February 2023 | Initial Study

OAK CREEK COMMUNTY PARK EXPANSION AND IMPROVEMENTS

City of Irvine

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PLACEWORKS

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ADT	average daily traffic
afy	acre-feet per year
AQMD	air quality management district
AQMP	air quality management plan
BMP	best management practices
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
cfs	cubic feet per second
CGP	Construction General Permit
CH_4	methane
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
dB	decibel
dBA	A-weighted decibel
EAP	emergency action plan
EPA	United States Environmental Protection Agency
FHSZ	fire hazard severity zone
GHG	greenhouse gases
GWP	global warming potential
IDP	Irvine Desalter Project
IPD	Irvine Police Department
IRWD	Irvine Ranch Water District
iShuttle	Irvine Shuttle
L_{dn}	day-night noise level
L_{eq}	equivalent continuous noise level
LID	low-impact development
LRA	local responsibility area
LST	localized significance thresholds

Abbreviations and Acronyms

MBTA	Migratory Bird Treaty Act
MS4	municipal stormwater system
MT	metric ton
MWS	modular wetlands system
N_2O	nitrous oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
OES	California Office of Emergency Services
OCFA	Orange County Fire Authority
OCTA	Orange County Transportation Authority
PM	particulate matter
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
RCNM	Roadway Construction Noise Model
RPS	renewable portfolio standard
RTP/SCS	regional transportation plan/sustainable communities strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SoCAB	South Coast Air Basin
SO_X	sulfur oxides
SRA	source receptor area (air quality)
SRA	state responsibility area (wildfire)
SWPPP	Storm Water Pollution Prevention Plan
TGD	technical guidance document
VdB	velocity decibels
VMT	vehicle miles traveled

Abbreviations and Acronyms

VOC	volatile organic compound
WMP	waste management plan
WQMP	water quality management plan

1. Introduction

1.1 PROJECT OVERVIEW

The City of Irvine has embarked on a Capital Improvement Project to expand and improve an existing community park, Oak Creek Community Park. Proposed plans for the 12-acre park include accessibility, irrigation and lighting improvements, flex turf area and sports field reconfigurations with natural and/or synthetic turf, the addition of a dog park and fitness nodes, a new parking lot, circulation improvements throughout for pedestrians and vehicles, and various hardscape and landscape improvements. In addition, the proposed project would expand park use onto the adjacent, undeveloped 8-acre property that is owned by Southern California Edison (SCE). Specifically, the City would amend an existing license with SCE to add an unlighted, multiuse flex field and parking lot (with Administrative Relief for parking lot landscaping) on the SCE-owned property. Combined, the City-owned park site and SCE property comprise the 20-acre project site. The project comprises all proposed park expansion and improvements and associated City actions described in this Initial Study.

1.2 PURPOSE OF CEQA AND INITIAL STUDY

CEQA (California Environmental Quality Act; Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 Cal. Code Regs. Section 15000 et seq.) require that before a lead agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about and consider the project's potential environmental impacts, inform the public about the project's potential environmental impacts and provide an opportunity to comment on environmental issues, and impose feasible measures to avoid or reduce potential harm to the physical environment.

The City of Irvine—in its capacity as lead agency pursuant to CEQA Guidelines Section 15050—is responsible for preparing environmental documentation in accordance with CEQA to determine if approval of the discretionary actions and subsequent development associated with the proposed project would have a significant impact on the environment. As part of the proposed project's environmental review and in its capacity as lead agency, the City authorized preparation of this Initial Study in accordance with the provisions of CEQA Guidelines Section 15063.The purposes of an Initial Study are to:

- Provide the lead agency information to use as the basis for deciding whether to prepare an environmental impact report (EIR) or negative declaration.
- Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration.
- Assist in the preparation of an EIR, if one is required.
- Facilitate environmental assessment early in the design of a project.

- Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment.
- Eliminate unnecessary EIRs.
- Determine whether a previously prepared EIR could be used with the project.

In its preparation of this Initial Study, the City determined that the Initial Study would support the adoption of a Mitigated Negative Declaration (MND). A MND is a written statement by the lead agency that briefly describes the reasons why a project that is not exempt from the requirements of CEQA will not have a significant effect on the environment and, therefore, does not require preparation of an EIR (CEQA Guidelines Section 15371). The CEQA Guidelines require preparation of a MND if the Initial Study prepared for a project identifies potentially significant effects, but: 1) revisions in the project plans or proposals made by or agreed to by the applicant before a proposed MND and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and 2) there is no substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment. (CEQA Guidelines Section 15070[b]).

The City has considered the information in this Initial Study in its decision-making processes. Although the Initial Study was prepared with consultant support, the analysis, conclusions, and findings made as part of its preparation fully represent the independent judgment and analysis of the City.

Additionally, this Initial Study includes a Mitigation Monitoring and Reporting Program (MMRP), which was developed to provide a vehicle to monitor mitigation measures outlined in the Initial Study for the proposed project. The MMRP has been prepared in conformance with Section 21081.6 of the Public Resources Code and the City of Irvine monitoring requirements. The MMRP will serve to document compliance with adopted/certified mitigation measures that are formulated to minimize impacts associated with the proposed project.

1.3 ENVIRONMENTAL SETTING

1.3.1 PROJECT LOCATION

The 20-acre Project Site is in the central portion of the City of Irvine, which encompasses approximately 66 square miles of land (approximately 42,240 acres) in central Orange County, California. Irvine is bounded by Tustin to the northwest; unincorporated land to the northeast; Lake Forest, Laguna Hills, and Laguna Woods to the southeast; and Newport Beach to the southwest. John Wayne Airport abuts Irvine's southwestern boundary (see Figure 1, *Regional Location*).

As shown in Figures 2, *Local Vicinity*, and 3, *Aerial Photograph*, the Project Site is generally bounded by Barranca Parkway to the south, Irvine Center Drive to the north, Valley Oak Drive to the west, and Sand Canyon Avenue to the east. The Project Site has an address of 15616 Valley Oak Drive and is in the City's Oak Creek Planning Area (Planning Area 12).

Figure 1 - Regional Location

Note: Unincorporated county areas are shown in white.

Source: ESRI, 2021

0 3
Scale (Miles)

1. Introduction

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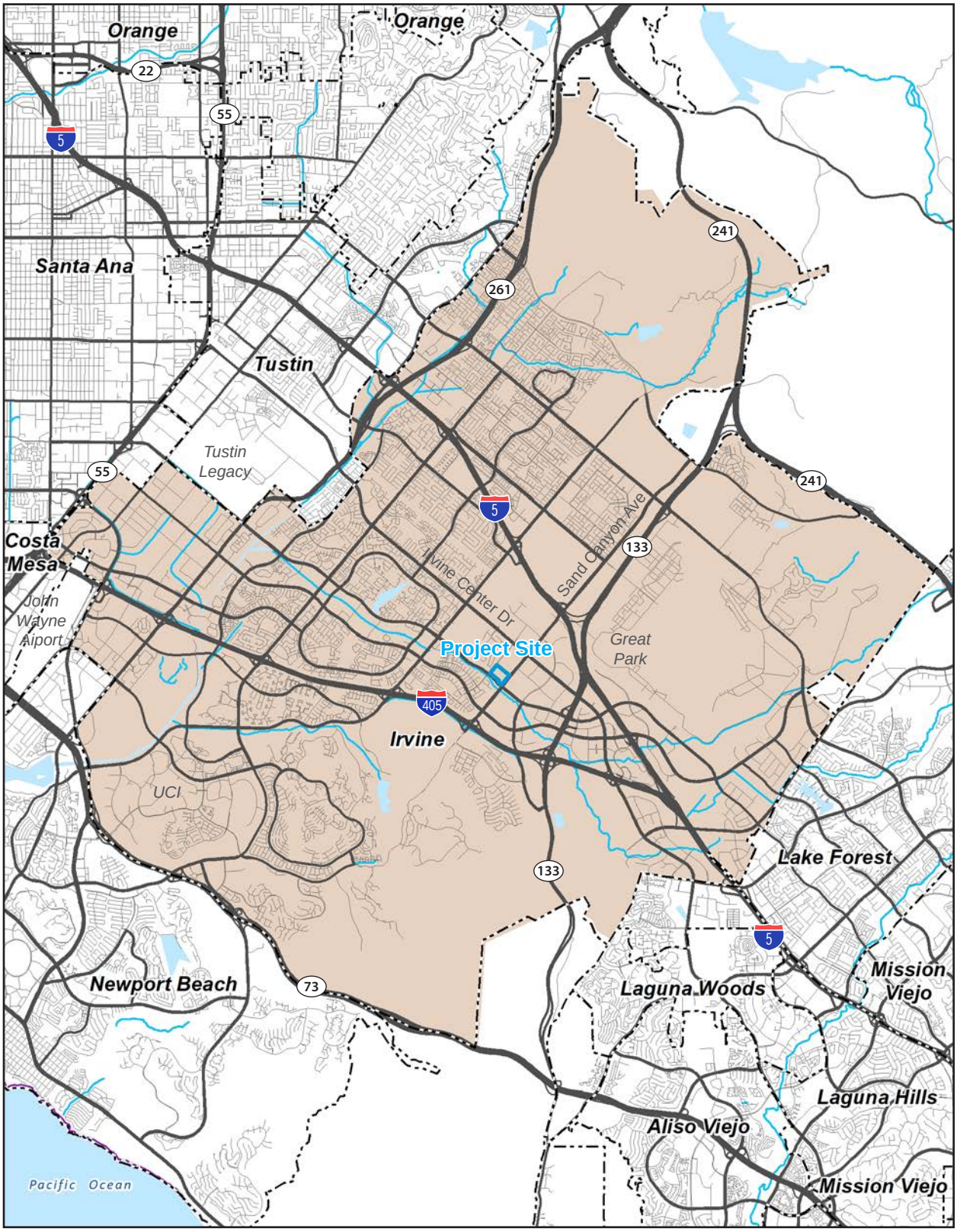
Figure 2 - Local Vicinity



Project Boundary
City Boundary

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Scale (Mile)

Source: ESRI, 2021

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Figure 3 - Aerial Photograph

Source: Nearmap, 2021

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1.3.2 Existing Land Use and Conditions

The 20-acre Project Site consists of two properties—the northern 12-acre property that is developed with the Oak Creek Community Park, which is owned and operated by the City, and the southern 8-acre property that is undeveloped and owned by SCE. A northwest-southeast-trending berm separates the park property from the SCE property. As shown in Figure 3, *Aerial Photograph*, the Oak Creek Community Park is currently developed with a variety of outdoor park amenities, including, but not limited to: two natural turf soccer fields, one ball diamond, a playground area, restroom building, covered picnic area, a parking lot, and various hardscape and landscape improvements. The ball diamond is used as a natural turf flex field for baseball, lacrosse, and soccer. The SCE property, which the City has obtained a license to use for park and public recreation purposes, is currently undeveloped and is used as a utility and off-street trail. The SCE property contains electric transmission towers with power lines, bare and exposed soil, and various shrubs and trees.

1.3.3 Surrounding Land Use

As shown in Figure 3, surrounding land uses consist of a large business park to the north; residential uses and an SCE easement to the west, beyond Valley Oak Drive; an SCE electric substation to the east, beyond Sand Canyon Avenue; and the San Diego Creek trail and residential uses to the south, beyond Barranca Parkway.

1.3.4 Existing Zoning and General Plan

The planning and regulatory plans that govern development and use of the Project Site are the Irvine General Plan, Zoning Ordinance, and Parks and Park Facilities Standards. Per the Irvine General Plan land use map, the land use designation of the project site is Recreation. This designation allows active public recreational activities that are enjoyed by the immediate and the surrounding communities. City-owned parks, regional parks, golf courses, and similar uses are allowed in the Recreation land use designation. The project site is similarly zoned 1.5 Recreation. This zoning district identifies lands suitable for active recreational opportunities and activities for public use and enjoyment.

1.3.5 Environmental Resources

The Project Site consists of the Oak Creek Community Park (12 acres) and an undeveloped SCE property (8 acres). The Project Site contains no historic buildings, housing, scenic resources, mineral resources, or water bodies. Additional information regarding environmental resources (or the lack thereof) on the Project Site is found in Section 3, *Environmental Analysis*, of this Initial Study under each respective environmental topic.

1.4 PROJECT DESCRIPTION

1.4.1 Proposed Land Use

The City of Irvine has embarked on a Capital Improvement Project to expand and improve an existing community park, Oak Creek Community Park (herein after referred to as "Project"). Proposed plans for the 12-acre park site include accessibility, irrigation and lighting improvements, flex turf area and sports field reconfigurations with natural and/or synthetic turf, the addition of a dog park and fitness nodes, a new parking

1. Introduction

lot (with approval of Administrative Relief for parking lot landscaping), circulation improvements throughout for pedestrians and vehicles, and various hardscape and landscape improvements (see Figure 4, *Oak Creek Park Plan*). No new buildings or structures are proposed, and the existing buildings and structures (e.g., bathroom building, picnic pavilion, children's play structure) would not be modified or improved but would remain in their existing condition. Additionally, the existing parking lot and mature dense landscaping that surrounds the park site would not be modified or improved.

One of the major changes to the existing park is the addition of a new dog park with natural turf (see Figure 4 and Figure 5, *Visual Simulation of Dog Park*). The new dog park would be placed on the eastern end of the Project Site in the area that is occupied by the soccer field, which is proposed to be relocated. The dog park would effectively replace the existing dog park (Irvine Central Bark) at 6405 Oak Canyon, approximately 0.65 mile north of the Project Site. The new dog park would include separate, dedicated, and fenced areas for small dogs and large dogs. Other features and improvements of the dog park include soccer field lighting that would be refurbished and used for lighting the dog park; a concrete mow curb and 10-foot-high vinyl-coated chain-link fence along the entire western boundary; a 5-foot-high vinyl-coated chain-link fence along the southern, northern, and eastern boundaries; new trees for shading and comfort; bench seating; pet-waste-bag dispensers; and trash and recycling receptacles.

As shown in Figure 4 and Figure 6, *Visual Simulation of Soccer Field*, another major change to the existing park includes relocation of one of the two existing soccer fields from the east side of the park (currently along Sand Canyon Avenue) to the west side (along Valley Oak Drive). The new soccer field would replace the existing ball diamond, which is used as a flex field for baseball, lacrosse, and soccer. The new soccer field would include natural and/or synthetic turf and new field lighting as well as a 10-foot-high vinyl-coated chain-link fence, with netting above, along the southern end of the soccer field.

Other modifications and improvements to the existing park site include the provision of fitness nodes along the northern edge of the park, which would be accessed via an existing concrete walkway; refurbished lighting for the existing soccer field; and a new pedestrian loading zone. Project development would also include the removal of approximately 30 trees to make room for the new park improvements; however, approximately 65 trees would be planted throughout the Project Site.

In addition to the above-described changes to the existing 12-acre park site, the Project would expand park use onto the adjacent undeveloped 8-acre SCE property. To expand the park use, the City would amend an existing park and public recreation license with SCE to authorize an unlighted, multiuse flex field and parking lot on a portion of the SCE property (see Figure 4). The multiuse flex field would include a large, unlit, open lawn area with synthetic turf. Other features and improvements include drinking fountains; concrete bench seating; a 16-foot-wide SCE maintenance access road of decomposed granite and concrete, with removable bollards; solar-powered pedestrian lighting along the perimeter walkway; and bicycle racks. The SCE portion of the Project Site would also include the addition of 85 parking stalls, including seven ADA spaces. The new parking lot will require a request for administrative relief from the City's parking lot landscape standards because SCE will not permit any trees as they could interfere in the operation of SCE's utility use adjacent to the park location. No modifications or improvements to the existing SCE electrical transmission towers or lines would occur; they would remain in their existing condition. Additionally, the mature dense landscaping that surrounds the SCE property would remain.

Figure 4 - Oak Creek Community Park Plan

LEGEND

1. CONCRETE PAVING, TYP.
2. SOCCER FIELD
3. EXISTING PLANTING TO REMAIN
4. FITNESS NODE WITH RESILIENT SURFACING, TYP.
5. FIELD LIGHTING
6. EXISTING CONCRETE PAVING TO REMAIN, TYP.
7. 10 FT. HEIGHT VINYL COATED CHAIN LINK FENCE WITH NETTING ABOVE
8. PEDESTRIAN GATE
9. EXISTING PICNIC PAVILION TO REMAIN
10. EXISTING PLAY STRUCTURE TO REMAIN
11. EXISTING RESTROOM TO REMAIN
12. EXISTING TREE TO REMAIN, TYP.
13. EXISTING PARKING LOT TO REMAIN
14. PEDESTRIAN LOADING ZONE
15. REFURBISHED FIELD LIGHTING
16. REFURBISHED SOCCER FIELD
17. CONCRETE MOW CURB
18. 10 FT. HEIGHT VINYL COATED CHAIN LINK FENCE
19. EXISTING BENCH TO REMAIN, TYP.
20. SHADE TREE, TYP.
21. PLANTING AREA, TYP.
22. PET WASTE BAG DISPENSER WITH LEASH REQUIREMENT SIGNAGE, TYP.
23. 5' HT. VINYL COATED CHAIN LINK FENCE, TYP.
24. LARGE DOG PARK
25. SMALL DOG PARK
26. BENCH SEATING, TYP.
27. TURF, TYP.
28. DECOMPOSED GRANITE PAVING, TYP.
29. DOG PARK SIGNAGE AND KIOSK
30. DOG PARK ENTRY
31. CONCRETE SEAT WALL
32. DRINKING FOUNTAIN WITH DOG BOWL AND BOTTLE FILLER
33. 6 FT. HEIGHT VINYL COATED CHAIN LINK FENCE, BONDED WITH GROUNDING LUGS, TYP.
34. S.C.E. ELECTRICAL TRANSMISSION TOWERS TO REMAIN, TYP. PROVIDE ANTI-CLIMBING GUARD AT BASE OF TOWER.
35. S.C.E MAINTENANCE ACCESS GATE, SINGLE ARM PIPE GATE, BONDED WITH GROUNDING LUGS.
36. PARKING LOT STRIPING
37. PLANTED PARKING MEDIANS WITH ZERO HEIGHT CURB, PLANTING NOT TO EXCEED 48 INCHES, TYP.
38. VEHICULAR AC PAVING
39. PARKING LOT: 157 SPACES
40. SMALL TREE, TYP. MAXIMUM HEIGHT 15 FT. PER S.C.E. APPROVED TREE LIST, TYP.
41. S.C.E. OVERHEAD TRANSMISSION LINES
42. S.C.E. MAINTENANCE ACCESS ROAD. DECOMPOSED GRANITE AND CONCRETE, TOTAL WIDTH 16FT. TURNING RADIUS: 50FT. INSIDE, 75FT. OUTSIDE.
43. TRASH AND RECYCLING RECEPTACLES
44. BICYCLE RACKS
45. CURB RAMP WITH TRUNCATED DOMES, TYP.
46. WHEEL STOP, TYP.
47. SOLAR POWERED PEDESTRIAN LIGHTING, TYP. CONCRETE POLE NOT TO EXCEED 12 FT. HEIGHT, BONDED WITH GROUNDING LUGS, TYP. (WIRE RUNS NOT REQUIRED)
48. PEDESTRIAN CROSSWALK
49. CONCRETE STAIRS WITH HANDRAIL, TYP.
50. CONCRETE BENCH SEATING BONDED WITH CONCRETE LUG, TYP.
51. FLEXIBLE TURF AREA. (NATURAL GRASS TURF)
52. REMOVABLE BOLLARDS
53. EXISTING GATE TO REMAIN
54. PLANTED PARKING ISLAND WITH SIX INCH CURB

NOTE: ALL GROUNDING TO BE CERTIFIED BY ELECTRICAL ENGINEER

0 100
Scale (Feet)

Source: Schmidt Design Group, 2022

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Figure 5 - Visual Simulation of Dog Park

Source: Schmidt Design Group, 2022

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Figure 6 - Visual Simulation of Soccer Field

Source: Schmidt Design Group, 2022

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1.4.2 Operational Characteristics: Park Program/Use

Existing park programs and uses are not proposed to change after Project completion. The only change in park use would be the addition of the dog park. Also, park hours of operation would continue to be from 6:00 am to 10:00 pm., including the dog park. Following are details on programs and uses that would remain unchanged:

Number of teams that access the park fields:

- Approximately 15 to 20 organizations per year.
  - City Adult Soccer League
  - 9 Youth Groups (youth soccer, youth flag football)
  - 5 to 10 Rental Groups (youth soccer, adult soccer)
- Monday through Friday: Estimated 50+ teams per week for practice.
- Saturday and Sunday: Estimated 20 teams per day for games.

Hours of field use:

- Permitted weekly hours
  - Monday through Friday from 4:00 pm to 10:00 pm for youth allocations and City programs.
  - Saturdays from 8:00 am to 9:00 pm for youth allocation soccer games.
  - Sundays from 8:00 am to 6:00 pm for youth allocation soccer games and rentals.

Park field programming/use:

- Permitted 42 out of 52 weeks of the year.
- 7 of the 42 weeks are permitted for tournaments.
- Weekday practices may have up to three teams per field at one time.

1.4.3 Access, Circulation, and Parking

Figure 4, *Oak Creek Park Plan*, illustrates the path of travel for all modes of travel—vehicular, pedestrian, and bicycle. It also illustrates the parking areas, both existing and proposed.

1.4.3.1 VEHICULAR ACCESS, CIRCULATION, AND PARKING

Vehicular access to the Project Site would continue to be provided via the unsignalized access driveway off Valley Oak Drive. No modifications or improvements would be required or undertaken for the access driveway. The access driveway connects to the existing drive aisle, which provides direct access to the existing and proposed parking areas.

Parking for park patrons would be provided via the existing parking areas on the park site and the proposed parking area on the SCE property. The existing parking areas would provide a total capacity of 96 parking

spaces, and the proposed parking area on the SCE property would provide a capacity of 85 parking spaces for a total of 181 parking spaces.

1.4.3.2 PEDESTRIAN ACCESS AND CIRCULATION

Pedestrian access to the Project Site would continue to be provided via the existing public sidewalks on Valley Oak Drive and Sand Canyon Avenue, which connect to the park's internal walkways at key locations. Under the Project, the existing public sidewalks and internal walkways would not undergo any modifications or improvements. However, a new walkway would be added along the entire stretch of the eastern boundary of the new dog park. Additionally, new walkways would be provided along the edges of the new flex field and parking area on the SCE portion of the Project Site. All existing and new walkways are designed to be ADA (Americans with Disabilities Act) compliant.

1.4.3.3 BICYCLE ACCESS AND CIRCULATION

Dedicated on-street bicycle lanes are on the roadways surrounding the Project Site, including Valley Oak Drive, Sand Canyon Avenue, and Barranca Parkway. No modifications or improvements to the existing bike lanes are included in the Project. Project development includes the provision of additional bicycle racks onsite in accordance with the provisions of the California Green Building Standards Code (CALGreen).

1.4.4 Infrastructure Improvements and Utility and Service Systems

Following is a discussion of the infrastructure improvements as well as utility and service systems needed to accommodate the Project. All proposed improvements would require City approval and, where necessary, approval from the utility/service provider.

1.4.4.1 WATER SYSTEM

The Irvine Ranch Water District provides water delivery service (potable and recycled water) to the existing uses of the Project Site and would continue to do so after Project implementation. Potable water is provided to the existing restrooms, and recycled water is provided for irrigation purposes. The potable water use at the Project Site would not change because the Project does not include the expansion or addition of onsite restrooms. As a part of the Project, however, new drinking fountains would be provided, which would connect to the existing potable water lines onsite. Also, new onsite water lines for recycled water use would connect to the existing water lines and the water main in Valley Oak Drive. No offsite construction or upsizing for water lines would be required to accommodate the Project. The proposed recycled water system improvements would be designed and constructed in accordance with City requirements and would require City approval.

1.4.4.2 WASTEWATER SYSTEM

No improvements or modifications to the existing wastewater system (on- or offsite) are required to implement the Project because it would not require additional wastewater services. The sewer lines that serve the existing park restrooms would remain as is, and the restrooms would not be modified or expanded under the Project.

1.4.4.3 DRAINAGE SYSTEM

Under existing conditions, drainage from the northern half of the Project Site, Oak Creek Community Park, is captured by various onsite catch basins and inlets into an onsite storm drain line that runs along the park's asphalt drive and parking area. On-site drainage is conveyed to a 78-inch storm drain line in Valley Oak Drive. Drainage from the southern half of the Project Site, the undeveloped SCE property, is captured by an existing 24-inch riser inlet at the south-westerly corner of the site and conveyed by an 18-inch storm drain to the 78-inch storm drain line in Valley Oak Drive.

Project development would be consistent with the existing drainage pattern, and onsite drainage would continue to be conveyed to the 78-inch storm drain line in Valley Oak Drive via the existing and new onsite drainage collection, conveyance, and treatment systems that would be introduced to provide better site drainage and stormwater treatment. Specifically, the proposed drainage improvements for the southerly portion of the site include provisions to capture and treat runoff from the new parking lot that would be constructed on the SCE property. Generally, the runoff from the new parking area would sheet flow to the southwest into concrete curb and gutter. This curb and gutter would convey the flows into a proposed modular wetlands system (MWS)/catch basin, which would be located in a landscape buffer on the southwest corner of the new parking lot. A small portion of the new parking lot runoff flowing north would be intercepted by a trench drain spanning the width of the parking lot entrance located on the north side of the new parking lot and redirect the flows south through a proposed 8-inch storm drain pipe to the MWS. Design capture flows would be treated by the MWS and discharged through a proposed 18-inch storm drain pipe into a swale. The swale would convey treated runoff into the existing 24-inch riser inlet located at the south-westerly corner of the site that conveys stormwater to the storm drain in Valley Oak Drive.

1.4.4.4 SOLID WASTE AND RECYCLING SYSTEM

Solid waste and recycling generated by the existing uses onsite are collected and hauled away by Waste Management and transported to the waste collection and disposal facilities serving Irvine. Additional solid waste generated as a result of Project implementation would also be collected and hauled away by Waste Management. Additionally, existing solid waste and recycling bins located onsite in an enclosure within the parking area, as well as existing and new solid waste and recycling receptacles provided throughout the park site, would be adequate to serve the Project's proposed uses.

1.4.4.5 UTILITIES AND SERVICE SYSTEMS

The only utility and service system that serves the existing uses onsite (and would serve the Project's proposed uses) is electricity from Southern California Edison. No natural gas or telecommunications facilities or infrastructure exist onsite or are needed to serve the Project.

1.4.5 Project Phasing and Construction

Project development is anticipated to be completed in three phases—clearing, grading, and construction. Overall construction is estimated to take up to nine months, commencing early 2023 to late 2023. Construction activities associated with the Project are anticipated to disturb 11.42 acres of the 20-acre Project Site. No soil

export would be required; however, approximately 80 cubic yards of soil import would be required. The types and numbers of construction equipment expected to be used during construction activities are summarized in Section 3.3, *Air Quality*. Construction staging would stay within the confines of the Project Site.

1.5 CITY ACTION REQUESTED

1.5.1 Discretionary Actions and Approvals

Under CEQA Guidelines Section 15357, a discretionary action means a project that calls for an exercise of judgment or deliberation when the public agency (here, the City of Irvine) decides to approve or disapprove a particular activity, as distinguished from situations where the public agency merely determines whether there has been conformity with applicable statutes, ordinances, regulations, or other fixed standards. The City of Irvine is the lead agency under CEQA and has the principal approval authority over the Project. Following is a list of the discretionary actions and approvals required for Project implementation:

- Adoption of a MND and Mitigation Monitoring and Reporting Program
- Approval of a Park Design Modification
- Approval of Administrative Relief for Parking Lot Landscape
- Approval of Synthetic Turf
- Approval of a Public Facility Review
- Approval of Plans and Specification

1.5.2 Nondiscretionary / Ministerial Actions and Approvals

Under CEQA Guidelines Section 15369, ministerial approvals are those that involve little or no discretion (e.g., connections to utility infrastructure), merely apply a checklist or clear requirements to the facts as presented and are often issued over the counter by county or city staff. Following is a list of the nondiscretionary / ministerial actions and approvals required for Project implementation:

- Approval and issuance of grading and building permits.
- Approvals for water, sewer, and storm drain infrastructure improvements in the public right-of- way.

1.6 INCORPORATION BY REFERENCE

- **Irvine General Plan.** The Irvine General Plan is a policy document designed to give long-range guidance and direction for decisions affecting the future character of the City. It represents the blueprint and official statement of Irvine's physical development as well as its economic, social, and environmental goals. The Irvine General Plan was used throughout this Initial Study as the fundamental planning document governing development on the Project Site.

- **Irvine Zoning Ordinance.** The Irvine Zoning Ordinance is the regulating tool that the City uses to implement the Irvine General Plan, and establish the basic regulations under which land in Irvine is developed and utilized. This includes but is not limited to regulations and controls for the design and

improvement of development sites, allowable uses, building setback and height requirements, and other development standards. The basic intent of the ordinance is to promote and protect the public health, safety, convenience, and welfare of present and future citizens of Irvine. The Irvine Zoning Ordinance was used throughout this Initial Study as the fundamental regulatory document governing development on the Project Site.

1. Introduction

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2. Environmental Checklist

2.1 PROJECT INFORMATION

1. **Project Title:** Oak Creek Community Park Expansion and Improvements

2. **Lead Agency Name and Address:**
   City of Irvine
   Community Services Department
   One Civic Center Plaza
   Irvine, CA 92623

3. **Contact Person and Phone Number:**
   Kathleen Haton, Senior Planner
   949.724.6667

4. **Project Location:** The Project Site encompasses Oak Creek Community Park at 15616 Valley Oak Drive and an adjoining undeveloped SCE property in Irvine. Combined, the Project Site comprises approximately 20 acres, which includes the 12-acre park site and 8-acre SCE property.

5. **Project Sponsor's Name and Address:**
   City of Irvine
   Community Services Department
   One Civic Center Plaza
   Irvine, CA 92623

6. **General Plan Designation:** Recreation

7. **Zoning:** 1.5 Recreation

8. **Description of Project:** The Project includes improvements to and an expansion of the Oak Creek Community Park, which currently encompasses 12 acres of the 20-acre project site. The Project includes an expansion of the park onto an 8-acre property owned by SCE and licensed to the City for park use. Proposed improvements to the existing 12-acre park site include replacement of the flex field with a lighted soccer field, refurbished lighting for the existing soccer field, exercise nodes, and a new dog park with separate areas for small and large dogs, which would replace the existing eastern soccer field. The 8-acre SCE property would be developed with a new unlighted synthetic flex field and a general park parking area with Administrative Relief related to parking lot landscape standards. The Project would also provide for new circulation improvements throughout for pedestrians and vehicles. Refer to Section 1.4, *Project Description*, for a more detailed description of the Project.

2. Environmental Checklist

9. **Surrounding Land Uses and Setting:** Surrounding uses consist of a large business park to the north; residential uses and an SCE easement to the west, beyond Valley Oak Drive; an SCE electric substation to the east, beyond Sand Canyon Avenue; and San Diego Creek trail and residential uses to the south, beyond Barranca Driveway.

10. **Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participating agreement):** Southern California Edison

2.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture / Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Kathleen Haton
Signature

2/22/23
Date

Kathleen Haton, Senior Planner

2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) **Earlier Analyses Used.** Identify and state where they are available for review.

   b) I**mpacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) **Mitigation Measures.** For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in a substantial erosion or siltation on- or offsite;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XIII. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?				X
Parks?		X		
Other public facilities?				X
XVI. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		X		
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X

	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X
XX. WILDFIRE.	**If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:**				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.					
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b)	Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?			X	
c)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
d)	Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

2. Environmental Checklist

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3. Environmental Analysis

Section 2.4 provided a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist and identifies mitigation measures, if applicable.

3.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the Project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. For purposes of determining significance under CEQA, a scenic vista is generally considered a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Some scenic vistas are officially designated by public agencies, and some are informally designated by tourist guides. Vistas provide visual access or panoramic views to a large geographic area and are generally located at a point where surrounding views are greater than one mile away. Panoramic views are usually associated with vantage points over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views might include an urban skyline, valley, mountain range, a large open space area, the ocean, or other water bodies. A substantial adverse effect to a scenic vista is one that degrades the view from such a designated view spot.

Neither the Project Site nor other properties in the project vicinity provide substantial views of any water bodies, mountains, hilltops, or any other significant visual resources. Additionally, Figure A-4, Scenic Highways, of the Irvine General Plan Land Use Element does not designate any scenic vistas or corridors on the Project Site. However, Sand Canyon Avenue, which forms the Project Site's eastern boundary, is designated as a scenic highway in Figure A-4. Project development would not affect this scenic highway because it would not introduce visual obstructions that would affect motorists and passersby traveling on this highway, and the Project Site is on the west side of Sand Canyon Avenue and scenic views along this highway are to the north.

Additionally, according to Figure A-3, Land Use, of the Irvine General Plan's Land Use Element and Figure L-2, Conservation and Open Space, of the Conservation and Open Space Element, the Project Site is designated Recreation, one of six open space area designations. Project implementation would not affect this designation; the site would remain Recreation. Also, after Project implementation, the park's existing visual resources would continue to be afforded to surrounding roadways and areas. In fact, Project development would result in an increase in the visual resources onsite because it includes the development of park uses on the southern portion of the Project Site, which is currently undeveloped SCE property.

Based on the preceding, no impact would occur, and no mitigation measures are necessary.

3. Environmental Analysis

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. Scenic highways are a unique component of the region's circulation system as they traverse areas of scenic or aesthetic value. According to the California Department of Transportation (Caltrans), a highway may be designated as scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view (Caltrans 2022a).

The Project Site is in an urbanized area of Irvine and is not on or near a state-designated or -eligible scenic highway, as designated on Caltrans's California State Scenic Highway System Map (Caltrans 2022b). In fact, no highways within Irvine are eligible or officially designated state scenic highways. Additionally, the Project Site is not visible from the nearest state-designated scenic highway (State Route 1, or Pacific Coast Highway), which is almost seven miles to the southwest of the Project Site. Due to distance and intervening land uses, no portion of the Project Site or surrounding area is viewable from Pacific Coast Highway.

Furthermore, there are no rock outcroppings or historic buildings onsite—the Project Site is developed with the Oak Creek Community Park.

Therefore, no impact would occur, and no mitigation measures are necessary.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

No Impact. The assessment of aesthetic impacts is subjective by nature. Aesthetics generally refers to the identification of visual resources and their quality, as well as an overall visual perception of the environment. A project is generally considered to have a significant aesthetic impact if it substantially changes the character or quality of the site such that it becomes visually incompatible with or visually unexpected in its surroundings.

The Project Site is in an urbanized area of Irvine that is characterized by flat topography and urban development. Existing land use and conditions of the Project Site and surrounding area are depicted in Figure 3, *Aerial Photograph*. As shown in Figure 3, the Project Site is developed with the Oak Creek Community Park and associated site features and improvements. Surrounding land uses consist mainly of residential and office uses as well as a SCE electric substation.

Following is a discussion of the potential impact to the visual character or quality of the Project Site and its surroundings resulting from the construction and operational phases of the Project.

Project Construction Phase

Project construction activities would temporarily change the visual character of the site and its surroundings. Construction activities would involve site clearing, grading, and site improvements. Construction staging areas, including earth stockpiling, storage of equipment and supplies, and related activities would contribute to a generally "disturbed site," which may be perceived by some as a visual impact.

However, these effects would be typical of any site in Irvine that undergoes development or redevelopment. Project development is anticipated to be completed in three phases—clearing, grading, and construction. Overall construction is estimated to take up to seven months, extending from early 2023 to late 2023. Construction activities may be unsightly during the site preparation and construction phases; however, they would be temporary and would cease upon completion.

Also, the existing mature landscape hedges and trees that line the southern, western, and eastern Project Site boundaries would help buffer offsite views of the construction areas and activities that would take place onsite. Where necessary, construction fencing would be erected to help shield the construction areas and would also be temporary. The typical fencing to be provided (i.e., chain-link fencing with mesh fabric or similar screening material) would screen views of the construction sites, including stockpiles, graded areas, construction equipment, and building materials.

Therefore, Project-related construction activities would not have a significant effect on the existing visual character or quality of the site and its surroundings. Impacts would be less than significant, and no mitigation measures are necessary.

Project Operation Phase

As shown in Figure 3, *Aerial Photograph*, the 20-acre Project Site consists of two properties, the northern 12-acre property that is developed with the Oak Creek Community Park, which is owned and operated by the City, and the southern 8-acre property that is undeveloped and is owned by SCE. The Oak Creek Community Park is currently developed with a variety of outdoor park amenities, including two natural turf soccer fields, a multiuse flex field, a playground area, restroom building, covered picnic area, a parking lot, and various hardscape and landscape improvements. The SCE property is undeveloped and is used as a utility and off-street trail. The SCE property contains electric transmission towers with power lines, bare and exposed soil, and a number of shrubs and trees.

Under the Project, proposed plans for the 12-acre park include accessibility, irrigation, and lighting improvements; flex turf area and sports field reconfigurations with natural and/or synthetic turf; the addition of a dog park and fitness nodes; a new parking lot; circulation improvements throughout for pedestrians and vehicles; and various hardscape and landscape improvements. In addition, Project implementation would expand park use onto the adjacent SCE property. Specifically, a portion of the SCE property would be developed with an unlighted, synthetic multiuse flex field and a new parking lot.

Figure 4 demonstrates how Project implementation would help create a more unified and enhanced development plan for an expanded Oak Creek Community Park. The proposed park improvements and

amenities would be complementary to and not detract from the visual character of those existing onsite or those of the surrounding uses. In fact, they would help to visually enhance the aesthetics of the park and surrounding area.

Overall, Project development would enhance and strengthen the visual character of the Project Site and its surroundings through new park improvements. The proposed hardscape and landscape elements and design would ensure that Project development is not detrimental to the visual character or quality of the surrounding area or uses. The proposed park improvements would be designed to create a sense of cohesiveness onsite and with the surrounding area. The proposed site improvements would complement and not detract from the visual character of the site and surrounding area.

Based on the preceding, Project development would not substantially degrade the visual character or quality of the site and its surroundings. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Lighting effects are associated with the use of artificial light during the evening hours. There are two primary sources of light—light emanating from building interiors passing through windows and openings, and light from exterior sources (i.e., street lighting, architectural building illumination, security lighting, parking lot lighting, landscape lighting, and signage). Excessive light and/or glare can impair vision, cause a nuisance, affect sleep patterns, and generate safety hazards when experienced by drivers. Uses such as residences, elderly care facilities, schools, and hotels are considered light sensitive, since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light spill or trespass is considered a nuisance and is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light on surfaces of buildings or objects, including highly polished surfaces such as glass windows or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation experienced by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior façades largely or entirely composed of highly reflective glass. Daytime glare can also be generated by light reflecting off passing or parked cars. Glare is produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare generation is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the day and year. Excessive glare not only impedes visibility, but also increases the ambient heat reflectivity in a given area. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

As shown in Figure 3, *Aerial Photograph*, the Project Site is in Oak Creek Community Park, and sources of light or glare already exist on the site. There are also numerous sources of light and glare surrounding the Project Site, including lighting from roadways and the mix of residential and office uses.

Following is a discussion of the potential day- and nighttime light and glare impacts in the project area resulting from the construction and operational phases of the project.

Project Construction Phase

Project construction would be limited to daytime hours. With the exception of illumination during nighttime hours for safety and security purposes, no other nighttime lighting would be required until the Project is operational. Nighttime security lighting would only be used for the duration of the temporary construction process. Additionally, construction activities are not anticipated to result in flat, shiny surfaces that would reflect sunlight or cause other natural glare. Therefore, no short-term, construction-related impacts associated with light and glare would occur. Impacts would be less than significant and no mitigation measures are necessary.

Project Operation Phase

Daytime Glare

The Project does not include building materials and architectural treatments that could cause daytime glare. The Project involves the development of new and improved park amenities and hardscape and landscape improvements; no buildings or structures are proposed. Therefore, daytime glare impacts from Project implementation would be less than significant and no mitigation measures are necessary.

Nighttime Lighting and Glare

As noted above, the Project Site is developed with the Oak Creek Community Park, and sources of artificial light already exist on the Project Site. Project development would introduce new sources of artificial light to the Project Site and surrounding area. Nighttime site lighting would consist of new and improved lighting for the soccer fields (existing light fixtures would be replaced with newer more efficient ones, as well as new lighting for the relocated soccer field); lighting for new pedestrian walkways; lighting for the new parking area; and security lighting. These new sources of artificial lighting have the potential to increase nighttime light and glare in the project area as well as create offsite light spill or trespass that could result in a nuisance. Nighttime lighting and glare from the Project Site would be visible from the surrounding roadways and land uses.

Although Project development would introduce new light sources to the Project Site and surrounding area, the proposed light sources would be similar to the existing light sources onsite and to the light sources of the surrounding residential and office uses. Existing nighttime lighting also emanates from streetlights along the surrounding roadways. It is unlikely that conventional lighting and illuminated operations under the Project would discernibly, much less adversely, affect ambient light conditions.

Furthermore, Project development would be required to conform with all applicable City lighting standards, including those of Chapter 3-16, Lighting, of the Irvine Zoning Ordinance. The lighting provisions are intended to prevent glare, light trespass, and light pollution. All proposed exterior lighting would be designed, arranged, installed, directed, shielded, operated, and maintained in such a manner as to contain direct

illumination onsite and prevent light and glare impacts offsite in accordance with the provisions of the Irvine Zoning Ordinance, thereby preventing excess illumination and light spillover onto adjoining/surrounding residential and nonresidential land uses and/or roadways. Through the City's established development review processes, the City would ensure that final design of the Project complies with the requirements of the Irvine Zoning Ordinance (including those of Chapter 3-16 (Lighting), as noted above) and thus precludes or effectively minimizes potential light/glare overspill onto adjacent/surrounding properties or roadways.

Compliance with the lighting provisions of the Irvine Zoning Ordinance and Title 24 would ensure that the Project does not result in significant light impacts. Compliance with these provisions is ensured through the City's development review and building plan check process.

Based on the preceding, operational nighttime light and glare impacts related to the Project would be less than significant and no mitigation measures are necessary.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Project Site is not mapped as farmland. According to the California Important Farmland Finder maintained by the Department of Conservation, the northeastern portion of the Project Site is designated as Urban and Built-Up Land. The southwestern portion is designated as Other Land (DOC 2022a), which is classified as vacant and nonagricultural land surrounded on all sides by urban development and usually greater than 40 acres. The SCE property northwest of the Project Site, which is across Valley Oak Drive, is mapped as Prime Farmland and used for row crops. However, Project development would have no impact on that property to the northwest as all improvements would occur within the confines of the Project Site. Therefore, Project development would not convert mapped farmland to nonagricultural use. No impact would occur, and no mitigation measures are necessary.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project Site is not zoned for agricultural use. According to the City's zoning map, the Project Site is zoned 1.5 Recreation, which lists agricultural uses as a permitted use. As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine and contains the Oak Creek Community Park and an undeveloped SCE property. The site does not contain active farmland or other agricultural uses and is not adjacent or in proximity to such uses. Additionally, Project implementation does not require a zone change, and no loss in land zoned for/or permitting agricultural uses would occur. Furthermore, the Project Site is not subject to a Williamson Act contract[1] (DOC 2018). Therefore, Project development would not conflict with zoning for agricultural uses or a Williamson Act contract. Accordingly, no impact would occur, and no mitigation measures are necessary.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (California Public Resources Code [PRC] Section 12220[g]). Timberland is defined as "land…which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees" (PRC Section 4526).

As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine and is surrounded by commercial and residential uses. The Project Site is not designated or zoned for forest or timber land or used for forestry. As stated above, the Project Site is zoned 1.5 Recreation. Furthermore, all trees onsite are ornamental trees and are not cultivated for forest resources. Therefore, the Project Site does not meet the definition of lands designated as forestland or timberland in PRC Sections 12220(g), 4526, and 51104(g). Project development would have no impact on forest land or resources and no mitigation measures are necessary.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. See response to Section 3.2.c, above. As substantiated in that section, no impact would occur, and no mitigation measures are necessary.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. See responses to Sections 3.2.a, b, and c, above. As substantiated in these sections, no impact would occur, and no mitigation measures are necessary.

[1] Williamson Act contracts restrict the use of privately owned land to agriculture and compatible open-space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value.

3.3 AIR QUALITY

This section addresses the impacts of the Project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the Project Site, and air quality modeling is provided in Appendix A.

The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O_3), carbon monoxide (CO), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb). Areas are classified under the federal and California Clean Air Act as either in attainment or nonattainment for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD), is designated nonattainment for O_3, and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2021).

Furthermore, the South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Development projects below the regional significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Where available, the significance criteria established by the South Coast AQMD may be relied upon to make the following determinations.

Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. South Coast AQMD adopted the 2016 Air Quality Management Plan (AQMP) on March 3, 2017. Regional growth projections are used by South Coast AQMD to forecast future emission levels in the SoCAB. For southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations included in city/county general plans. Typically, only large, regionally significant projects have the potential to affect the regional growth projections.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in South Coast AQMD's AQMP. The Project is not a regionally significant project that has the potential to result in changes in population, housing, or employment in Irvine. Additionally, as demonstrated below in Section 3.3.b, the regional emissions that would be generated by the operational phase of the Project would be less than the South Coast AQMD emissions thresholds and would therefore not be considered by South Coast AQMD to be a substantial source of air pollutant emissions that would have the potential to affect the attainment designations in the SoCAB. Therefore, the Project would not affect the regional emissions inventory or conflict with strategies in the AQMP. Impacts would be less than significant, and no mitigation measures are necessary.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The following describes Project-related impacts from regional short-term construction activities and regional long-term operation of the Project.

Regional Short-Term Construction Impacts

Construction activities would generate air pollutants. These emissions would primarily be 1) exhaust from off-road diesel-powered construction equipment; 2) dust generated by construction activities; 3) exhaust from on-road vehicles; and 4) off-gassing of volatile organic compounds (VOCs) from paints and asphalt.

As described in Section 1.4.5, *Project Phasing and Construction*, construction activities associated with the Project are anticipated to disturb 11.42 acres of the 20-acre Project Site. Project development would involve asphalt demolition, fine and rough grading, soil haul, utilities trenching, paving, and finishing/landscaping. Construction would occur from early 2023 to late 2023. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2020.4

Project-related construction emissions modeling are shown in Table 1. As demonstrated in the table, the maximum daily emissions for NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ from construction-related activities would be less than their respective South Coast AQMD regional significance threshold values. Therefore, impacts to the regional air quality associated with construction of the Project would be less than significant and no mitigation measures are necessary.

Table 1 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lbs/day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Asphalt & Site Preparation	6	59	42	<1	12	7
Asphalt Demolition and Debris Haul, Site Preparation	6	60	42	<1	12	7
Site Preparation, Rough Grading, Utilities Trenching	7	74	53	<1	16	9
Site Preparation and Soil Haul, Rough Grading, Utilities Trenching	7	74	54	<1	16	9
Fine Grading and Finishing/Landscaping	5	45	41	<1	9	4
Fine Grading, Paving, and Finishing/Landscaping 2022	6	56	56	<1	9	5
Asphalt Paving and Finishing/Landscaping 2022	2	17	27	<1	3	1
Finishing/Landscaping 2022	1	6	11	<1	3	1
Finishing/Landscaping 2022 and Architectural Coating	8	8	15	<1	3	1
Finishing/Landscaping 2023	1	5	11	<1	3	1

3. Environmental Analysis

Table 1 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lbs/day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions						
Maximum Daily Emissions	8	74	56	<1	16	9
South Coast AQMD Regional Construction Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2020.4.
Notes: lbs/day = pounds per day.
[1] Based on the preliminary information provided by the City. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.
[2] Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

Long-Term Operation-Related Air Quality Impact

Typical long-term air pollutant emissions are generated by area sources (e.g., landscape fuel use, aerosols, architectural coatings, and asphalt pavement), energy use (natural gas), and mobile sources (i.e., on-road vehicles). As identified in Section 3.17, *Transportation*, the Project would generate a net increase of 317 weekday trips and an increase of 634 daily trips on the weekend (Urban Crossroads 2021a). As shown in Table 2, it is anticipated that operation of the Project would result in an overall minimal net increase in emissions and would not exceed the South Coast AQMD regional operation-phase significance thresholds. Therefore, impacts to the regional air quality associated with operation of the Project would be less than significant and no mitigation measures are necessary.

Table 2 Net Maximum Daily Regional Operation Emissions

Source	Maximum Daily Emissions (lbs/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.}$
Net Emissions						
Area	<1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile[1]	2	2	22	<1	5	1
Total	**2**	**2**	**22**	**<1**	**5**	**1**
South Coast AQMD Regional Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2020.4.
Notes: lbs/day = pounds per day. Highest winter or summer emissions report.
[1] Existing and Project vehicle emissions are based on year 2023 emission rates in order to isolate the effect of the change in land uses at buildout.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Project development could expose sensitive receptors to elevated pollutant concentrations if it causes or significantly contributes to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction LSTs

Localized significance thresholds (LST) are based on the California AAQS, which are the most stringent AAQS to provide a margin of safety in the protection of public health and welfare. They are designated to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. The screening-level construction LSTs are based on the size of the Project Site, distance to the nearest sensitive receptor, and Source Receptor Area (SRA). The nearest offsite sensitive receptors to the Project Site are the residences along Valley Oak Drive to the west, beyond Valley Oak Drive and the residences to the south, and beyond Barranca Parkway and the San Diego Creek.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 3 shows that the maximum daily construction emissions (pounds per day) for NO_X, CO, PM_{10}, and $PM_{2.5}$ construction emissions would be less than their respective South Coast AQMD screening-level LSTs. Therefore, air quality impacts from project-related construction activities would be less than significant and no mitigation measures are necessary.

Table 3 Localized Construction Emissions

Construction Activity	Pollutants(lbs/day)[1]			
	NO_X	CO	PM_{10}[2]	$PM_{2.5}$[2]
South Coast AQMD ≤1.00 Acre LST	93	810	10	4
Asphalt Paving and Finishing/Landscaping 2022	13	18	0.65	0.60
Finishing/Landscaping 2022	2	3	0.09	0.08
Finishing/Landscaping 2022 and Architectural Coating	3	5	0.17	0.16
Finishing/Landscaping 2023	2	3	0.08	0.07
Exceeds LST?	No	No	No	No
South Coast AQMD 4.00 Acre LST	169	1,763	27	9
Fine Grading and Finishing/Landscaping 2022	41	32	5.66	3.15
Fine Grading, Paving, and Finishing/Landscaping 2022	52	47	6.22	3.67
Exceeds LST?	No	No	No	No
South Coast AQMD 4.50 Acre LST	180	1,907	30	10
Asphalt Demolition, Site Preparation	59	40	11.28	6.96
Asphalt Demolition and Debris Haul, Site Preparation	59	40	11.28	6.96
Exceeds LST?	No	No	No	No

3. Environmental Analysis

Table 3 Localized Construction Emissions

Construction Activity	Pollutants(lbs/day)[1]			
	NO_X	CO	PM_{10}[2]	$PM_{2.5}$[2]
South Coast AQMD 5.00-Acre LSTs	190	2,051	33	10
Site Preparation, Rough Grading, Utilities Trenching	74	52	15.67	8.95
Site Preparation and Soil Haul, Rough Grading, Utilities Trenching	74	52	15.67	8.95
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2020.4; South Coast AQMD 2008, 2011.
Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment are included in the analysis. Screening level LSTs are based on receptors within 150 ft in SRA 19.
[1] Where specific information for Project-related construction activities or processes was not available, modeling was based on CalEEMod defaults. These defaults are based on construction surveys conducted by the South Coast AQMD.
[2] Includes fugitive dust control measures required by South Coast AQMD under Rule 403, such as watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

Construction Health Risk

Emissions from construction equipment primarily consist of diesel particulate matter. In 2015, the Office of Environmental Health Hazards Assessment adopted guidance for preparation of health risk assessments, which included the development of a cancer risk factor and non-cancer chronic reference exposure level for diesel particulate matter over a 30-year time frame (OEHHA 2015). Currently, South Coast AQMD does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. The Project is anticipated to be completed in approximately seven months, which would limit the exposure of on- and offsite receptors. Furthermore, construction activities would not generate onsite exhaust emissions that would exceed the screening-level construction LSTs, as demonstrated in Table 3, *Localized Construction Emissions*. Therefore, construction emissions would not pose a health risk to onsite and offsite receptors. Project-related construction health impacts would be less than significant and no mitigation measures are necessary.

Operation LSTs

Operation of the Project would not generate substantial emissions from onsite stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions include industrial land uses, such as chemical processing and warehousing operations where truck idling would occur onsite, which would require a permit from South Coast AQMD. The Project does not fall within these categories of uses. Therefore, localized air quality impacts related to operation-related emissions would be less than significant and no mitigation measures are necessary.

Carbon Monoxide Hotspots

Vehicle congestion has the potential to create pockets of CO called hotspots. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles are backed-up and idle for longer periods and are subject to reduced speeds. These pockets could exceed the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations.

The SoCAB has designated attainment under both the national and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact (BAAQMD 2017). The Project-related weekday peak-hour additional vehicle trips—33 AM and 4 PM—would be nominal compared to the AAQS screening levels (Urban Crossroads 2021a). Therefore, the Project would not substantially increase CO hotspots at intersections. Impacts would be less than significant and no mitigation measures are necessary.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The Project would not result in objectionable odors. The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The Project involves expansion and improvement to Oak Creek Community Park and would not fall within the objectionable odors land uses. Emissions from construction equipment, such as diesel exhaust and volatile organic compounds from architectural coatings and paving activities may generate odors. However, these odors would be low in concentration, temporary, and would not affect a substantial number of people. Therefore, odor impacts would be less than significant and no mitigation measures are necessary.

3.4 BIOLOGICAL RESOURCES

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. Special-status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act, species otherwise given certain designations by the California Department of Fish and Wildlife, and plant species listed as rare by the California Native Plant Society. As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine and surrounded by various commercial and residential uses. The Project Site is currently operating as a park and

undeveloped SCE property and does not contain any natural habitat that could contain any sensitive species or other sensitive natural community. There are trees onsite that would be removed by the Project. However, these trees are unlikely to support candidate, sensitive, or special-status species (see also Section 3.4.d regarding migratory species). Considering the current developed nature of the Project Site and its surroundings, the Project Site does not have capacity to support any candidate, sensitive, or special-status species. Therefore, no impact would occur and no mitigation measures are necessary.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. No riparian, sensitive or undisturbed native/natural habitats were documented within or abutting the Project Site (USFWS 2021a). The Project Site is currently operating as a park and surrounded by commercial and residential uses. The nearest riparian habitat is the San Diego Creek, which is south of the Project Site beyond Barranca Parkway. Per the United States Fish and Wildlife Service's national wetlands inventory, the creek is designated riverine habitat (USFWS 2021a). However, Project development would have no impact on this creek because all improvements would occur within the confines of the Project Site. Therefore, no impact would occur and no mitigation measures are necessary.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. As discussed in Section 3.4.b, the Project Site is currently operating as a park and surrounded by commercial and residential uses. No watercourse runs through or adjacent to the Project Site and no wetland habitat exists onsite (USFWS 2021a). The nearest wetland is the San Diego Creek, which is south of the project site beyond Barranca Parkway. Per the United States Fish and Wildlife Service's national wetlands inventory, the creek is designated as riverine habitat (USFWS 2021a). However, Project development would have no impact on this creek as all improvements would occur within the confines of the project site. Therefore, no impact would occur and no mitigation measures are necessary.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact With Mitigation Incorporated. The Project Site is in an urbanized area of Irvine. The Project Site is surrounded by commercial and residential uses. No critical habitat exists on or abutting the Project Site (USFWS 2021b). Also, the Project Site and its surroundings do not represent a wildlife movement corridor or route between open space habitats. Although the Project Site may provide some habitat for limited wildlife movement and live-in habitat—particularly for reptile and avian species and small to medium mammals that are adapted to urban settings—the Project Site does not function as a wildlife corridor. Additionally, the Project Site and environs have not been identified or designated as a wildlife corridor.

However, a few trees on the Project Site would be removed because of project implementation, and construction activities would be in proximity to existing trees to remain (see Figure 3, *Aerial Photograph*). The trees may provide suitable habitat, including nesting habitat, for migratory birds under the federal Migratory Bird Treaty Act (MBTA) and Section 3513 et seq., of the California Fish and Game Code. Section 3513 provides protection to the birds listed under the MBTA—essentially all native birds. Additionally, Section 3503 of the Fish and Game Code makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird.

Project construction could result in direct and/or indirect impacts to nesting birds, including the loss of nests, eggs, and fledglings if ground-disturbing activities occur during the nesting season (generally February 1 through August 31). Construction activities during this time may result in reduced reproductive success and may violate the MBTA and California Fish and Game Code Sections 3503 and 3513. If construction (including any ground-disturbing activities) occurs during the nesting season, a nesting bird survey must be conducted by a qualified biologist prior to grading activities, as outlined in Mitigation Measure BIO-1. If nesting birds are observed within or adjacent to the construction activities, avoidance of active bird nests should occur as determined by the qualified biologist to ensure compliance with these regulations.

Adherence to the MBTA regulations and implementation of Mitigation Measure BIO-1 would ensure that if construction activities occur during the breeding season, appropriate measures would be taken to avoid impacts to nesting birds, if any are encountered. Compliance with the MBTA requirements and Mitigation Measure BIO-1 would be ensured through the City's development review process. Therefore, impacts would be reduced to a level of less than significant with implementation of mitigation.

Mitigation Measures

BIO-1 To avoid impacts to nesting birds within or adjacent to the Project Site and to comply with the California Fish and Game Code Sections 3503 and 3513 and the Migratory Bird Treaty Act, any site clearing and ground-disturbing activities should occur during the nonnesting (or nonbreeding) season for birds (generally, September 1 to January 31). If this avoidance schedule is not feasible, prior to the commencement of any proposed actions (e.g., site clearing, demolition, grading) during the breeding/nesting season, a qualified monitoring biologist contracted by the City of Irvine shall conduct a preconstruction survey(s) to identify any active nests in and adjacent to the Project Site no more than 14 days prior to initiation of the action. If the biologist does not find any active nests that would be potentially impacted, the proposed action may proceed.

However, if the biologist finds an active nest within or directly adjacent to the action area (within 100 feet) and determines that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest using temporary plastic fencing or other suitable materials, such as barricade tape and traffic cones. The buffer zone shall be determined by the biologist in consultation with applicable resource agencies; in consideration of species sensitivity and existing nest site conditions; and in coordination with the construction contractor. The qualified biologist shall serve as a construction monitor when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests.

Only specified activities (if any) approved by the qualified biologist in coordination with the construction contractor shall take place within the buffer zone until the nest is vacated. Activities that may be prohibited within the buffer zone by the biologist include but are not limited to grading and tree clearing. Once the nest is no longer active and upon final determination by the biologist, the proposed action may proceed within the buffer zone. The monitoring biologist shall prepare a survey report summarizing his/her findings and recommendations of the preconstruction survey. Any active nests observed during the survey shall be mapped on a current aerial photograph, including documentation of GPS coordinates, and included in the survey report. The completed survey report shall be submitted to the City of Irvine Project Management Division prior to the commencement of construction-related activities that have the potential to disturb any active nests during the nesting season.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. As shown in Figure 3, *Aerial Photograph*, the Project Site contains the Oak Creek Community Park and an undeveloped SCE property; the Project Site contains a number of mature trees. Project development would involve the removal of a number of trees. The majority of existing trees onsite would be protected in place, with approximately 30 being removed to make room for the new park improvements. However, the trees to be removed are ornamental and not covered by any City tree preservation policies or ordinances. Also, any removal of trees within the public right-of-way, street landscape, or trees defined as having significant value are required to comply with the City's Urban Forestry Ordinance. Since trees proposed for removal are not within the public right-of-way, street landscape, or trees defined as having significant value, Project implementation would not conflict with the City's Urban Forestry Ordinance. Furthermore, approximately 65 trees would be planted throughout the Project Site, which is two times more than the number of trees to be removed. Therefore, no impact would occur, and no mitigation measures are necessary.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is within the Natural Community Conservation Plan/Habitat Conservation Plan (NCCH/HCP) for the Central and Coastal Subregion of Orange County. The NCCP/HCP provides long-term protection for wildlife and their critical habitats, and regulatory assurances and economic benefits for participating landowners. However, the project site is located outside of the 37,378-acre habitat reserve system, which was created to include significant areas of the 13 major habitat types in the Central and Coastal Subregion. The reserve system protects more than 18,500 acres of coastal sage scrub habitat, 6,950 acres of chaparral, 5,700 acres of grassland, 1,750 aces of riparian, 950 acres of woodland, 200 acres of forest habitat and significant portions of six other habitat types existing in the subregion (CDFW 2022). Being outside of the reserve system ensures that the Project would not impact any of the habitat types protected by the NCCP/HCP. Additionally, the project site is in a highly urbanized area of Irvine and consists of the Oak Creek Community Park and an undeveloped SCE property. Therefore, no impact would occur, and no mitigation measures are necessary.

3.5 CULTURAL RESOURCES

The analysis in this section is based partly on the following technical study, which is included as Appendix B to this Initial Study:

- *Cultural Resources Assessment*, BCR Consulting, Inc., April 2022

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

No Impact. Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally a resource is considered "historically significant" if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

ii) Is associated with the lives of persons important in our past;

iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;

iv) Has yielded, or may be likely to yield, information important in prehistory or history.

As shown in Figure 3, *Aerial Photograph*, the northern half of the Project Site is developed with the Oak Creek Community Park and related site improvements and is owned and operated by the City; the southern portion is undeveloped land that is owned by SCE. The park site has a few buildings and structures, which include picnic pavilion, play structures, and a restroom building. The SCE property is void of buildings, but does contain a few electrical transmission towers and lines. Project implementation would not include the demolition or removal of any of the existing buildings or structures onsite; these would remain in their existing condition. Also, none of the buildings or structures is considered historical.

Historically, the Project Site was developed for agricultural purposes, with orchards from at least 1938 to 1967, followed by intermittent row crops from the 1970s to about 2001 (BCR 2022). The Project Site then became occupied by SCE with overhead powerline structures (southern half) and the existing Oak Creek Community Park (northern half). The Project Site and existing buildings and structures are not listed in the National Register of Historic Places or California Register of Historic Resources (NPS 2020; OHP 2022). Also, as shown in Figure E-1 (Historical/Archeological Landmarks) of the Irvine General Plan Cultural Resources Element, the Project Site is not listed as a designated historical or archeological landmark.

Based on the preceding, no impact to historical resources would occur and no mitigation measures are necessary.

3. Environmental Analysis

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant Impact With Mitigation Incorporated. Archaeological resources are prehistoric or historic evidence of past human activities, including structural ruins and buried resources. As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine; most of the site has already been disturbed due to grading and construction activities associated with current uses of the site. Given the disturbed condition of the Project Site and its surroundings, the potential for the Project to impact an unidentified archeological resource is considered extremely low. Also, as shown in Figure E-1, Historical/Archeological Landmarks, of the Irvine General Plan Cultural Resources Element, the Project Site is not listed as a designated historical or archeological landmark.

Additionally, as a part of the cultural resources assessment conducted for the Project Site, BCR Consulting requested an archaeological records search from the South Central Coastal Information at California State University, Fullerton. The records research revealed that 44 cultural resource studies have been completed within a one-half-mile radius of the Project Site, resulting in the recording of three cultural resources (two prehistoric and one historic period). None of the previous studies assessed the Project Site, and no cultural resources were identified within the Project Site's boundaries (BCR 2022).

The Sacred Lands File search by the Native American Heritage Commission (NAHC) found resources, but the NAHC did not indicate the nature or location of the resource(s). Finally, an intensive pedestrian survey of the Project Site by BCR Consulting staff did not yield any cultural resources. The high level of disturbance of the Project Site indicates relatively low sensitivity for buried archaeological resources (BCR 2022).

Based on the results of the cultural resources records search, Sacred Lands File search, and field survey of the Project Site, the cultural resources assessment concluded that no additional cultural resources work or monitoring is necessary. However, although the assessment has not indicated sensitivity for cultural resources within the Project Site boundaries, Project-related ground-disturbing activities (e.g., grading and excavation) have the potential to reveal buried archeological deposits not observed on the surface during previous site disturbance and surveys. Therefore, though unlikely, the presence of subsurface archaeological resources on the Project Site is possible, and these could be affected by ground-disturbing activities associated with the Project.

However, implementation of Mitigation Measure CUL-1 would avoid or minimize potential Project impacts to archaeological resources. With implementation of Mitigation Measure CUL-1, impacts to archeological resources would be reduced to a less than significant level. Compliance with the mitigation measure would be ensured through the City's building plan check and development review process.

Mitigation Measures

CUL-1 Prior to the issuance of grading permits, the City of Irvine shall retain a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications for Archeology as defined at 36 CFR Part 61, Appendix A (Professional Archeologist). The qualified

archaeologist shall be on call during all grading and other significant ground-disturbing activities.

In the event that potential archeological resources are discovered during ground-disturbing activities, all such activity shall cease in the immediate area of the find (i.e., not less than a 50-foot buffer), and the professional archeological monitor shall have the authority to halt any activities adversely impacting potentially significant cultural resources until they can be formally evaluated. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the archaeological monitor has evaluated the discovery to assess whether it can be classified a significant cultural resource pursuant to the CEQA (California Environmental Quality Act) definition of historical and/or unique archeological resource (State CEQA Guidelines Section 15064.5[a] and/or Public Resources Code Section 21083.2[g]). Work may continue in other areas of the Project Site outside of the buffered area and for other project elements while the encountered find is evaluated. Additionally, the Gabrieleño Band of Mission Indians – Kizh Nation and Juaneño Band of Mission Indians Aejachemen Nation – Belardes shall be contacted regarding any pre-contact and/or historic era finds and be provided information after the archaeologist makes his/her initial assessment in order to provide Kizh Nation and Aejachemen Nation input with regards to significance and treatment. The City shall, in good faith, consult with Kizh Nation and Aejachemen Nation throughout the duration of ground-disturbing activities. .

If, upon completion of the assessment, the archeological monitor determines that the find qualifies as a significant cultural resource, the qualified archeologist shall make recommendations on the treatment and disposition of the deposits, which shall be developed in accordance with all applicable provisions of California Public Resource Code Section 21083.2 and State CEQA Guidelines Sections 15064.5 and 15126.4. For example, if significant cultural resources are discovered, and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan (MTP). The MTP shall be overseen and implemented by the archeologist and include mitigation measures to follow regarding identification and recording methods, and evaluation and final treatment of any cultural resources identified. The MTP shall allow for a Kizh Nation monitor to be present for the remainder of the ground-disturbing activities, should Kizh Nation elect to place a monitor onsite. Likely mitigations would involve temporary avoidance of the area of discovery plus a 60-foot buffer, development of a cultural resources eligibility evaluation plan in consultation with Kizh Nation, Aejachemen Nation and the City of Irvine, and test excavation to determine eligibility of any discovery for the California Register of Historical Resources. Final disposition of any artifacts recovered shall be determined during development of the evaluation plan and would be likely to include reburial onsite, donation to Kizh Nation, or other Native American entities, or curation at a federally approved repository. The draft MTP and any/all archaeological/cultural documents created (isolate records, site records, survey reports, testing reports, etc.) shall be provided to the City of Irvine for dissemination to Kizh Nation. The archaeologist shall monitor the remainder of the Project Site and implement the MTP

accordingly. The archaeologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the City for dissemination to Kizh Nation or Aejachemen Nation. If disturbed resources are required to be collected and preserved, the City shall be required to participate financially up to the limits imposed by Public Resources Code Section 21083.2.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. There are no known human remains or cemeteries on or near the Project Site. The nearest cemetery to the site is Ascension Cemetery, which is a fairly small cemetery on the south side of Trabuco Road just north of Via Del Rio. This cemetery is approximately 4.5 miles southeast of the project site.

As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine, and although a portion of the site is undeveloped (southern half), most of the site has already been disturbed due to grading and construction activities associated with uses that occupy the site. A majority of the surrounding vicinity has also experienced substantial ground disturbance associated with the development of existing buildings, roadways, and other urbanized land uses. The Project Site is largely flat, and development proposed under the Project would be above ground level. Accordingly, little ground disturbance would be required to implement the Project. Therefore, the likelihood that human remains would be discovered during site clearing and grading activities is considered extremely low. Additionally, due to the distance to the Ascension Cemetery, Project development would have no direct or indirect impacts on the cemetery.

However, Project development could have the potential to disturb previously undiscovered subsurface human remains because it would involve grading and some excavation activities over the entire Project Site. In the unlikely event that human remains are uncovered during ground-disturbing activities, California Health and Safety Code Section 7050.5 requires that disturbance of the site shall remain halted until the Orange County Coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative, in the manner provided in Section 5097.98 of the California Public Resources Code. The coroner is required to make a determination within two working days of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to his or her authority or has reason to believe the human remains are those of a Native American, he/she/they shall contact, by telephone within 24 hours, the NAHC, who will contact the most likely descendant. The descendant shall be given access to the discovery and will provide recommendations or preferences for treatment of the remains within 48 hours of accessing the discovery site. Disposition of human remains and any associated grave goods, if encountered, shall be treated in accordance with procedures and requirements in Sections 5097.94 and 5097.98 of the Public Resources Code; Section 7050.5 of the California Health and Safety Code; and CEQA Guidelines Section 15064.5.

Compliance with existing law regarding the discovery of human remains would reduce potential impacts to human remains to less than significant levels. No mitigation measures are necessary.

3.6 ENERGY

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The following discusses the potential energy demands from construction activities associated with the construction and operation of the Project.

Short-Term Construction Impacts

Construction of the Project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electrical Energy

Construction of the Project would not require electricity to power most construction equipment. Electricity use during construction of the Project would vary during different phases of construction. The majority of construction equipment would be gasoline or diesel powered. Later construction phases could result in the use of electric-powered equipment for interior construction and architectural coatings. However, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws) and lighting, which would result in minimal electricity usage during construction activities. Additionally, it is anticipated that such equipment would be used on an as-needed basis. Therefore, Project-related construction activities would not result in wasteful or unnecessary electricity demands. Impacts would be less than significant, and no mitigation measures are necessary.

Natural Gas Energy

It is not anticipated that construction equipment used for the Project would be powered by natural gas, and no natural gas demand is anticipated during construction. Therefore, impacts would be less than significant and no mitigation measures are necessary.

Transportation Energy

Transportation energy use during construction of the Project would come from delivery vehicles, haul trucks, and construction employee vehicles. In addition, transportation energy demand would come from use of off-road construction equipment. It is anticipated that the majority of off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. The use of energy resources by these vehicles would fluctuate according to the phase of construction.

To limit wasteful and unnecessary energy consumption from transportation, the construction contractors would minimize nonessential idling of construction equipment in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9, which limits nonessential idling of diesel-powered off-road equipment to five minutes. In addition, construction trips would not result in unnecessary use of energy since the Project Site is served by numerous regional freeway systems (e.g., I-405, I-5, and SR-133)

that provide the most direct routes from various areas of the region. Moreover, all construction equipment would cease operating upon completion of Project construction. Therefore, energy use during the construction phase would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant, and no mitigation measures are necessary.

Long-Term Impacts During Operation

Operation of the Project would generate new demand for electricity, natural gas, and transportation energy on the Project Site. Operational use of energy would include operation of electrical systems; use of onsite equipment; and outdoor, perimeter, and sports field lighting.

Electrical Energy

Operation of the Project would consume electricity for various purposes, including, but not limited to operation of electrical systems, lighting, and use of onsite equipment. Electrical service to the Project Site would continue to be provided by SCE through connections to existing offsite electrical lines and new onsite infrastructure. As shown in Table 4, implementation of the Project would result in a net increase of 67,344 kilowatt hours (kWh) of electricity use per year.

Table 4 Electricity Consumption

Land Use	Electricity (kWh/year)
Parking Lot	27,999
Racquet Club[1]	21,519
Lighting Energy[2]	87,688
Proposed Project Total	**137,206**
Existing Conditions Total[3]	**69,862**
Net Change	**67,344**

Source: CalEEMod Version 2020.4.
Note: kWh = kilowatt hour(s)
1 Racquet club was used for this analysis as it is the most similar land use type in the CalEEMod defaults that represents the existing park buildings on site. Therefore, the electrical generation noted for this land use type is conservative.
2 Calculated energy demand from sports field lighting off model (87,688 kWh/year) based on 365 days per year for 3 hours per day on average.
3 Includes the electricity use from calculated field lighting off model (28,185 kWh/year) based on 365 days per year for 3 hours per day of on average.

While the Project would result in an increase in electricity demand, it would be consistent with the requirements of the latest 2020 Title 20 Lighting Standards. Compliance with the standards would contribute to minimizing inefficient energy use by the proposed parking area and sports field lighting. Therefore, operation of the Project would not result in wasteful or unnecessary electricity demands. Impacts would be less than significant and no mitigation measures are necessary.

Natural Gas Energy

Operation of Project would not consume natural gas for heating nor result in any natural gas demand. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

Transportation Energy

The Project would consume transportation energy during operations from the use of motor vehicles, which include both on-road vehicles and off-road equipment. The efficiency of these motor vehicles is unknown, such as the average miles per gallon. Estimates of transportation energy use for on-road vehicles are based on the overall vehicle miles traveled (VMT) and their associated transportation energy use. The Project would result in a net increase in annual VMT, which would also result in a net increase of fuel consumption. However, since the Project meets the criteria for redevelopment and community-serving project, it is presumed to have a less than a significant impact on VMT. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The state's electricity grid is transitioning to renewable energy under California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state's renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. Senate Bill 350 (SB 350) also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. On September 10, 2018, Governor Brown signed SB 100, which supersedes the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 established a new RPS requirement of 50 percent by 2026. The bill also established a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under SB 100 the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The statewide RPS goal is not directly applicable to individual development projects, but to utilities and energy providers such as SCE, which is the utility that would provide all of electricity needs for the Project. Compliance of SCE in meeting the RPS goals would ensure the state is meeting its objective in transitioning to renewable energy. The Project would also comply with the latest 2020 Title 20 lighting standards. Therefore, implementation of the Project would not conflict or obstruct plans for renewable energy and energy efficiency. No impact would occur, and no mitigation measures are necessary.

3.7 GEOLOGY AND SOILS

The analysis in this section is based partly on the following technical study, which is included as Appendix C to this Initial Study:

- *Limited Geotechnical Investigation*, Geocon West Inc., April 2022.

3. Environmental Analysis

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. Surface rupture is the most easily avoided seismic hazard. Fault rupture generally occurs within 50 feet of an active fault line and is limited to the immediate area of the fault zone where the fault breaks along the surface. The main purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent construction of buildings used for human occupancy on the surface of active faults, in order to minimize the hazard of surface rupture of a fault to people and habitable buildings. Before cities and counties can permit development within Alquist-Priolo Earthquake Fault Zones, geologic investigations are required to show that the proposed development site is not threatened by surface rupture from future earthquakes.

According to the California Geologic Survey, the Project Site is not in a currently established Alquist-Priolo Earthquake Fault Zone for fault rupture hazard. The San Joaquin Hills Fault, Newport-Inglewood Fault Zone, and Elsinore Fault are the nearest faults to the Project Site, and they are approximately 2 miles, 10 miles, and 15 miles, respectively, from the Project Site (DOC 2022). No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, no impact would occur and no mitigation measures are necessary.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As stated above, the Project Site is not within an established Alquist-Priolo Earthquake Fault Zone. However, like all areas in southern California, movement associated with the active faults could cause strong ground motion at the Project Site. The degree of ground shaking and earthquake-induced damage is dependent on multiple factors, such as distances to causative faults, earthquake magnitudes, and expected ground accelerations. The closest active fault is the San Joaquin Hills fault, which is approximately two miles south of the Project Site (DOC 2022). Movement along this fault or other regional faults could result in seismic ground shaking on the Project Site.

However, the Project Site is not at a greater risk of seismic activity or impact than other sites in southern California. Seismic shaking is a risk throughout southern California. Additionally, the Project does not include construction of new structures or buildings. Therefore, there would be no potential from hazards due to strong seismic ground shaking. Impacts would be less than significant, and no mitigation measures are necessary.

iii) Seismic-related ground failure, including liquefaction? Liquefaction refers to loose, saturated sand or silt deposits that behave as a liquid and lose their load-supporting capability when strongly shaken. Loose granular soils and silts that are saturated by relatively shallow groundwater are susceptible to liquefaction.

No impact. According to the reference Seismic Hazard Zone map for the Tustin 7.5-Minute Quadrangle, the Project Site does not lie within an area that is susceptible to earthquake-induced liquefaction or landslide. Additionally, Project development does not include any habitable buildings or structures; all proposed improvements would be surface level, which include hardscape (e.g., walkways, parking lot) and landscape improvements (e.g., playfields, dog park). Furthermore, Project Site grading, design, and construction would conform with the recommended design parameters of the limited geotechnical investigation prepared for the Project (Appendix C), and compliance with the design parameter would be ensured through the City's building plan check and development review process.

Therefore, no impact would occur, and no mitigation measures are necessary.

iv) Landslides?

No Impact. Landslides are the downslope movement of geologic materials. Slope failures in the form of landslides are common during strong seismic shaking in areas of steep hills. Landslides are not expected to occur at the Project Site, since the site is generally flat and not within a landslide hazard area, which are areas having potential for seismic slope instability (DOC 2022). Additionally, and as noted above, according to the reference Seismic Hazard Zone map for the Tustin 7.5-Minute Quadrangle, the Project Site does not lie within an area that is susceptible to earthquake-induced liquefaction or landslide. Therefore, no impact would occur, and no mitigation measures are required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Erosion is the movement of rock and soil from place to place and is a natural process. Common agents of erosion in the project region include wind and flowing water. Significant erosion typically occurs on steep slopes where stormwater and high winds can carry topsoil down hillsides. Erosion can be increased greatly by earth-moving activities if erosion control measures are not used. The following is a discussion of the potential erosion impacts resulting from the Project's construction and operational phases.

Construction Phase

Construction of the Project would result in excavation and exposure of underlying soils that could result in soil erosion. Construction activities would involve earthwork, such as grading and excavating, and construction equipment and vehicle use that could track soil offsite. These activities could result in soil erosion. Additionally, natural processes, such as wind and rain, could further lead to soil erosion during construction.

However, construction of the Project would be required to comply with local and state codes regulating construction activities and soil erosion. For example, the Construction General Permit (CGP; 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) issued by the State Water Resources Control Board regulates construction activities to minimize water pollution, including sediment risk from construction

activities to receiving waters. Project development would be subject to the National Pollution Discharge Elimination System permitting regulations, including the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which is further discussed in Section 3.10.c.i. The Project's construction contractor would be required to prepare and implement a SWPPP and associated best management practices (BMP) in compliance with the CGP during grading and construction. For example, as outlined in Section 3.10c.i, types of BMPs that are incorporated in SWPPPs and would help minimize impacts from soil erosion include:

- **Erosion controls.** Cover and/or bind soil surface to prevent soil particles from being detached and transported by water or wind. Erosion control BMPs include mulch, soil binders, and mats.
- **Sediment controls.** Filter out soil particles that have been detached and transported in water. Sediment control BMPs include barriers and cleaning measures such as street sweeping.
- **Tracking controls.** Tracking control BMPs minimize the tracking of soil offsite by vehicles, for instance, stabilizing construction roadways and entrances/exits.

Adherence to the BMPs in the SWPPP and adherence with local and state codes including Division 10, Chapter 1, Article j of the Irvine Municipal Code (Erosion and Sediment Control), would reduce, prevent, or minimize soil erosion from project-related grading and construction activities. For example, as outlined in Sec. 5-10-137.A of Article j, prior to the issuance of grading permits an erosion and sediment control plan for development projects is required to be approved by the Chief Building Official.

Additionally, project development is required to comply with standard regulations, including South Coast AQMD Rules 402 and 403, which would reduce construction erosion impacts. Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emissions source. Rule 402 requires dust suppression techniques be implemented to prevent dust and soil erosion from creating a nuisance offsite. For example, as outlined in Rule 403, Table 1, Best Available Control Measures, control measures to reduce erosion during grading and construction activities include stabilizing backfill materials when not actively handling, stabilizing soils during clearing and grubbing activities, and stabilizing soils during and after cut-and-fill activities.

Therefore, soil erosion impacts from project-related grading and construction activities would be less than significant and no mitigation measures are necessary.

Operation Phase

The Project Site is in an urbanized area of Irvine and is generally flat. No major slopes or bluffs are on or adjacent to the site. After project completion, the redeveloped portion of the Project Site would have a soccer field, a dog park, a flex field, a parking lot, access and circulation improvements, and landscape improvements; it would not contain exposed or bare soil. Upon project completion, the potential for soil erosion or the loss of topsoil would be expected to be extremely low. Therefore, soil erosion impacts from the project's operation phase would be less than significant and no mitigation measures are necessary.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. Hazards from liquefaction and lateral spreading are addressed above in Section 3.7.a.iii, and landslide hazards are addressed above in Section 3.7.a.iv. As concluded in these sections, no impact would occur, and no mitigation measures are necessary.

Ground Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. Soils with high silt or clay content are particularly susceptible to subsidence. Based on a field investigation conducted as a part of the limited geotechnical investigation and published geologic maps of the area, the Project Site is underlain by artificial fill and unconsolidated Holocene-age young alluvial fan deposits consisting of gravel, sand, and silt (Appendix C). The Project Site does not contain soils with high silt or clay content. The Project Site is over the Coastal Plain of Orange County groundwater basin, where ground subsidence has been identified (USGS 2022). However, there is no evidence that land subsidence has interfered with surface uses since 2002 (DWR 2019). Also, groundwater storage by Orange County Water District and statutory commitments to sustainable groundwater management practices reduce the potential for future land subsidence, and ongoing surveying of the ground surface by Orange County Water District provides a way to verify that its efforts in preventing subsidence are effective (OCWD 2015). Furthermore, based on a review of the Seismic Hazard Zone Report of the Tustin Quadrangle, the historically highest groundwater level in the area is greater than 40 feet beneath the ground surface (Appendix C). Therefore, impacts from ground subsidence would be less than significant and no mitigation measures are necessary.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soils shrink or swell as the moisture content decreases or increases; the shrinking or swelling can shift, crack, or break structures built on such soils. Based on geologic observation and laboratory testing, the onsite soils have a medium to high expansion potential. Due to the potential for expansive soils, special design considerations would be required for the foundations, slabs, and flatwork associated with the proposed improvements.

The onsite native soils are considered to have a "high" expansion potential and are classified as "expansive". These soils may be subject to swelling and shrinking cycles following the introduction of water due to precipitation, irrigation, or other means. However, Project development would be implemented in accordance with the recommendations of the limited geotechnical investigation prepared for the project (Appendix C). With implementation of the design parameters of the geotechnical reports, which would be ensured through the City's building plan check and development review process, Project development would not subject people to substantial hazards arising from ground subsidence. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed improvements under the Project would not generate any wastewater. The existing park restrooms are already served by sewer laterals that connect to sewers in surrounding roadways. The project would not involve the use of septic tanks or other alternative wastewater disposal systems. Therefore, no impact would occur, and no mitigation measures are necessary.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact With Mitigation Incorporated. Paleontological resources are commonly known as fossils, that is, the recognizable physical remains or evidence of past life forms found on earth in past geological periods—including bones, shells, leaves, tracks, burrows, and impressions.

As shown in Figure E-2, Paleontological Sensitivity Zones, of the Irvine General Plan Cultural Resources Element, the Project Site is in a zone with low paleontological sensitivity. Additionally, there are no unique geological features onsite or adjacent to or surrounding the Project Site. The Project Site exhibits generally flat topography.

However, the geologic units underlying the Project Site are mapped entirely as young alluvial fan deposits dating from the late Pleistocene to Holocene epoch. Pleistocene alluvial units are considered to have high paleontological sensitivity, and though the Western Science Center does not show localities in the project area or a one-mile radius, multiple localities are in similarly mapped units throughout the region. Pleistocene alluvial units are known to produce fossil specimens including mastodon (*Mammut pacificus*), mammoth (*Mammuthus columbi*), ancient horse (*Equus* sp.), camel (*Camelops hesternus*), sabertooth cats (*Smilodon fatalis*) and many more (Geocon 2022).

Project-related ground-disturbing activities (e.g., grading and excavation) have the potential to reveal buried paleontological deposits not observed on the surface during previous site disturbance and surveys. Therefore, the presence on the Project Site of subsurface paleontological resources is possible, and such resources could be affected by ground-disturbing activities.

However, implementation of Mitigation Measure GEO-1 would avoid or minimize potential Project impacts to paleontological resources. With implementation of Mitigation Measure GEO-1, impacts to paleontological resources would be reduced to a less than significant level. Compliance with the mitigation measure would be ensured through the City's building plan check and development review process.

Mitigation Measures

GEO-1 Prior to the issuance of grading permits, the City shall retain a qualified paleontologist. The qualified paleontologist shall be on call during all grading and other significant ground-disturbing activities.

In the event that potential paleontological resources are discovered during ground-disturbing activities, all such activity shall cease in the immediate area of the find, and the professional

archeological monitor shall have the authority to halt any activities adversely impacting potentially significant paleontological resources until they can be formally evaluated. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the paleontological monitor has evaluated the discovery. Work may continue in other areas of the Project Site and for other project elements while the encountered find is evaluated.

If the resource is classified as a significant paleontological resource, the qualified paleontologist shall make recommendations on the treatment and disposition of the deposits. The paleontologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the City.

3.8 GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities contribute to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHG), into the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the Panel that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[2]

Information on manufacture of cement, steel, and other "life cycle" emissions that would occur as a result of the project are not applicable and are not included in the analysis.[3] Black carbon emissions are not included in the GHG analysis because the California Air Resources Board (CARB) does not include this short-lived climate pollutant in the state's SB 32 inventory but treats it separately.[4] A background discussion on the GHG regulatory setting and GHG modeling is provided in Appendix A to this Initial Study.

[2] Water vapor (H2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

[3] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (CNRA 2018). Because the amount of materials consumed during the operation or construction of the Project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

[4] Particulate matter emissions, which include black carbon, are analyzed in Section 3.3, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The state's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017a.).

3. Environmental Analysis

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

Project-related construction- and operation-phase GHG emissions are shown in Table 5. As identified in Section 3.17, *Transportation*, the Project would generate a net increase of 317 weekday vehicle trips and an increase of 634 daily trips on the weekend (Urban Crossroads 2021a). Additionally, operation of the Project would result in an increase in water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), and energy usage (i.e., electricity). Annual average emissions from construction activities were amortized over 30 years and included in the emissions inventory to account for one-time GHG emissions from the construction phase of the project. As demonstrated in Table 5, development and operation of the Project would not generate net annual emissions that exceed the South Coast AQMD Working Group bright-line threshold of 3,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year for development projects (South Coast AQMD 2010). Therefore, the Project's cumulative contribution to GHG emissions would not be significant. Impacts would be less than significant, and no mitigation measures are necessary.

Table 5 Project-Related Operation GHG Emissions

Source	GHG ($MTCO_2e$/Year)		
	Existing	Project	Net
Area	<1	<1	<1
Energy	13	14	2
Mobile (Vehicle Trips)[1]	609	1,037	428
Solid Waste[2]	<1	1	<1
Water[3]	24	39	15
Lighting Energy[4]	7	20	13
Amortized Construction Emissions[5]	NA	16	16
Total	**653**	**1,128**	**475**
South Coast AQMD Bright-Line Threshold	NA	NA	3,000 $MTCO_2e$/Year
Exceeds Bright-Line Threshold?	**NA**	**NA**	**No**

Source: CalEEMod, Version 2020.4.
Notes: $MTCO_2e$: metric ton of carbon dioxide equivalent
1 Vehicle trips provided by Urban Crossroads (Appendix G).
2 Solid waste based on CalEEMod defaults for both existing conditions and Project operations.
3 Annual outdoor water use is based on calculations from the State Department of Water Resources Water Budget Worksheet for new and rehabilitated non-residential landscapes. Proposed number is highly conservative and is expected to be less.
4 Lighting demand based on the Musco Lighting Study and carbon intensity for Southern California Edison.
5 Total construction emission are amortized over 30 years per South Coast AQMD Working Group methodology.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). A consistency analysis with these plans is presented below.

CARB Scoping Plan

On December 24, 2017, CARB adopted the Final 2017 Climate Change Scoping Plan Update (Scoping Plan) to address the 2030 interim target to achieve a 40 percent reduction below 1990 levels by 2030, established by SB 32 (CARB 2017b). The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Since adoption of the 2008 Scoping Plan, which was adopted to achieve the GHG reduction goals of Assembly Bill 32 (AB 32), state agencies have adopted programs identified in the plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the Corporate Average Fuel Economy standards, and other early action measures as necessary to ensure the state is on target to achieve the GHG emissions reduction goals AB 32 and SB 32. Also, new buildings are required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen. While measures in the Scoping Plan apply to state agencies and not the Project, the Project's GHG emissions would be reduced by statewide compliance with measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, the Project would not obstruct implementation of the CARB Scoping Plan. No impact would occur, and no mitigation measures are necessary.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted the 2020-2045 RTP/SCS (Connect SoCal) in September 2020. Connect SoCal identifies that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options are consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal is to plan for the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). Connect SoCal's transportation projects help more efficiently distribute population, housing, and employment growth, and forecast development is generally consistent with regional-level general plan data to promote active transportation and reduce GHG emissions. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

The Connect SoCal Plan does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. The community park is a local-serving land use and would provide new circulation improvements throughout for pedestrians and vehicles. Therefore, the Project would not interfere with SCAG's ability to implement the regional strategies outlined in Connect SoCal. No impact would occur, and no mitigation measures are necessary.

3.9 HAZARDS AND HAZARDOUS MATERIALS

The analysis in this section is based partly on the following technical study, which is included as Appendix D to this Initial Study.

- *Soil Sampling*, PlaceWorks, May 4, 2022.

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact. The term "hazardous material" can be defined in different ways. For purposes of this environmental document, the definition of "hazardous material" is the one in California Health and Safety Code, Section 25501:

> Hazardous materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials, and the definition is essentially the same as in California Health and Safety Code, Section 25117, and in California Code of Regulations, Title 22, Section 66261.2:

> Hazardous wastes are those that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Hazardous materials can be categorized as hazardous nonradioactive chemical materials, radioactive materials, and biohazardous materials (infectious agents such as microorganisms, bacteria, molds, parasites, viruses, and medical waste).

The means by which the public or the environment could be exposed to hazardous materials include but are not limited to improper handling or use of hazardous materials or waste, particularly by untrained personnel; transportation accident; environmentally unsound disposal methods; and/or fire, explosion, or other

emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or wastes present, and the proximity of sensitive receptors.

Following is a discussion of the project's potential to create a significant hazard to the public or the environment through the routine use, storage, transport, or disposal of hazardous materials during the operational and construction phases.

Project Construction

Construction activities would involve the use of larger amounts of hazardous materials than would Project operation. Construction activities would involve use of hazardous materials including cleansers and degreasers; fluids used in routine maintenance and operation of construction equipment, such as oil and lubricants; fertilizers; pesticides; and architectural coatings including paints. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature and would cease upon completion of the Project's construction phase. As standard practice in the construction industry, Project construction workers are trained in safe handling and hazardous materials use.

Additionally, the use, storage, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations for the cleanup and disposal of that contaminant. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements set forth by the Orange County Fire Authority (OCFA) would be required through the duration of the project construction phase.

Based on the preceding, hazards to the public or the environment arising from the routine use of hazardous materials during project construction would be less than significant and no mitigation measures are necessary.

Project Operation

As shown in Figure 3, *Aerial Photograph*, the Project Site contains the Oak Creek Community Park and an undeveloped SCE property. Project operation would involve the use and storage of hazardous materials and wastes, such as cleansers, fertilizers, and pesticides for cleaning and maintenance purposes. However, the Project would not use, generate, store, or transport large quantities of hazardous materials; such uses generally include manufacturing, industrial, medical (e.g., hospital), and similar uses.

Additionally, the use, storage, transport, and disposal of hazardous materials would be governed by existing regulations of several agencies, including the US Environmental Protection Agency, US Department of Transportation, California Division of Occupational Safety and Health, Orange County Department of Public Health, and OCFA. Compliance with applicable laws and regulations governing the use, storage, transportation,

and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. The Project would also be operated with strict adherence to all emergency response plan requirements set forth by OCFA.

Therefore, substantial hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during long-term operation of the Project would not occur. Impacts would be less than significant, and no mitigation measures are necessary.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. Following is a discussion of the potential hazards impacts that could arise through the accidental release of hazardous materials from the Project's construction and operational phases, as well from existing site materials onsite.

Hazardous Materials Associated with Project Construction and Operation

See response to Section 3.9.a., above. As concluded in this section, hazards to the public or the environment arising from the routine use of hazardous materials during Project operation and construction phases would be less than significant and no mitigation measures are necessary. Additionally, the Project consists of the development of park improvements, which would not generate air toxics requiring an SCAMQD permit.

Hazardous Materials Onsite

Any site materials demolished (e.g., asphalt, concrete) would either be reused onsite (where possible) for development of the project's site improvements (e.g., drive aisles, walkways) or hauled offsite to the appropriate disposal or recycling facility and in accordance with all applicable laws and regulations associated with the transport and disposal of hazardous and nonhazardous materials, referenced above in Section 3.9.a. In the event of a hazardous materials spill of greater amount or toxicity than onsite personnel could safely contain and clean up, assistance would be requested from the OCFA hazmat team at Fire Station 47.

Additionally, a limited soil sampling report was prepared for the Project Site—specifically, for the southern portion of the site that consists of the undeveloped SCE property (Appendix D). The purpose of the soil sampling was to evaluate the surface soils in the expansion area for residual organochlorine pesticides due to historical agricultural use, including an orchard followed by row crops from approximately 1938 to about 1990. Based on the field sampling and analysis conducted, the analytical results show that historical agricultural usage of the site is not a concern based on planned future land use. Also, there have been no releases at the site of concern.

Based on the preceding, it is unlikely that development of the project would cause the release of hazardous materials into the environment. Therefore, impacts would be less than significant and no mitigation measures are necessary.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are no schools within one-quarter mile of the Project Site The closest school to the Project Site is the Oak Creek Elementary School, which is approximately 0.7 mile to the southwest. Therefore, no impact would occur, and no mitigation measures are necessary.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. California Government Code Section 65962.5 requires the compiling of lists of the following types of hazardous materials sites: hazardous waste facilities subject to corrective action; hazardous waste discharges for which the State Water Quality Control Board has issued certain types of orders; public drinking water wells containing detectable levels of organic contaminants; underground storage tanks with reported unauthorized releases; and solid waste disposal facilities from which hazardous waste has migrated. The following databases were reviewed for hazardous material site listings onsite or within 0.25 mile of the Project Site:

- **GeoTracker.** State Water Resources Control Board (SWRCB 2021)
- **EnviroStor.** Department of Toxic Substances and Controls (DTSC 2021)
- **EJScreen.** US Environmental Protection Agency (USEPA 2021a)
- **EnviroMapper.** US Environmental Protection Agency (USEPA 2021b)
- **Solid Waste Information System.** California Department of Resources, Recycling and Recovery (CalRecycle 2021)

No hazardous materials sites were listed on the Project Site or within 0.25 mile of the Project Site. Therefore, no impact to the public or to the environment would occur as a result of the Project and no mitigation measures are necessary.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Project Site is not within an airport land use plan and or within two miles of an airport. The closest public airport is John Wayne Airport (Airnav 2021), which is approximately 5 miles west of the Project Site. Therefore, the Project would not result in an impact to an airport land use plan and would not result in a safety hazard or excessive noise for people residing or working in the project area. No impact would occur and no mitigation measures are necessary.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project would not conflict with the adopted emergency response or evacuation plans. The City has adopted an emergency management plan that addresses the planned response to natural and man-made disasters and technological incidents (Irvine 2004). The Project involves the expansion of and improvements to an existing park and would have no impact on emergency response or evacuation plans. During the construction and operation phases, the Project would not interfere with any of the daily operations of OCFA or Irvine Police Department, which support emergency planning and response efforts in Irvine. All construction activities would be required to be performed per the City's standards and regulations. The Project would be required to provide the necessary on- and offsite access and circulation for emergency vehicles and services during the construction and operation phases.

The Project would also be required to go through the City's development review and permitting process and would be required to incorporate all applicable design and safety standards and regulations in the Irvine Municipal Code to ensure that project development does not interfere with the provision of local emergency services (provision of adequate access roads to accommodate emergency response vehicles, adequate numbers/locations of fire hydrants, etc.). The project would not result in inadequate emergency access.

Therefore, no impact to adopted emergency response and evacuation plans would occur and no mitigation measures are necessary.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. A wildland fire hazard area is typically characterized by areas with limited access, rugged terrain, limited water supply, and combustible vegetation. As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine and is surrounded mainly by residential and office development. The Project Site has good access and would be served by adequate water infrastructure. There is no combustible wildland vegetation on or near the site. Additionally, the Project Site is not in or near a Fire Hazard Severity Zone mapped by the California Department of Forestry and Fire Protection (CAL FIRE 2021). Therefore, no impact would occur and no mitigation measures are necessary.

3.10 HYDROLOGY AND WATER QUALITY

The analysis in this section is based partly on the following technical studies, which are included as Appendices E and F, respectively, to this Initial Study:

- *Preliminary Water Quality Management Plan*, Adams Streeter Civil Engineers, April 8, 2022. (Appendix E)
- *Preliminary Hydrology Report*, Adams Streeter Civil Engineers, April 2022. (Appendix F)

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The City of Irvine, including the Project Site, is in the San Diego Creek subwatershed. San Diego Creek lies within the 97,000-acre Newport Bay Watershed and is the major tributary to Upper Newport Bay. The Newport Bay Watershed is bounded in the northeast by the Loma Ridge Foothills and the Santa Ana Mountains. The southern edge is bounded by the San Joaquin Hills. Runoff originating in the northern hills flows south through flood control channels into the San Diego Creek Channel, through the Tustin Plain, and then into Upper Newport Bay. The San Diego Creek channel system underwent significant natural and man-made changes during the 20th century (OCWD 2018).

Water quality in Irvine is regulated by the Santa Ana Regional Water Quality Control Board (RWQCB) and its Water Quality Control Plan (Basin Plan), which contains water quality standards and identifies beneficial uses (wildlife habitat, agricultural supply, fishing, etc.) for receiving waters along with water quality criteria and standards necessary to support these uses consistent with federal and state water quality laws.

Impacts to water quality of receiving waters generally range over three different phases of a development project:

- During the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest.
- Following construction and before the establishment of ground cover, when the erosion potential may remain high.
- Following project completion, when impacts related to sedimentation would decrease markedly, but those associated with urban runoff would increase.

Following is a discussion of the potential water quality impacts resulting from urban runoff that would be generated during the construction and operational phases of the Project.

Project Construction

Construction-related runoff pollutants are typically generated from waste and hazardous materials handling or storage areas, outdoor work areas, material storage areas, and general maintenance areas (e.g., vehicle or equipment fueling and maintenance, including washing). The Project's construction phase may cause deterioration in the quality of downstream receiving waters if construction-related sediments or pollutants wash into the existing storm drain system and facilities in the area.

Construction-related activities that are primarily responsible for sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include removing vegetation from the site, grading the site, and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Nonsediment-

3. Environmental Analysis

related pollutants that are also of concern during construction relate to nonstorm water flows and generally include construction materials (e.g., paint and stucco); chemicals, liquid products, and petroleum products used in the maintenance of heavy equipment; and concrete and related cutting or curing residues. Construction-related activities of the Project would generate pollutants that could adversely affect the water quality of downstream receiving waters if appropriate and effective stormwater and nonstorm water management measures are not used to keep pollutants out of and remove pollutants from urban runoff.

Construction projects of one acre or more are regulated under the CGP, Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ. Projects obtain coverage by developing and implementing a SWPPP estimating sediment risk from construction activities to receiving waters and specifying BMPs that would be used by the project to minimize pollution of stormwater. Categories of BMPs used in SWPPPs are described in Table 6.

Table 6 Construction Best Management Practices

Category	Purpose	Examples
Erosion Controls	Protects the soil surface and prevents soil particles from being detached by rainfall, flowing water, or wind.	Scheduling, preserving existing conditions, mulch, soil binders, geotextiles, mats, hydroseeding, earth dikes, swales, velocity dissipating devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization.
Sediment Controls	Traps soil particles after they have been detached and moved by rain, flowing water, or wind.	Barriers such as silt fences, straw bales, sandbags, fiber rolls, and gravel bag berms; sediment basins; sediment traps; check dams; storm drain inlet protection; compost socks and berms; biofilter bags; manufactured linear sediment controls; and cleaning measures such as street sweeping and vacuuming
Wind Erosion Controls	Minimizes dust nuisances.	Applying water or other dust palliatives to prevent or minimize dust nuisance, reducing soil-moving activities during high winds, and installing erosion control BMPs for temporary wind control.
Tracking Controls	Prevents or reduces the tracking of soil offsite by vehicles	Stabilized construction roadways and construction entrances/exits and entrance/outlet tire wash.
Nonstorm Water Management Controls	Prevents pollution by limiting or reducing potential pollutants at their source or eliminating offsite discharge. Prohibits illicit connections or discharges.	Water conservation practices, BMPs specifying methods for: dewatering operations; temporary stream crossings; clear water diversions; pile driving operations; temporary batch plants; demolition adjacent to water; materials over water; potable water and irrigation; paving and grinding operations; cleaning, fueling, and maintenance of vehicles and equipment; concrete curing; concrete finishing.

Table 6 Construction Best Management Practices

Category	Purpose	Examples
Waste Management and Controls (i.e., good housekeeping practices)	Management of materials and wastes to avoid contamination of stormwater.	Proper material delivery and storage and material use, spill prevention and control, stockpile management, contaminated soil management, and management of solid, concrete, sanitary/septic, liquid, and hazardous wastes.

Source: CASQA 2015.

The Project's construction contractor would be required to prepare and implement a SWPPP and associated BMPs in compliance with the CGP during grading and construction. The SWPPP would specify BMPs, such as those outlined in Table 6, that the construction contractor would implement to protect water quality by eliminating and/or minimizing stormwater pollution prior to and during grading and construction and show the placement of those BMPs. Project construction activities would also implement the requirements of Title 6, Division 8, Chapter 3, Stormwater/Urban Runoff Pollution, of the Irvine Municipal Code.

Adherence to the BMPs in the SWPPP and to the Irvine Municipal Code would reduce, prevent, minimize, and/or treat pollutants and prevent degradation of downstream receiving waters. BMPs identified in the SWPPP would reduce or avoid contamination of stormwater with sediment and other pollutants such as trash and debris; oil, grease, fuels, and other toxic chemicals; nutrients; and paint, concrete, asphalt, bituminous[5] materials, etc.

Based on the preceding, water quality and waste-discharge impacts from project demolition, grading, and construction activities would be less than significant and no mitigation measures are necessary.

Project Operation

Operational activities of the Project (e.g., runoff from parking areas, solid waste storage areas, and landscaped areas) would generate pollutants that could adversely affect the water quality of downstream receiving waters if effective measures are not used to keep pollutants out of and remove pollutants from urban runoff.

Standards governing discharges to stormwater from project operation are set forth in the Municipal Stormwater (MS4) Permit for Orange County in the jurisdiction of the Santa Ana RWQCB, Order No. R8-2009-0030 as amended by Order No. R8-2010-0062, NPDES No. CAS618030, issued by the RWQCB in 2010. A model water quality management plan (WQMP) and technical guidance document (TGD) were developed to provide guidance for "priority" new development and significant redevelopment projects that need to comply with the requirements of the MS4 permit. The Model WQMP and TGD include instructions on selecting BMPs for a project, including low impact development (LID) BMPs, alternatives to LID BMPs in case LID BMPs are impractical on a site, and source control BMPs.

[5] Bituminous = having any of various viscous or solid impure mixtures of hydrocarbons that occur naturally in asphalt, tar, mineral waxes, etc.; used as a road surfacing and roofing material.

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LID is a stormwater management and land development strategy that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site's predevelopment hydrology by using site design techniques that store, infiltrate, evapotranspire, biofilter, or detain runoff close to its source. Source control BMPs reduce the potential for pollutants to enter runoff and are classified in two categories—structural and nonstructural. Structural source control BMPs have a physical or structural component, such as inlet trash racks, trash bin covers, and an efficient irrigation system, to prevent pollutants from contacting stormwater runoff. Nonstructural source control BMPs are procedures or practices used in project operation, such as stormwater training or trash management and litter control practices.

According to the Model WQMP and TGD, the Project is a priority project since the Project includes the addition or replacement of 5,000 square feet or more of impervious surfaces. The Project would increase the impervious area on the Project Site by 1.97 acres. For priority projects, the design capture flow[6] needs to be retained onsite through infiltration, evapotranspiration, stormwater runoff harvest and use, or a combination thereof.

Project development would include accessibility, irrigation and lighting improvements, sports field reconfigurations, and the addition of a dog park and parking lot. The Project would expand park use on an adjacent undeveloped property, the southern SCE property. Per the MS4 permit and the City's initial requirements for priority projects, the City prepared a preliminary WQMP for City review (Appendix E). The preliminary WQMP specifies BMPs that would be implemented to minimize water pollution from the Project Site during the operation phase. BMPs identified in the WQMPs include source control measures and treatment control measures.

Runoff from the existing park flows into storm drain inlets that convey stormwater to a 36-inch storm drain. This drain is connected to a 78-inch storm drain in Valley Oak Drive. Runoff from the SCE property flows into a storm drain riser in the southwest corner of the site and is conveyed to the 78-inch storm drain in Valley Oak Drive by an 18-inch onsite storm drain (see Figure 7, *WQMP Exhibit – Existing Conditions*). No offsite drainage enters the Project Site.

The proposed drainage condition includes provisions to capture and treat runoff from the new parking lot that would be constructed on the SCE property. Generally, the runoff from the new parking area would sheet flow to the southwest into concrete curb and gutters. Drainage from the gutters would be diverted into a proposed Modular Wetlands System (MWS). A small portion of runoff will be diverted to the north where a trench drain spanning the width of the parking lot entrance would intercept the runoff and redirect the flow to the MWS. The MWS would be in a landscape buffer on the southwest corner of the parking lot. Design capture flows would be treated by the MWS and discharged into a swale. The swale would discharge treated runoff into the existing 24-inch riser inlet that conveys stormwater to the storm drain in Valley Oak Drive. The design capture flow is 0.31 cubic feet per second (cfs) and the MWS has a treatment capacity of 0.34 cfs.

[6] The design capture flow relates to the amount of stormwater runoff associated with the 85th percentile 24-hour storm event that needs to be treated onsite per the MS4 Permit requirements.

In addition to the parking lot improvements, five-foot-wide concrete walkways are proposed to provide access to the new amenities. The walkways would have landscaping on both sides. The minimal runoff generated from the walkways would discharge onto the adjacent landscaping and be absorbed by the soil. The existing green areas on the northern part of the site would largely remain as green space and would be self-treating (see Figure 8, *WQMP Exhibit – Proposed Conditions)*. Nonstructural and structural source control BMPs are also included in the preliminary WQMP to further mange stormwater runoff on the site.

A detailed list of the BMPs is provided in the preliminary WQMP, with discussion of how they were selected based on their effectiveness to address and mitigate the Project's pollutants of concern. The final BMPs to be implemented for the Project would be determined through the City's review of the final WQMP during the City's development review and building plan check process.

The information in the preliminary WQMP provides sufficient detail to identify the major LID BMPs and other anticipated water quality BMPs and features that would be implemented as part of the Project to prevent impacts to the water quality of receiving waters. The combination of BMPs identified in the preliminary WQMP addresses all identified pollutants of the Project. Implementation of the BMPs would be ensured through the City's development review and building plan check process.

Additionally, per the TGD, a hydrologic condition of concern is considered to exist on the Project Site if any streams downstream from the Project are determined to be potentially susceptible to hydromodification impacts, and the post-development runoff volume for the 2-year, 24-hour storm event exceeds the pre-development runoff volume by more than 5 percent.[7] The Project Site drains to Newport Bay, which is potentially susceptible to hydromodification impacts. However, the existing 2-year, 24-hour storm event flow rate is 17.47 cfs, and the proposed flow rate is 18.02 cfs, which is a 3.2 percent increase. Therefore, no hydrologic condition of concern exists on the Project Site since total increase in stormwater runoff is less than 5 percent.

Project development would also be required to comply with the standards of Title 6, Division 8, Chapter 3, Stormwater/Urban Runoff Pollution, of the Irvine Municipal Code, which prohibits the discharge of specific pollutants into stormwater; regulates connections to the storm drain system; and requires development projects to implement permanent BMPs on individual sites to reduce pollutants in stormwater.

Based on the preceding, water quality and waste discharge impacts from project operation activities would be less than significant, and no mitigation measures are necessary.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The Project Site is in the Orange County Groundwater Basin. The Irvine Ranch Water District (IRWD) would provide water to the Project Site. IRWD's water supply sources include imported water, local groundwater, recycled water, and local surface water. Potable and nonpotable groundwater supplies are extracted from both the Orange County Groundwater Basin and the Irvine and Lake Forest subbasins. Recycled water is produced at IRWD's Michelson and Los Alisos water recycling plants, and surface

[7] A hydrologic condition of concern is a combination of upland hydrologic conditions and stream biological and physical conditions that poses the potential for physical and/or biological degradation of a stream.

water sources are the drainage tributary areas to the Irvine Lake and Harding Canyon Reservoir. In the event IRWD does not have sufficient recycled water supplies to meet customer demands, IRWD can supplement the recycled water system with untreated imported water. This water supply is introduced into the system via Irvine Lake and conveyed through IRWD's Irvine Lake pipeline. IRWD can also supplement its recycled water system with nonpotable groundwater pumped from the Orange County Groundwater Basin. Approximately 13 percent of IRWD's water needs are met by imported water, 50 percent from local groundwater wells, 30 percent by recycled water, and the rest by surface water sources (IRWD 2021a).

IRWD estimates that recycled water demands in its service area for normal years will increase from approximately 29,146 acre-feet per year (afy) in 2020 to approximately 30,462 afy in 2040. The City forecasts that it will have sufficient water supplies, including recycled water supplies, to meet water demands in its service area for normal, single dry, and multiple dry years. The Project would increase the demand for recycled water used for irrigation at the Project Site. Recycled water is only supplemented with nonpotable groundwater during the peak summer months. Therefore, the Project's water demand would not impact groundwater sources.

Furthermore, the Project Site is not in or near a groundwater recharge area/facility, nor does it represent a source of groundwater recharge.

Therefore, the Project would not substantially interfere with groundwater supplies or recharge. Impacts to groundwater supplies would be less than significant and no mitigation measures are necessary.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in a substantial erosion or siltation on- or offsite?

Less Than Significant Impact. Erosion and siltation impacts potentially resulting from alteration of the drainage pattern due to the Project would, for the most part, occur during the project's construction phase, which would include site preparation and grading activities. Environmental factors that affect erosion include topographic, soil, and wind and rainfall characteristics. Siltation is most often caused by soil erosion. Following is a discussion of the potential erosion and siltation impacts that could occur during the construction and operational phases of the Project.

Figure 7 - WQMP Exhibit - Existing Conditions

LEGEND

- BMP CATCHMENT AREA
- SD — EXISTING STORM DRAIN
- DIRECTION OF FLOW
- PERVIOUS AREAS
- IMPERVIOUS AREAS
- DMA-X / X.XX — DRAINAGE AREA / AREA (ACRE)

DRAINAGE AREAS

DRAINAGE AREA	AREA (ACRE)	IMPERVIOUS AREA (ACRE)	PERVIOUS AREA (ACRE)	% PERVIOUS	% IMPERVIOUS
TOTAL	19.10	2.00	17.10	11	89

0 100
Scale (Feet)

Source: Adams Streeter Civil Engineers, 2022

3. Environmental Analysis

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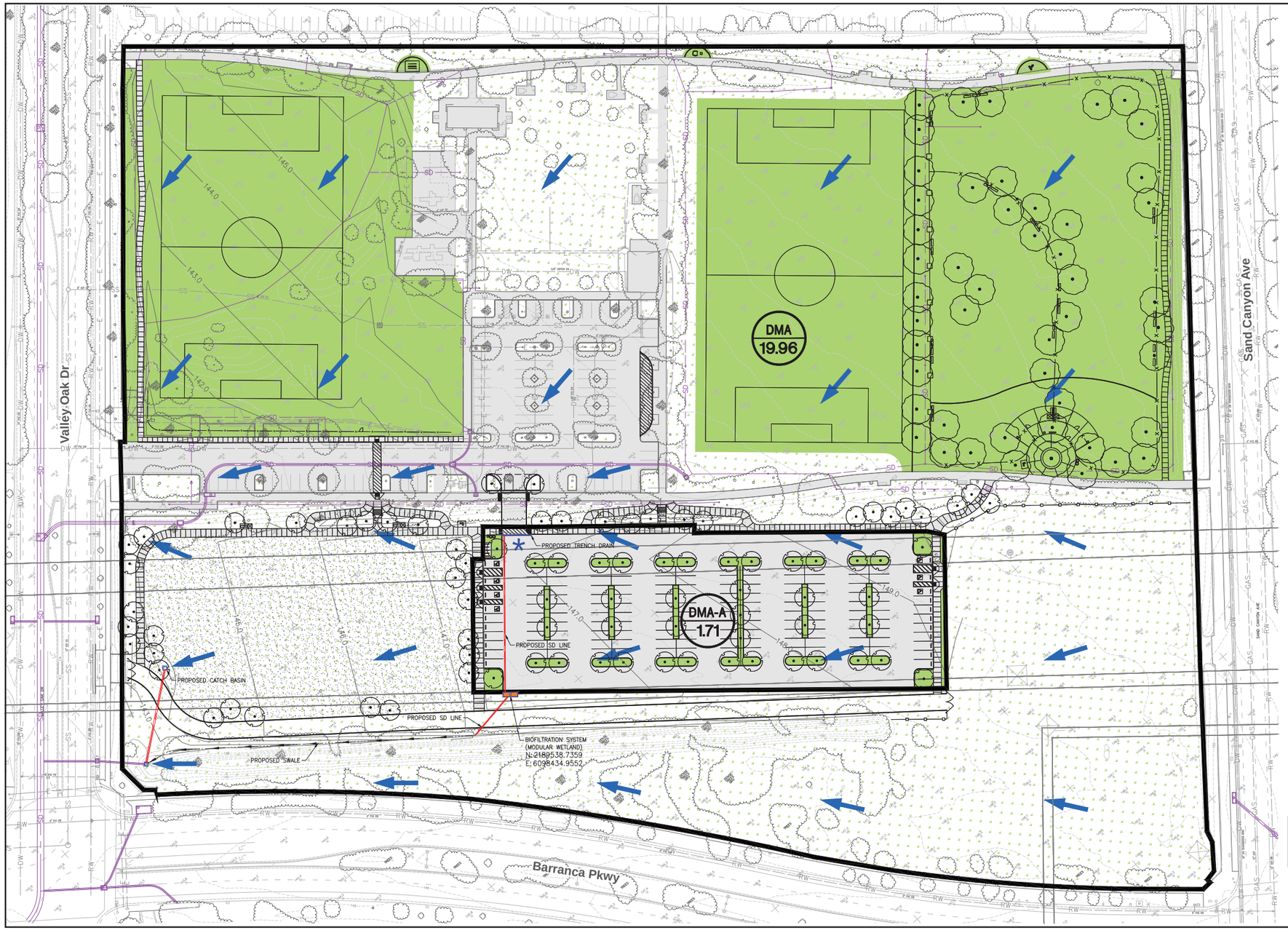
Figure 8 - WQMP Exhibit - Proposed Conditions



LEGEND

- BMP CATCHMENT AREA
- SD — EXISTING STORM DRAIN
- SD — PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- * CATCH BASIN STENCILING
- DIRECTION OF FLOW
- PERVIOUS AREA
- COMMON AREA EFFICIENT IRRIGATION AND RUN–OFF MINIMIZING LANDSCAPE
- IMPERVIOUS AREA
- BIOFILTRATION SYSTEM (BIOCLEAN MODULAR WETLAND SYSTEM)
- DMA-X / X.XX — DRAINAGE AREA / AREA (ACRE)

DRAINAGE AREAS

DRAINAGE AREA	AREA (ACRE)	IMPERVIOUS AREA (ACRE)	PERVIOUS AREA (ACRE)	% PERVIOUS	% IMPERVIOUS
TOTAL	19.10	3.97	15.13	21	79

0 100
Scale (Feet)

Source: Adams Streeter Civil Engineers, 2022

3. Environmental Analysis

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Project Construction

As discussed above in Section 3.10.a, the project construction contractor would be required to prepare and implement a SWPPP pursuant to the CGP during grading and construction. The SWPPP would specify erosion- and sediment-control BMPs that the project construction contractor would implement prior to and during grading and construction to minimize erosion and siltation impacts on- and offsite. Erosion-control BMPs are designed to prevent erosion, and sediment controls are designed to trap or filter sediment once it has been mobilized. BMPs that would be implemented during the Project's construction phase are discussed in detail in Section 3.10.a, above. For example, BMPs would include but are not limited to installation of perimeter silt fences; installation of silt fences around stockpile and covering of stockpiles; and stabilization of disturbed areas where construction ceases for a determined period of time (e.g., one week) with erosion controls.

Adherence to the BMPs in the SWPPP would reduce, prevent, or minimize soil erosion from project-related grading and construction activities. The construction-phase BMPs would also ensure effective control of not only sediment discharge, but also of pollutants associated with sediments (e.g., nutrients, heavy metals, and certain pesticides).

Additionally, and as discussed above in Section 3.7.b, project development is required to comply with standard regulations, including South Coast AQMD Rules 402 and 403, which would reduce construction erosion impacts. Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emissions source. Rule 402 requires dust suppression techniques be implemented to prevent dust and soil erosion from creating a nuisance offsite. For example, as outlined in Table 1, Best Available Control Measures, of Rule 403, control measures to reduce erosion during grading and construction activities include stabilizing backfilling materials when not actively handling, stabilizing soils during clearing and grubbing activities, and stabilizing soils during and after cut-and-fill activities.

Therefore, project-related construction activities would not result in substantial erosion or siltation on- or offsite. Construction-related impacts would be less than significant, and no mitigation measures are necessary.

Project Operation

As shown in Figure 3, *Aerial Photograph*, the Project Site is currently developed with the Oak Creek community park and its associated surface parking, landscaping, and hardscaping. Under the Project, there would be no bare or disturbed soil onsite at project completion that would be vulnerable to erosion or siltation. All areas would either be paved or landscaped.

Project development would not alter the course of a stream or a river and, as discussed in Section 3.10.a, would not substantially alter the existing drainage pattern of the site area. Runoff from the new parking lot would be diverted into a proposed MWS for treatment prior to discharge to the storm drain in Valley Oak Drive. Stormwater from walkways would discharge onto adjacent landscaping and infiltrate into the

soil. The existing green areas on the northern portion of the site would largely remain as green space and would be self-treating (see Figure 8, *WQMP Exhibit – Proposed Conditions*).

Additionally, the Project would be implemented in accordance with the WQMP and abide by the requirements of the MS4 permit and the TGD. For example, project design and operation would include implementation of BMPs specified in the WQMP, which would minimize runoff and soil erosion and siltation into stormwater and thus minimize sedimentation downstream.

Furthermore, project development would be required to comply with the standards of Title 6, Division 8, Chapter 3, Stormwater/Urban Runoff Pollution, of the Irvine Municipal Code, which requires development projects to implement permanent BMPs on individual sites to reduce pollutants in stormwater.

Therefore, Project development would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on- or offsite. Operation-related impacts would be less than significant, and no mitigation measures are necessary.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact. Existing site topography generally slopes in a westerly direction, with elevations ranging from 141 to 156 feet above sea level. No offsite drainage enters the site or contributes to onsite runoff. Drainage from the northern half of the site is captured by various onsite catch basins and inlets into an existing onsite storm drain line that runs along the park's existing asphalt drive and parking area. The preliminary hydrology report prepared for the Project (Appendix F) refers to this storm drain line as Line A. Onsite drainage is conveyed by Line A to an existing 78-inch storm drain line in Valley Oak Drive, referred to in the hydrology report as Line B. Drainage from the southern half of the Project Site within SCE's property is captured by an existing 24-inch riser inlet at the western corner of the site and conveyed by an existing 18-inch storm drain to Line B in Valley Oak Drive. The 18-inch storm drain is referred to as Line C in the hydrology report (see Figure 7, *WQMP Exhibit – Existing Conditions*).

The site hydrology analysis completed for the Project complied with the hydrology requirements of the Orange County Hydrology Manual and included the determination of peak runoff rates for the 10-year and 25-year storm events. As shown in Table 7, the total existing peak runoff to Line B is 42.54 cfs for the 25-year storm event and 34.98 cfs for the 10-year storm event.

Table 7 Existing and Proposed Peak Runoff Rates

Category	Peak Runoff Rate for a 10-Year Storm Event (cfs)	Peak Runoff Rate for a 25-Year Storm Event (cfs)
Existing Conditions		
Line A	22.25	26.74
Line C	12.73	15.80
Total (Line B)	**34.98**	**42.54**
Proposed Conditions		
Line A	23.53	28.34
Line C	11.81	14.46
Total (Line B)	**35.34**	**42.80**

Source: Adams Streeter Civil Engineers, April 2022.

Storm drain improvements for the Project include provisions to capture and treat runoff from the new parking lot that would be constructed on the SCE property. New concrete curb and gutters and a new 8-inch storm drain would convey runoff from the proposed parking lot to the MWS. Treated and overflow runoff from the MWS would drain to the southwest corner of the site and be captured by the existing 24-inch riser inlet that conveys runoff via Line C to Line B in Valley Oak Drive (see Figure 8, *WQMP Exhibit – Proposed Conditions*).

As shown in Table 7, peak runoff rates for the 25-year storm event under proposed conditions indicate a slight increase of 1.60 cfs in peak runoff for Line A, and a slight reduction in peak runoff for Line C of about 1.34 cfs compared to existing conditions. The peak runoff for Line B would increase by 0.26 cfs with Project development. Due to the minor differences in peak flows, no significant changes to Line A, Line B, or Line C are anticipated for the proposed condition. Additionally, BMPs specified in the WQMP would further decrease peak flows.

Therefore, post-development runoff from the Project Site would be adequately handled by the Project's drainage system and would not exceed the capacity of existing or planned stormwater drainage systems or substantially alter the existing drainage pattern of the Project Site or area in a manner that would result in flooding on- or offsite. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. Project impacts on the capacity of storm drainage systems would be less than significant, as discussed in Section 3.10.c.ii above. No mitigation measures are necessary.

Project stormwater pollution impacts would be less than significant, as discussed in Section 3.10.a above. No mitigation measures are necessary.

iv) Impede or redirect flood flows?

Less than Significant Impact. The Project Site is not within a Federal Emergency Management Agency 100-year flood hazard zone. The Project Site is within Zone X, defined as an area within a 500-year flood hazard zone, or within a 100-year flood hazard zone with an average flooding depth of less than one foot, or within a drainage area of less than one square mile (FEMA 2009). However, the Project Site is within the inundation zone of the Marshburn Retarding Basin and the Agua Chinon Dam (DWR 2021). Both dams are owned by the Orange County Flood Control District.

Dams in California are monitored and inspected annually by the California Division of Safety of Dams. In addition, dam owners are required to maintain emergency action plans (EAP) that include procedures for damage assessment and emergency warnings. An EAP identifies potential emergency conditions at a dam and specifies preplanned actions to help minimize property damage and loss of life should those conditions occur. EAPs contain procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities. Additionally, the State of California Dam Safety Act requires dam owners to submit inundation maps for dams whose total failure would cause loss of life or personal injury.

The Project does not include any new structures within the flood zone or the dam inundation zones that would impede or redirect flows. The Project only includes parking lots, park areas, and playing fields. Therefore, impact to flood flows would be less than significant and no mitigation measures are necessary.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant Impact. As noted in Section 3.10.c.iv, the Project Site is not in 100-year flood zone but is in the dam inundation zone of the Marshburn Retarding Basin and the Agua Chinon Dam. However, impacts from dam failure are less than significant.

A seiche is an oscillating surface wave in a restricted or enclosed body of water, generated by ground motion, usually during an earthquake. Seiches are of concern for water storage facilities such as reservoirs, water storage tanks, dams, or other artificial bodies of water, because a seiche can cause sloshing and an overflow of water from the water body. There are no adjacent bodies of water that would pose a flood hazard to the site due to a seiche and, therefore, the Project Site is not at risk of inundation by seiche.

Tsunamis are a type of earthquake-induced flooding produced by large-scale sudden disturbances of the sea floor. Tsunami waves interact with the shallow sea floor when approaching a landmass, resulting in an increase in wave height and a destructive wave surge into low-lying coastal areas. The Project is approximately 7.5 miles inland from the Pacific Ocean. Therefore, the site is outside the tsunami hazard zone and would not be affected by a tsunami.

Based on the preceding, the Project would not result in the release of pollutants as the result of floods, tsunami, or seiche. Therefore, impacts would be less than significant and no mitigation measures are necessary.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. Water quality in Irvine is regulated by the Santa Ana RWQCB and its Basin Plan for Santa Ana River. The basin plan contains water quality standards and identifies beneficial uses (wildlife habitat, agricultural supply, fishing, etc.) for receiving waters along with water quality criteria and standards necessary to support these uses consistent with federal and state water quality laws. As substantiated in Section 3.10.a, the Project would comply with all requirements of the MS4 permit and would not violate any water quality standards or obstruct the implementation of the Water Quality Control Plan (Basin Plan). Therefore, no impact would occur and no mitigation measures are necessary.

The Project Site is within the Orange County Groundwater Basin. The Orange County Water District serves as the groundwater manager for this basin and adopted the first groundwater management plan (GMP) in 1989; this plan was updated in 2015 but has been superseded by the Basin 8-1 Alternative Plan. As substantiated in Sections 3.10.a and b, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Project would not conflict or obstruct the implementation of the Basin 8-1 Alternative Plan. No impact would occur and no mitigation measures are necessary.

3.11 LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The project involves an expansion and improvement to the existing Oak Creek Community Park that operates from the Project Site. As shown in Figure 3, *Aerial Photograph*, the Project Site is predominantly surrounded by residential and office uses. The Project would not introduce a physical barrier that would separate land uses that are not already separated. Connections between the surrounding residential and nonresidential uses would remain and not be impacted by project implementation. The project would not physically change the surrounding street pattern or otherwise impede movement through the surrounding areas.

Additionally, though established residential and nonresidential uses surround the Project Site, Project development would not physically divide these uses in any way because the Project would be developed within the confines of the Project Site and would not introduce roadways or other infrastructure improvements that would bisect or transect the surrounding uses. Furthermore, the Project would not introduce a new land use that would disrupt existing land use patterns. Therefore, no impact would occur, and no mitigation measures are necessary.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The prevailing planning and regulatory plans that govern development and use of the Project Site are the Irvine General Plan and Irvine Zoning Ordinance. The development and design standards and

regulations in the Irvine Zoning Ordinance constitute the zoning regulations that govern development of the Project Site.

Following is an analysis of the project's consistency with these adopted land use regulations.

General Plan Consistency

Per the Irvine General Plan the Project Site is Recreation. This designation allows active public recreational activities that are enjoyed by the immediate and the surrounding communities. City-owned parks, regional parks, golf courses, and similar uses are allowed in this category.

The uses proposed by the Project are permitted uses under the existing land use designation. Project development does not include or require any amendments to the Irvine General Plan. Therefore, project implementation would not conflict with the Irvine General Plan. No land use impact related to general plan consistency would occur and no mitigation measures are necessary.

Zoning Consistency

Consistent with its General Plan designation, the Project Site is zoned as Recreation. This zoning district allows active recreational opportunities and activities for public use and enjoyment. The uses proposed under the project are permitted uses under the 1.5 Recreation zoning designation. Project development does not include or require a zone change; nor would it require a variance or any adjustments from the City's zoning standards, which help ensure that development in Irvine is designed and implemented in a manner that is not detrimental to the Project Site or its surroundings.

The project has been designed and would be developed in accordance with all applicable development and design standards of the Irvine Zoning Ordinance, with the exception of parking lot landscape requirements. The Project includes a request for Administrative Relief from the City's parking lot landscape standards. SCE will not allow trees, planters, shrubs or any landscape in the parking area. The new parking lot would be located on undeveloped SCE property that is surrounded by utility towers to the east, large, dense, mature trees to the south, proposed flex field to the west and the existing park to the north. Parking will not be visible from the public right-of-way. Aesthetic impacts from the new parking area will be insignificant. In addition, compliance with the applicable development and design standards would be ensured through the City's development review process.

Therefore, no land use impact related to zoning consistency would occur and no mitigation measures are necessary.

3.12 MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The Project Site is classified by the California Geologic Survey as Mineral Resource Zone 1, indicating that significant mineral deposits are absent or unlikely to be present (CGS 1994). No mineral resource areas that would be of value to the region and residents of the state exist on or near the Project Site. Additionally, no locally important mineral resource recovery sites are on or near the Project Site. The Project Site is also not in an area with active mineral extraction operations, nor does it support such operations.

Additionally, mining would be incompatible with the surrounding uses and is not a permitted use under the 1.5 Recreation zoning district of the Project Site, which is in a highly urbanized area of Irvine and surrounded by office and residential uses.

Furthermore, no mining sites are designated in the City of Irvine General Plan, and the nearest mine to the site mapped on the Mines Online website is over 4.5 miles away (DMR 2022).

Finally, no oil or energy extraction and/or generation activities exist on the Project Site. A review of California Geologic Energy Management Division's well finder indicates that there are no oil or energy wells located onsite (CalGEM 2022).

Therefore, no impact to mineral resources or mineral resource recovery sites would occur and no mitigation measures are necessary.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. See response to Section 3.12.a, above. As substantiated in this section, no impact would occur, and no mitigation measures are necessary.

3.13 NOISE

Noise Fundamentals

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, federal, state, and city governments have established criteria to protect public health and safety and to prevent the disruption of certain human activities, such as classroom instruction, communication, or sleep. Additional information on noise and vibration fundamentals and applicable regulations are contained in Appendix G.

3. Environmental Analysis

Environmental Setting

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, and open space/recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. As shown in Figure 3, *Aerial Photograph*, the project is near residential uses with residences to the west and south beyond Valley Oak Drive and Barranca Parkway, respectively. Other uses in the project vicinity include commercial uses such as Verizon Wireless Corporate Offices to the north and the United States Postal Service and the Southern California Edison Santiago Substation to the east.

Ambient Noise Measurements

To determine a baseline noise level at different environments within the project area, ambient noise monitoring was conducted in the vicinity of the Project Site at the adjacent residential neighborhoods on September 22, 2021. All measurements were short-term (15-minutes) and during the evening hours of 7:00 pm to 10:00 pm.

The primary noise source at both locations was traffic, with faint recreational activity noise coming from Oak Creek Community Park (such as children's laughter, raised voices, and faint conversations). Urban and residential activity (such as dogs barking) and garage doors opening and closing also contributed to the overall noise environment. Meteorological conditions during the measurement period were favorable for outdoor sound measurements and were noted to be representative of the typical conditions for the season. Generally, conditions included clear skies with temperatures of 79 degrees Fahrenheit (°F) with winds averaging three miles per hour (mph) or less. The sound level meter was equipped with a windscreen during measurements.

The sound level meter used (Larson Davis LxT) for noise monitoring satisfies the American National Standards Institute (ANSI) standard for Type 1 instrumentation. The sound level meter was set to "slow" response and "A" weighting (dBA). The meter was calibrated prior to and after the monitoring period. All measurements were at least five feet above the ground and away from reflective surfaces. Approximate noise measurement locations are described below and shown on Figure 9, *Approximate Noise Monitoring Locations*, and results are summarized in Table 8.

- **Short-Term Location 1 (ST-1)** was along Valley Oak Drive, next to 11 Bright Hollow (residence). The measurement location was approximately 75 feet west of the nearest southbound travel lane centerline. A 15-minute noise measurement began at 7:14 pm on Wednesday, September 22, 2021. The noise environment is characterized primarily by traffic and recreational activity noise from Valley Oak Drive. Traffic generally ranged from 61 dBA to 69 dBA. Noise levels were generally around 52 dBA in the absence vehicle pass-bys. Secondary noise sources included neighborhood dogs barking, neighbors walking by, and garage doors opening and closing.

- **Short-Term Location 2 (ST-2)** was south of the Project Site, next to 30 Sonata Road (residence). A 15-minute noise measurement began at 7:41 pm on Wednesday, September 22, 2021. The noise environment

is characterized primarily by traffic noise from Valley Oak Drive and Barranca Parkway. Traffic noise levels generally ranged from 51 dBA to 60 dBA.

Table 8 Short-Term Noise Measurements Summary in A-weighted Sound Levels

Monitoring Location	Description	15-Minute Noise Level, dBA						
		L_{eq}	L_{max}	L_{min}	L_{50}	L_{25}	L_8	L_2
ST-1	Next to 11 Bright Hollow (residence) 9/22/2021, 7:14 PM	55.0	69.6	46.2	52.8	55.1	58.4	61.2
ST-2	Next to 30 Sonata Road (residences) 9/22/2021, 7:41 PM	49.1	61.8	45.5	48.1	49.4	51.8	53.2

Applicable Standards

City of Irvine Noise Regulations

Irvine Municipal Code

The City of Irvine Noise Ordinance (Irvine Municipal Code Title 6, Division 8, Chapter 2) establishes the maximum permissible noise level from a stationary source. For residential properties, noise generated offsite is prohibited from exceeding 55 dBA during daytime hours of 7:00 am to 10:00 pm and 50 dBA during the nighttime hours of 10:00 pm to 7:00 am for more than 30 minutes in any hour at the property line. Exterior noise standards are summarized in Table 9.

Table 9 City of Irvine Exterior Noise Standards

Noise Zone	Time Interval	Noise Standard (L_n)				
		L_{50}	L_{25}	L_8	L_2	L_{max}
Zone 1: All hospitals, libraries, churches, schools, and residential properties	7:00 a.m. to 10:00 p.m.	55	60	65	70	75
	10:00 p.m. to 7:00 a.m.	50	55	60	65	70
Zone 2: All professional office and public institutional properties	Anytime	55	60	65	70	75
Zone 3: All professional office and public institutional properties	Anytime	60	65	70	75	80
Zone 4: All industrial properties	Anytime	70	75	80	85	90

Source: City of Irvine, Municipal Code, Title 6, Division 6, Chapter 2, Noise.
Notes:
Noise standards shall be reduced by 5 dB for impact noise, predominant tone noise, or for noises consisting of speech or music. In the event that the noise source and the affected property are within different noise zones, the noise standards of the affected property shall apply.
Maintenance of property may exceed the noise standards, so long as maintenance activities that exceed the noise limits in Table 8 are restricted to the hours of 7:00 am through 7:00 pm Monday through Friday or 9:00 am through 6:00 pm Saturdays. In addition, the City further restricts the maximum noise levels of leaf blowers and hours of use to 8:00 am through 5:00 pm Monday through Friday and 9:00 am through 5:00 pm on Saturdays.
Commercial deliveries or pickups for commercial properties that share a property line with any residential property are required to limit the hours of delivery/pickup service to 7:00 am through 10:00 pm daily, as outlined in the City's Noise Ordinance.

The City's Noise Ordinance regulates the timing of construction activities and includes special provisions for sensitive land uses. Section 6-8-205.A, Special Provisions, of the Irvine Municipal Code states that construction activities may occur between the hours of 7:00 am and 7:00 pm Monday through Friday, and 9:00 am to 6:00 pm

on Saturdays. No construction is permitted outside of these hours or on Sundays and federal holidays (except Columbus Day) unless a temporary waiver is granted by the Chief Building Official or an authorized representative. Trucks, vehicles, and equipment that are making or involved with deliveries, loading, or transfer of materials, equipment service, or maintenance of any devices associated with project construction are also subject to these prohibitions.

Irvine CEQA Manual

Volume II, Technical Guidelines, of the Irvine CEQA Manual provides a general approach to determine project-related noise impacts' significance and provides screening criteria that are based on the noise standards adopted by the City. A significant impact would occur if:

- The project would exceed the City of Irvine's exterior stationary noise standards, summarized in Table 9.
- Vibration levels would exceed 78 VdB during daytime hours at a residential receptor.
- Vibration levels would exceed 0.20 inches/second (in/sec) peak particle velocity (PPV) at the façade of a nonengineered structure (e.g., wood-frame residential).

Adopted Standards

The City has limited allowable construction hours but does not have a quantified construction noise threshold. Therefore, the Federal Transit Administration criteria of 80 dBA $L_{eq(8hr)}$ is adopted for this analysis, and a Project-related impact would occur if construction activities would generate noise levels greater than 80 dBA L_{eq} at the sensitive receptor property line.

The City does not have established quantified standards for traffic noise. Therefore, the following thresholds of significance, similar to those recommended by the Federal Aviation Administration, are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if traffic noise increase would exceed:

- 1.5 dBA in ambient noise environments of 65 dBA CNEL and higher.
- 3 dBA in ambient noise environments of 60 to 64 dBA CNEL.
- 5 dBA in ambient noise environments of less than 60 dBA CNEL.

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact. Following is a discussion of the temporary and permanent noise impacts as a result of the Project's construction and operational phases.

Figure 9 - Approximate Noise Monitoring Locations

Source: Nearmap, 2021

3. Environmental Analysis

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Construction Noise

The total duration for project construction is anticipated to be approximately nine months, with a tentative start date of early 2023. Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment.

Construction Vehicles

The transport of workers and materials to and from the construction site would incrementally increase noise levels along site access roadways. Individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA L_{max} at 50 feet from the worker and vendor vehicles. However, these occurrences would generally be infrequent and short-lived.

Construction is anticipated to generate up to 332 daily worker and vendor trips during overlapping construction phases. Maximum daily haul truck trips would be up to 10 trips during site preparation and soil haul over five work days (Monday through Friday). Primary haul truck access to the project site would be through Barranca Parkway. Existing average daily traffic (ADT) along Barranca Parkway, east and west of the Project Site, is between 11,500 and 13,700.[8] The addition of both construction and haul trips would result in a temporary noise increase of less than 0.5 dBA CNEL, which would not be substantial nor permanent. Therefore, construction-vehicle noise impacts would be considered less than significant, and no mitigation measures are necessary.

Construction Equipment

Noise generated by onsite construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each stage of construction involves different kinds of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

The noise produced at each construction stage is determined by combining the L_{eq} contributions from each piece of equipment used at a given time while accounting for the ongoing time variations of noise emissions. Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on the specific activity performed at any given moment. Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation effects from air absorption, ground effects, and shielding effects), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the site with different loads and power requirements.

[8] ADT provided by City of Irvine Engineering Department.

3. Environmental Analysis

Average noise levels from Project-related construction activities are calculated by modeling the three loudest pieces of equipment per activity phase. Equipment for grading and site preparation is modeled at spatially averaged distances (i.e., from the acoustical center of the nearest proposed area of grading to sensitive receptor property line) because the area around the center of construction activities best represents the potential average construction-related noise levels at the various sensitive receptors for mobile equipment. Similarly, construction noise from paving activities is modeled from the center of proposed parking areas. Equipment for architectural coating, finish and landscaping, utility trenching, and light-pole installation is modeled from the edge of the proposed building to the nearest sensitive receptors.

The Project's expected construction equipment mix was categorized by construction activity using the Federal Highway Administration's Roadway Construction Noise Model (RCNM). The associated, aggregate sound levels—grouped by construction activity—are summarized in Table 10. RCNM modeling input and output worksheets are included in Appendix G.

Table 10 Project-Related Construction Noise

Construction Activity Phase	RCNM Reference Noise Level	Residences to South	Residences to East	Valley Oak Park to West
Distance in feet	*50*	*270*	*675*	*740*
Asphalt Demolition - Levels in dBA L_{eq}	85	70	62	61
Distance in feet	*50*	*140*	*340*	*370*
Utility Trenching - Levels in dBA L_{eq}	77	68	60	59
Finish/Landscaping - Levels in dBA L_{eq}	77	111	111	59
Distance in feet	*50*	*620*	*530*	*740*
Rough Grading - Levels in dBA L_{eq}	85	63	64	62
Fine Grading - Levels in dBA L_{eq}	85	63	64	62
Site Preparation - Levels in dBA L_{eq}	84	118	118	61
Distance in feet	*50*	*730*	*625*	*900*
Architectural Coating - Levels in dBA L_{eq}	74	50	52	49
Asphalt Paving - Levels in dBA L_{eq}	84	60	62	58
Distance in feet	*50*	*170*	*720*	*750*
Light Pole Installation - Levels in dBA L_{eq}	77	67	54	54

Notes: Calculations performed with the FHWA RCNM software are included in Appendix G. Equipment mix based on CalEEMod defaults.

As shown in Table 10, construction-related noise levels would not exceed the 80 dBA L_{eq} threshold at the nearest sensitive receptors. Therefore, construction-equipment noise impacts would be considered less than significant, and no mitigation measures are necessary.

Operational Noise

Mobile Noise

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels at adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet,

controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance, similar to those recommended by the Federal Aviation Administration, are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if traffic noise increase would exceed:

- 1.5 dBA in ambient noise environments of 65 dBA CNEL and higher.
- 3 dBA in ambient noise environments of 60 to 64 dBA CNEL.
- 5 dBA in ambient noise environments of less than 60 dBA CNEL.

The daily traffic volumes along study roadway segments were used to determine the traffic noise increase. This analysis compares the existing plus project traffic volumes to the existing no project traffic volumes to estimate the increase due to Project development. The same method is used in determining the cumulative traffic noise increase (cumulative plus Project traffic volumes compared to existing no Project). A significant cumulative noise increase would occur if the Project's contribution to the cumulative increase would be greater than 1 dBA.

As shown in Table 11, Project-related traffic noise increase would be up to 0.3 dBA, and it would not exceed 1.5 dBA CNEL; the cumulative noise increase would be up to 3.0 dBA CNEL, exceeding the 1.5 dBA CNEL threshold. However, the Project's contribution to the cumulative increase is less than 1 dBA (0.2 dBA or less). Therefore, traffic noise impacts would be less than significant, and no mitigation measures are necessary.

Table 11 Project-Related Traffic Noise Increases

	Average Daily Traffic				dBA CNEL		
Roadway Segment	Existing No Project	Existing Plus Project	Future No Project	Future Plus Project	Project Noise Increase	Cumulative Increase	Project Cumulative Contribution
Valley Oak Drive - south of Irvine Center Drive	4,200	4,517	8,100	8,417	0.3	3.0	0.2
Barranca Parkway - west of Valley Oak Drive	11,500	11,817	15,400	15,717	0.1	1.4	0.1
Barranca Parkway - Valley Oak Drive to Sand Canyon Avenue	13,700	14,017	18,200	18,517	0.1	1.3	0.1
Barranca Parkway - Sand Canyon Avenue to Laguna Canyon Road	12,000	12,317	19,200	19,517	0.1	2.1	0.1

Sources: Existing and future volumes provided by City of Irvine; Daily trip generation provided by Urban Crossroad, *Oak Creek Access and Circulation Considerations*, 2021.

Recreational Noise

The Project Site contains an existing park with existing lighting. The Project would include lighting improvements, a new flexible turf field, relocation of an existing soccer field (along Sand Canyon Avenue) to the west side of the park (along Valley Oak Drive), the addition of a dog park with a small dog area and large dog area, and the refurbishing of the existing soccer field next to the proposed dog park. The flexible turf field would not be lit. The proposed hours for the park would not change, and it would continue to be closed at 10:00 pm.

3. Environmental Analysis

Dog Park

The nearest noise sensitive receptors to the proposed dog park are residences approximately 850 to 1,000 feet to the south and west beyond Barranca Parkway and Valley Oak Drive, respectively. The primary noise source associated with dog parks is barking. Barking can exceed 85 dBA at a distance of 3 feet. However, the nearest receptors are approximately 850 to 1,000 feet. As mentioned earlier, noise diminishes at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation from air absorption, ground effects, and shielding effects). At 850 feet, barking sounds would diminish to approximately 36 dBA. As shown in Table 8, the existing evening ambient at the receptors to the south and west is 49 dBA to 55 dBA. Noise from the proposed dog park would not permanently increase noise levels at the nearest sensitive receptors above the existing ambient. Additionally, traffic from Barranca Parkway and Oak Valley Drive would mask noise from the dog park, and the dog park would be locked and closed at 10:00 pm. Therefore, noise impacts from the dog park would be less than significant, and no mitigation measures are necessary.

Sport Fields

The reconfiguration of the sports fields would result in the soccer field being moved to the west along Oak Valley Drive; currently this area is a general use field. The soccer field could be used for practices, games, and general community use. PlaceWorks staff has collected noise measurement data at various sports fields, including soccer fields. For example, noise monitoring was conducted on August 24, 2008, at John A. Murdy Elementary School at 14851 Donegal Drive in the City of Garden Grove during a private league match. Based on the data collected, soccer games/practices generate noise levels of approximately 49 dBA at approximately 50 feet from the edge of the field. The nearest noise-sensitive receptor to the relocated soccer field are the residences to the east beyond Barranca Parkway at approximately 200 feet. At 200 feet noise levels would attenuate to 37 dBA. As shown in Table 8, the existing evening ambient at the receptors to the west is 55 dBA. The relocation of the soccer field, though it would be moved closer to sensitive receptors, would not permanently increase noise levels above the existing ambient. Other changes would include the addition of a flexible turf field south of the relocated soccer field. This field would not be lit and would not be used past dark; noise levels would be similar to those generated by the soccer field. Additionally, the Project does not propose to install amplified equipment such as speakers or a public address system. Therefore, noise impacts from sport fields would be less than significant, and no mitigation measures are necessary.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Following is a discussion of the Project's temporary and permanent vibration impacts as a result of the Project's construction and operational phases.

Operational Vibration

Project operation would not include any substantial long-term vibration sources. Therefore, no significant vibration effects would occur. Impacts would be less than significant, and no mitigation measures are necessary.

Construction Vibration

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the

ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures.

For reference, a vibration level of 0.2 in/sec PPV is used as the limit for nonengineered timber and masonry buildings, which would conservatively apply to the surrounding structures (FTA 2018). To determine potential vibration-induced architectural damage, the distance from the vibration source (construction equipment) to the vibration-sensitive receptors (residences) is measured from the edge of the construction site to the nearest building façade. Vibration-induced architectural damage is assessed in terms of peak velocity. Table 12 summarizes PPV levels for typical construction equipment and shows that vibration damage levels would not exceed the 0.2 in/sec PPV threshold. Therefore, vibration damage impacts would be less than significant, and no mitigation measures are necessary.

Table 12 Vibration Damage Levels for Typical Construction Equipment

	PPV (in/sec)		
Equipment	FTA Reference at 25 Feet	Residence at 160 Feet to West	Nonresidential (Verizon Wireless) at 270 Feet to East
Vibratory Roller	0.21	0.013	0.006
Hoe Ram	0.089	0.005	0.003
Large Bulldozer	0.089	0.005	0.003
Caisson Drilling	0.089	0.005	0.003
Loaded Trucks	0.076	0.005	0.002
Jackhammer	0.035	0.002	0.001
Small Bulldozer	0.003	0.000	0.000

Source: FTA 2018.

For vibration annoyance, attenuated vibration levels at the nearest sensitive receptors are conservatively determined by measuring from the edge of the Project Site to the nearest sensitive-receptor building. Unlike architectural damage, which is typically in terms of peak particle velocity, vibration annoyance is typically measured in terms of vibration decibels (VdB), which correspond best with the human response to vibration. Table 13 summarizes vibration annoyance levels for typical construction equipment. As shown in the table, vibration levels would not exceed 78 VdB threshold. Therefore, vibration annoyance levels would be less than significant, and no mitigation measures are necessary.

Table 13 Vibration Annoyance Levels for Typical Construction Equipment

Equipment	VdB		
	FTA Reference at 25 Feet	Residential at 160 feet to West	Residential at 270 feet to South
Vibratory Roller	94	70	63
Hoe Ram	87	63	56
Large Bulldozer	87	63	56
Caisson Drilling	87	63	56
Loaded Trucks	86	62	55
Jackhammer	79	55	48
Small Bulldozer	58	34	27

Source: FTA 2018.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airport to the Project Site is John Wayne Airport (Airnav 2021), approximately 5 miles to the west. The Project would not expose people working in the project area to excessive aircraft noise levels. Therefore, no impact would occur, and no mitigation measures are necessary.

3.14 POPULATION AND HOUSING

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The Project does not propose new homes or businesses; the project involves expansion and renovation of an existing park. Therefore, the Project would not directly or indirectly induce population growth in the area. Parks are typically developed in response to population growth in an area and do not cause population growth. The existing park is also provided with adequate road access and utilities, and project development would not require extension of roadways or utilities. Therefore, no impact to population and housing would occur and no mitigation measures are necessary.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. No housing exists on the Project Site, which is currently developed with a park and an undeveloped SCE property (see Figure 3, *Aerial Photograph*). Therefore, project development would not displace housing or people. No impact would occur, and no mitigation measures are necessary.

3.15 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less Than Significant Impact. OCFA provides fire protection and emergency services to 23 Orange County cities and all unincorporated areas, which includes the entire City of Irvine (including the Project Site). The nearest fire station to the Project Site is Fire Station 47 at 7050 Corsair, 1.07 miles to the southwest of the Project Site. Two additional fire stations, Fire Stations 36 and 20, are within 2 miles of the Project Site.

The Project includes expansion and renovation of an existing park. Project implementation would result in a slight increase in calls for fire protection and emergency medical service. However, considering the existing firefighting resources available in and near Irvine, Project impacts on fire protection and emergency services (including response times) are not expected to occur. Additionally, in the event of an emergency at the Project Site that required more resources than Fire Station 47 could provide, OCFA would direct resources to the site from other OCFA stations nearby and, if needed, would request assistance from other nearby fire departments.

The City also involves OCFA in the development review process in order to ensure that the necessary fire prevention and emergency response features are incorporated into development projects. All site and building improvements proposed as a part of the Project would be subject to review and approval by OCFA prior to building permit and certificate of occupancy issuance.

Furthermore, development of the Project is required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of the City of Irvine and OCFA, which impose design standards and requirements that seek to minimize and mitigate fire risk. Compliance with these codes and standards is ensured through the City's and OCFA's development review and building permit process.

Based on the preceding, the Project would not adversely affect OCFA's ability to provide adequate service and would not require new or expanded fire facilities that could result in adverse environmental impacts. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

b) Police protection?

Less Than Significant Impact. The Irvine Police Department (IPD) provides police protection services to Irvine through three geographical areas. The Project Site is in IPD's Crossroads Area, one of IPDs three geographic based policing areas (City of Irvine 2022), and is approximately 5 miles east of the IPD headquarters. Project implementation would result in a slight increase in calls for police protection service. However, considering the existing police resources available in and near Irvine, Project impacts on police services (including response times) are not expected. Additionally, in the event of an emergency at the Project Site that required more resources than IPD could provide, the IPD would direct resources to the site from

other stations nearby and, if needed, would request assistance from other nearby police departments. Therefore, the Project would not adversely affect IPD's ability to provide adequate service and would not require new or expanded police facilities that could result in adverse environmental impacts. Impacts would be less than significant, and no mitigation measures are necessary.

c) Schools?

No Impact. The increase in the student generation and the need for new or the expansion of existing school facilities is tied to population growth. No residential development is proposed as a part of the Project, and Project development is not expected to generate an increase in the student population in the area. Therefore, no impact to schools would occur and no mitigation measures are necessary.

d) Parks?

Less Than Significant Impact With Mitigation Incorporated. See response to Section 3.16.b, below. As substantiated in that section, impacts would be reduced to less than significant with implementation of mitigation.

e) Other public facilities?

No Impact. The need for new or the expansion of existing library services and facilities is tied to population growth. No residential development is proposed as a part of the Project, and Project development is not expected to generate a need for new or additional library services or facilities. Therefore, no impact to libraries would occur and no mitigation measures are necessary.

3.16 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. The increase in the use of existing parks and recreational facilities and the need for new or the construction or expansion of existing recreational facilities is tied to population growth. No residential development is proposed as a part of the Project; therefore, no population growth or increase in the use of existing parks or other recreational facilities would occur. Furthermore, the Project, by adding a dog park (dog park would be relocated from another area of the City where the dog park is currently operating from), will attract users from the existing dog park, thus eliminating the physical deterioration of the existing dog park to be relocated. Additionally, adding the dog park to the Project Site would result in an increase in the use of the Oak Creek Community Park once all park expansion and improvements are completed under the Project. However, the increase in the park use due to the dog park introduction would not be substantial. Therefore, the impact on parks and recreational facilities would be less than significant and no mitigation measures are necessary.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less Than Significant Impact With Implementation of Mitigation. The Project includes the expansion of an existing park. New additions would include a dog park, turf field, and parking lots. Project implementation would not require further development of additional recreational facilities. The potential adverse physical effects on the environment caused by Project have been addressed throughout the entirety of this initial study. As substantiated in the various topical sections of this initial study, impacts have either been determined to have no impact, a less than significant impact, or a less than significant impact with implementation of mitigation.

3.17 TRANSPORTATION

This section is based in part on the following studies, which are included as Appendices H and I, respectively, to this Initial Study:

- *Access and Circulation Considerations*, Urban Crossroads, June 8, 2021 (Appendix H).
- Vehicle Miles Travelled (VMT) Screening Analysis, Urban Crossroads, September 21, 2021 (Appendix I).

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. The Project includes the renovation and expansion of the existing Oak Creek Community Park. Since all improvements would occur within the confines of the Project Site and there are no planned changes to the existing circulation system in or around the Project Site, the Project would not cause conflicts with proposed programs or plans to improve the circulation system for all users including transit passengers, vehicles, bicyclists, and pedestrians.

The existing driveway along Valley Oak Drive has available capacity to serve the Project after the renovation and expansion of the park. Since the Project would not make offsite improvements that would conflict with planned programs and plans and would not conflict with policies governing the local circulation system, the Project would not conflict with programs, plans, and ordinances addressing the circulation system, and a less than significant impact would occur.

Following is a discussion of the Project's potential impacts on a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Impact to Roadway Facilities

A trip generation analysis was prepared for the Project as a part of an access and circulation considerations memorandum (Appendix H). Based on the memorandum, existing park land uses are estimated to generate 397 daily vehicle trip ends on weekdays, with 16 trip ends during the morning peak hour and 96 trip ends during

the evening peak hour. Under the Project, proposed park land uses are estimated to generate a total of 714 daily vehicle trip ends on weekdays, with 49 trip ends during the morning peak hour and 100 trip ends during the evening peak hour. Project development would result in a net increase of 317 daily vehicle trip ends on weekdays.

While daily and morning peak hour weekday traffic generation increases significantly in conjunction with the proposed park improvements, the change in evening peak hour traffic is nominal. Also, it is important to note that the trip generation associated with park land uses increases significantly on weekend days and holidays; specifically, Project development would result in an increase of 634 daily trips on the weekend over existing conditions.

The access and circulation considerations memorandum summarizes the Valley Oak Drive/Oak Creek Park intersection weekday peak hour level of service for weekday morning and evening peak hour conditions. As substantiated in the memorandum, the Valley Oak Drive/Oak Creek Park intersection is anticipated to experience acceptable operations for existing plus project conditions with Project implementation. Additionally, the existing daily traffic capacity on Valley Oak Drive north of Barranca Parkway is approximately 32,000 ADT. Existing traffic volumes on Valley Oak Drive adjacent to the Project Site are less than 15 percent of its capacity. This relatively low background volume condition provides a favorable setting for the Valley Oak Drive/Oak Creek Park intersection to serve the Project without congestion impacts.

Furthermore, and as noted above, trip generation associated with park land uses increases significantly on weekend days and holidays. Under the Project, the daily entry volume could increase to more than 2,000 ADT at the park entrance east of Valley Oak Drive, or 634 ADT over existing conditions. Peak hour weekend volumes could be over 400 vehicles per hour. Although peak hour vehicle queues can be expected to interfere with some of the parking spaces at the entry driveway east of Valley Oak Drive, any potential back-ups on Valley Oak Drive are ameliorated by the low background volumes on that roadway.

Therefore, the project would not result in a conflict with a program, plan, ordinance, or policy addressing roadway facilities. Impacts would be less than significant, and no mitigation measures are necessary.

Impact to Alternate Modes of Transportation Facilities

Pedestrian access to the Project Site would continue to be provided via the existing public sidewalks on Valley Oak Drive and Sand Canyon Avenue, which connect to the park's internal walkways at key locations. Under the Project, the existing public sidewalks and internal walkways would not undergo any modifications or improvements. Therefore, Project development would not result in an impact to the pedestrian circulation system in and around the Project Site. However, a new walkway would be added along the entire stretch of the eastern boundary of the new dog park. Additionally, new walkway would be provided along the edges of the new flex field and parking area in the SCE portion of the Project Site. All existing and new walkways are designed to be ADA (Americans with Disabilities Act) compliant.

There are dedicated on-street bicycle lanes on the roadways surrounding the Project Site, which include Valley Oak Drive, Sand Canyon Avenue, and Barranca Parkway. Under the Project, the existing bicycle lanes would not undergo any modifications or improvements. Therefore, Project development would not result in an impact

to the bicycle circulation system in and around the Project Site. Further, Project development includes the provision of additional bicycle racks onsite in accordance with the provisions of CALGreen; the racks would be placed in strategic areas of the Project Site. Additionally, Section 21100(h) of the California Vehicle Code allows bicyclists to ride on sidewalks. Bicyclists are also allowed to ride on roads.

The Orange County Transit Authority (OCTA) and Irvine Shuttle (iShuttle) operate public transit bus routes in Irvine. OCTA bus route 90 and iShuttle route 403D are the closest bus routes to the Project Site; OCTA bus route 90 travels east-west along Irvine Center Drive, just north of the Project Site, and iShuttle bus route 403 travels north-south along Sand Canyon Avenue, which forms the Project Site's eastern boundary. These bus routes are those that are within a reasonable walking distance (approximately one-half mile) of the Project Site. The closest bus stop for OCTA bus route 90 is approximately 0.4 mile north of the Project Site at the Irvine Center Drive and Sand Canyon Avenue intersection; and the closest bus stop for route 403D is approximately 0.1 mile east of the Project Site at the Sand Canyon Avenue and Waterworks Way intersection. These bus routes and stops would be within a reasonable walking distance from the Project Site and would be available to serve visitors and users of the Project. Also, the routes have adequate capacity to serve bus riders needing to access the Project Site; it is anticipated that the number of bus riders that would be generated by the Project would be low since the majority of people visiting the park would use their personal vehicles. Project implementation would not require the need for additional OCTA and iShuttle bus routes or stops to serve the Project's users.

Based on the preceding, the Project would not result in a conflict with a program, plan, ordinance, or policy addressing the alternate mode of transportation facilities. Impacts would be less than significant, and no mitigation measures are necessary.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Less Than Significant Impact. City of Irvine CEQA VMT Impact Analysis Guidelines stipulate that "If an analysis of environmental impacts related to transportation (i.e., VMT impact analysis) is required for a discretionary project, but the project applicant demonstrates to the satisfaction of the Director of Public Works and Transportation (or assigned staff under the direction of the Director) that the project meets any one of the following four screening criteria, no further VMT impact analysis is required:

- The project results in a net increase of 250 or less weekday daily trips (based on latest edition of the ITE Trip Generation Manual or other sources acceptable to the City).
- The project is located in a High Quality Transit Area or Priority Transit Area (i.e., within half-mile distance of existing rail transit station or located within half-mile of two or more existing bus routes with a frequency of service interval of 15 minutes or less during morning and evening peak hours), with specified density and parking features and if consistent with the applicable Sustainable Communities Strategy.
- The project consists of 100 percent restricted affordable housing units.
- The project is local serving, such as 100,000 square feet or less of retail use, a daycare use, or a locally serving public school (kindergarten through 12th grade).

3. Environmental Analysis

Public parks are not intended to be the focus of CEQA VMT analyses: "…land uses such as public facilities, recreation and parks are generally perceived as community-serving and not independent trip generators on the scale of residences or workplaces" (Appendix I).

Proposed improvements to the Oak Creek Community Park would be locally serving. They expand on the existing park activities and uses by accommodating a new dog park for pet owners who live or work nearby and adding parking spaces for the transport of pets to the park. Therefore, Project impacts to VMT would be less than significant, and no mitigation measures are necessary.

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

No Impact. The Project includes the renovation and expansion of the Oak Creek Community Park. The Project Site currently operates as a park and undeveloped land, and Project implementation would continue with park operation. Therefore, Project operation does not represent an incompatible use. The Project would not result in any offsite improvements to the local transportation network that would result in sharp curves, dangerous intersections, or other hazards.

Additionally, the design of the proposed internal drive aisles, parking area reconfiguration, and other circulation improvements would be required to adhere to the City's guidelines for site design and circulation and OCFA's design standards, which are imposed on project developments by the City and OCFA during the building plan check and development review process. Compliance with the established design standards would ensure that hazards due to design features would not occur and that the placement of the circulation improvements would not create a conflict for motorists, pedestrians, or bicyclists traveling within or around the Project Site.

Therefore, no impact would occur and no mitigation measures are necessary.

d) Result in inadequate emergency access?

No Impact. Factors such as number of driveway access points, roadway widths, and proximity to fire stations determine whether a project provides sufficient emergency access. The Project would introduce a number of new onsite vehicular access and circulation improvements. Also, the existing driveways would continue to serve the needs of emergency and fire vehicles. To address emergency and fire access needs, the proposed site improvements would be required to be designed in accordance with all applicable City and OCFA design standards for emergency access (e.g., minimum lane width and turning radius). For example, internal drive aisles would be designed to meet the minimum width requirements of OCFA to allow the passing of emergency vehicles.

Additionally, the Project would be required to incorporate all applicable design and safety requirements in the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of Irvine and OCFA. Compliance with these standards is ensured through the City's and OCFA's development review and building plan check process.

During the development review and building plan check process, the City would coordinate with OCFA and IPD to ensure that the necessary fire prevention and emergency response features are incorporated into the project and that adequate circulation and access (e.g., adequate turning radii for fire trucks) are provided within the traffic and circulation components of the project. All site improvements proposed under the project would be subject to review and approval by the City, OCFA, and IPD.

Based on the preceding, no impacts to emergency access would occur. No mitigation measures are necessary.

3.18 TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

No Impact. As shown in Figure 3, *Aerial Photograph*, the northern half of the Project Site is developed with the Oak Creek Community Park and related site improvements, which is owned and operated by the City, and the southern portion is undeveloped land that is owned by SCE. The park site has a few buildings and structures, which include picnic pavilion, play structures, and a restroom building. The SCE property is void of buildings, but does contain a few electrical transmission towers and lines. Project implementation would not include the demolition or removal of any of the existing buildings or structures onsite; these would remain in their existing condition. Also, none of the buildings or structures are considered historical.

Historically, the Project Site was developed for agricultural purposes, with orchards from at least 1938 to 1967, and intermittent row crops from the 1970s to about 2001 (BCR 2022). The Project Site then became occupied by SCE overhead power-line structures (southern half) and the existing Oak Creek Community Park (northern half). The Project Site and existing buildings and structures are not listed in the National Register of Historic Places or California Register of Historic Resources (NPS 2020; OHP 2022). Also, as shown in Figure E-1 (Historical/Archeological Landmarks) of the Irvine General Plan Cultural Resources Element, the Project Site is not listed as a designated historical or archeological landmark.

Based on the preceding, no impact would occur, and no mitigation measures are necessary.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact With Mitigation Incorporated. Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level

of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the lead agency (in this case, Irvine) during the project planning process to identify and protect tribal cultural resources.

The provisions of CEQA, Public Resources Code Sections 21080.3.1 et seq. (also known as AB 52), requires meaningful consultation with California Native American Tribes on potential impacts to tribal cultural resources, as defined in Public Resources Code Section 21074. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (CNRA 2018).

As part of the AB 52 process, Native American tribes must submit a written request to the relevant lead agency if it wishes to be notified of projects that require CEQA public noticing and are within its traditionally and culturally affiliated geographical area. The lead agency must provide written, formal notification to the tribes that have requested it within 14 days of determining that a project application is complete or deciding to undertake a project. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation. Consultation concludes when either 1): the parties agree to mitigation measures to avoid a significant effect, if one exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. AB 52 also addresses confidentiality during tribal consultation per Public Resources Code Section 21082.3(c).

In accordance with the provisions of AB 52, the City sent formal notifications letters on February 9, 2022, to the following tribes:

- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/ Tongva San Gabriel Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Juaneño Band of Mission Indians Acjachemen Nation – Belardes
- Manzanita Band of Kumeyaay Nation
- Campo Band of Diegueno Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Gabrielino/ Tongva Nation
- Gabrielino-Tongva Tribe
- La Posta Band of Diegueno Mission Indians
- Mesa Grande Band of Diegueno Mission Indians
- Pala Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

The 30-day noticing requirement under AB 52 was completed on March 15, 2022, approximately 30 days from the date the tribes received the notification letter. The City received responses from the Gabrieleno Band of Mission Indians–Kizh Nation (Kizh Nation) and Juaneño Band of Mission Indians Acjachemen Nation–Belardes requesting consultation. They City followed up with both tribes. The Kizh Nation requested a formal consultation meeting, which the City accommodated and completed. The Kizh Nation provided the City with mitigation that they requested to be added to this Initial Study, which is provided in Mitigation Measures CUL-1 and TCR-1, TCR-2, and TCR-3. The Juaneño Band of Mission Indians did not request a formal consultation meeting; however, they did request in writing that a member of the tribe be permitted to observe all grading activities. This request is incorporated in Mitigation Measure CUL-1.

Additionally, a cultural resources assessment was conducted for the Project Site by BCR Consulting (Appendix B). As a part of the assessment, an intensive pedestrian survey of the Project Site was conducted by BCR Consulting staff. The survey did not yield any tribal cultural resources. There are also no resources onsite determined by the City to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

However, while not anticipated, there is a potential to encounter buried prehistoric deposits (including tribal cultural resources) on the Project Site during site excavation and grading activities. The presence of unknown subsurface tribal cultural resources on the site remains possible and could be affected by project-related, ground-disturbing activities associated with excavation and grading at the Project Site. It is possible that subsurface disturbance may uncover undiscovered tribal cultural resources at the site. Therefore, impacts to tribal cultural resources are potentially significant.

To enable Kizh Nation to protect and preserve its tribal cultural resources and to reduce potential impacts to such resources (if encountered), mitigation is required. With implementation of Mitigation Measure CUL-1 and TCR-1, TCR-2, and TCR-3, which are based on input the City received from Kizh Nation during the consultation efforts, impacts related to tribal cultural resources would be reduced to a level of less than significant.

Mitigation Measures

TCR-1 **Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** The City of Irvine shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians–Kizh Nation (Kizh or Tribe). The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both onsite and any offsite locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. A copy of the executed monitoring agreement shall be submitted to the City prior to the commencement of any ground-disturbing activity. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of

ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered Tribal Cultural Resources (TCR), as defined by Section 21074(a) of the Public Resources Code. Copies of monitor logs will be provided to the City upon written request to the Tribe. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the City that all ground-disturbing activities and phases that may involve ground-disturbing activities on the Project Site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the City that no future, planned construction activity and/or development/construction phase at the Project Site possesses the potential to impact Kizh TCRs. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the monitor and/or archeologist. The Kizh will recover and retain discovered TCRs in the form, purpose, and/or manner the Tribe deems appropriate, including for educational, cultural, and/or historic purposes.

TCR-2 **Unanticipated Discovery of Human Remains and Associated Funerary Objects.** Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. If Native American human remains and/or grave goods are discovered or recognized on the Project Site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Construction activities may resume in other parts of the Project Site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh determines that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (CEQA Guidelines Section 15064.5(f)). Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any discovery of Native American human remains/burial goods shall be kept confidential to prevent further disturbance.

TCR-3 **Procedures for Burials and Funerary Remains.** To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. If the discovery of

human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. In the event preservation in place is not possible despite good faith efforts by the City of Irvine, before ground-disturbing activities may resume on the Project Site, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects, and objects of cultural patrimony will be removed to a secure container onsite if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the Project Site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically, and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data, recovery data, and/or recovery-related forms of documentation, shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the Native American Heritage Commission. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. Following is a discussion of the Project's potential impacts on water, wastewater treatment or stormwater drainage, and electric power. The Project does not involve the use of natural gas or telecommunications facilities.

Water Supply Facilities

IRWD currently provides and would continue to provide potable and recycled water to the Project Site. IRWD's water service area is approximately 181 square miles with a total of 420,000 residents. IRWD serves the City of Irvine and portions of Costa Mesa, Lake Forest, Newport Beach, Orange, Tustin, Santa Ana, and unincorporated areas of Orange County. IRWD's water resource portfolio consists of imported water, local groundwater, recycled water, and local surface water. Treated and untreated imported water is purchased from the Metropolitan Water District of Southern California through the Municipal Water District of Orange County. Potable and nonpotable groundwater supplies are extracted from both the Orange County Groundwater Basin and the Irvine and Lake Forest subbasins. Recycled water is produced at IRWD's Michelson and Los Alisos water recycling plants, and surface water sources are the drainage tributary areas to the Irvine Lake and Harding Canyon Reservoir. Approximately 13 percent of IRWD's water needs are met by imported water, 50 percent from local groundwater wells, 30 percent by recycled water, and the rest by surface water sources (IRWD 2021a).

IRWD's groundwater supply from the Main Orange County Groundwater Basin includes the Dyer Road Well Field (DRWF), a production well in the City of Orange, and two wells in the City of Tustin. The DRWF is in the City of Santa Ana and is connected to IRWD's potable distribution system. IRWD can produce up to 28,000 afy of groundwater from the DRWF. IRWD's groundwater production well in the City of Orange can serve an additional 900 afy of demand. In 2012, IRWD constructed and now operates two wells in the City of Tustin with a total annual yield of 8,800 afy. IRWD also produces water from the Irvine sub basin. IRWD has constructed the Irvine Desalter Project (IDP) to treat some of the water produced for potable use from this sub basin. The IDP began operations in 2007 and has the capacity to produce up to 5,600 afy of potable water supplies. In addition, IRWD operates other small wells that produce nonpotable quality water. Altogether, these wells can produce up to 4,100 afy of nonpotable water, which is used to supplement the IRWD recycled water distribution system. IRWD also constructed and operated up to six wells within the Lake Forest area sub basin; however, the Lake Forest sub basin has low production capability, and currently there is only one well that can be put into service. Historically, IRWD has produced up to 500 acre-feet from this well, but currently it does not produce any water due to poor water quality and well maintenance issues (IRWD 2021a).

The local surface water to Irvine Lake from Santiago Creek runoff has historically and solely been a supply to the nonpotable water system. On average, approximately 4,000 afy of local surface water is captured by Irvine

Lake for IRWD's use. However, IRWD's annual use of local surface water could be as low as 1,000 afy during dry years. With completion of the Baker Water Treatment Plant, local surface water in Irvine Lake can be supplied for treatment as a potable water supply source. The other local surface water supply, or local runoff, available to IRWD is from the Harding Canyon Dam area via the Manning Water Treatment Plant. The Manning Water Treatment Plant has an operational flow rate of 800 afy capacity. The water supplies available from the Harding Canyon Reservoir are often limited due to dry weather conditions in the drainage area (IRWD 2021a).

Most of the sewage generated in IRWD's service area is treated to disinfected, tertiary recycled water standards and used within the service area for nonpotable purposes. IRWD operates four recycled water seasonal storage reservoirs, which store excess recycled water during the winter months when irrigation demands are low for later use in the peak summer months. (IRWD 2021a). About 80 percent of the public and commercial irrigated landscape in IRWD's service area, including community association property, parks, medians, golf courses, and schools, is watered with recycled water (IRWD 2021b). Three IRWD recycled mains run adjacent to the Project Site along Valley Oak Drive, Barranca Parkway, and Sand Canyon Avenue (IRWD 2021c). The mains along Valley Oak Drive and Sand Canyon Avenue currently service the park's irrigation water needs.

The existing recycled water demand for the Project Site is approximately 29.08 afy over the past 12 months.[9] The Project would include a total of 12.2 acres[10] of irrigated land, which amounts to an outdoor maximum allowable water demand of 46.48 afy.[11] Outdoor water use is based on the California Department of Water Resources' Water Budget Workbook for New and Rehabilitated Non-Residential Landscapes (DWR 2017; CIMIS 2021).[12] Therefore, the Project would result in a maximum net increase of 17.40 afy of recycled water demand. The potable water use at the Project Site would not change since the Project does not include the expansion or addition of onsite restrooms.

IRWD estimates that it will have a residual nonpotable water capacity of 30,362 afy in 2025 and 31,974 afy in 2040 (IRWD 2021).[13] Additionally, IRWD estimates that it will have sufficient water supplies to meet proposed growth for normal, single dry, and multiple dry years (IRWD 2021a). Therefore, Project development would not require the construction of new or expanded water treatment facilities. Impacts would be less than significant, and no mitigation measures are necessary.

Wastewater Treatment Facilities

The Project would not require wastewater services since the only water demand would be for outdoor water use. The restrooms at the existing park would not be modified or expanded under the Project. Therefore, there would be no impacts on wastewater treatment facilities and no mitigation measures are necessary.

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9 Based on the total metered water demand usage on the site from October 2020 to September 2021.

10 Based on information received from Kathleen Haton, Senior Planner at the City of Irvine, on January 9, 2021.

11 This number is the maximum allowable water usage for the site per the California Water Commission revised Model Water Efficient Landscape Ordinance (MWELO) approved on July 15, 2015. This outdoor water demand is highly conservative. Proposed outdoor water demand is expected to be less than this amount.

12 A total annual precipitation of 14.5 inches/year was used. This number represents the average precipitation over the past three years per information for the City of Irvine from the California Irrigation Management Information System. The landscaped acreage is considered a Special Landscape Area since it will be irrigated with recycled water.

13 Nonpotable IRWD water supplies consist of recycled water, untreated imported water, surface water, and nonpotable groundwater.

3. Environmental Analysis

Stormwater Drainage Facilities

See response to Section 3.10.c.iii, above. As substantiated in this section, impacts would be less than significant and no mitigation measures are necessary.

Electrical Facilities

Electricity needs of the Project would be provided by SCE via existing infrastructure in the immediate area. SCE obtains electricity from conventional and renewable sources. The Project would result in a net increase in electricity demand of 55,003 kWh per year (see Table 4, *Electricity Consumption*).

Total electricity consumption in SCE's service area is forecast to increase by approximately 18,000 gigawatt-hours between 2016 and 2030 (CEC 2018). SCE forecasts that it will have sufficient electricity supplies to meet demands in its service area, and the electricity demand due to the Project is within the forecast increase in SCE's electricity demands. Project development would not require SCE to obtain new or expanded electricity supplies.

Additionally, the Project would be required to comply with energy efficiency standards by Title 24 of the California Code of Regulations and the Appliance Efficiency Regulations. The Project would also comply with CALGreen requirements related to energy and water conservation. These measures will decrease electricity consumption.

Therefore, the Project would not result in a substantial increase in electrical service demands. SCE would not need to expand their supply and transmission facilities to handle the demand generated by the Project. Impacts would be less than significant and no mitigation measures are necessary.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. The City has adequate water supplies to meet project water demands, as substantiated in Section 3.19.a. The Project would result in a maximum net increase of 17.40 afy of recycled water demand, and IRWD estimates that it will have a residual nonpotable water capacity of 30,362 afy in 2025. Therefore, the Project's net increase in recycled water demand is nominal in comparison to IRWD's residual capacity.

Additionally, the Project's landscaping would be required to be installed and maintained in compliance with Division 7, Sustainability in Landscaping, of the Irvine Municipal Code, which sets landscape design standards for water conservation. Furthermore, development of the Project would be required to comply with the provisions of CALGreen, which contains requirements for compliance with the Model Water Efficient Landscape Ordinance for outdoor water use.

Based on the preceding, there are adequate water supplies to meet the water demands of the Project, and Project development would not require IRWD to obtain new or expanded water supplies. Therefore, impacts on water supplies due to Project development would be less than significant and no mitigation measures are necessary.

c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. As discussed above in Section 3.19.a, the Project would not generate any wastewater. Therefore, project development would not require construction of new or expanded wastewater treatment facilities. No impacts would occur, and no mitigation measures are necessary.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. Waste Management waste haulers provide solid waste services to the Project Site. In 2019, approximately 91 percent of the municipal solid waste landfilled from the City of Irvine was disposed of at the Frank R. Bowerman Sanitary Landfill (CalRecycle 2019a). Capacity and disposal data for the Frank R. Bowerman Sanitary Landfill is shown in Table 14. As shown in the table, the landfill has a residual capacity of 7,842 tons per day.

Table 14 Landfill Capacity

Landfill Name	Current Remaining Capacity (tons)[1]	Maximum Daily Disposal Capacity (tons)	Average Daily Disposal, 2017 (tons)[2]	Residual Daily Disposal Capacity (tons)	Estimated Close Date
Frank R. Bowerman Sanitary Landfill	205,000,000	11,500	3,658	7,842	2053

Sources: CalRecycle 2019b, 2019c.

[1] A Volume-to-Weight conversion rate of 2,000 lbs/cubic yard (1 tons/cubic yard) for "Compacted - MSW Large Landfill with Best Management Practices" is used as per CalRecyle's 2016 Volume-to-Weight Conversion Factors, https://www.epa.gov/sites/production/files/201604/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf.

[2] Average daily disposal is calculated based on 300 operating days per year. The facility is open six days per week, Monday through Saturday, except certain holidays.

The Project is estimated to generate a net increase of approximately 0.8 ton per year (0.002 ton per day), as shown in Table 15.

Table 15 Project-Generated Solid Waste

Land Use	Acres	Generation Rate (tons/acre/year)	Total (tons/year)
Existing Conditions			
Public Park	10.35	0.09	0.93
Proposed Conditions			
Public Park	19.26	0.09	1.73
Net Difference	8.91	—	0.80

Source: CAPCOA 2017.

3. Environmental Analysis

As demonstrated in Table 14, there is adequate landfill capacity for the Project's forecast solid waste disposal, and project development would not require additional landfill capacity. Also, the total net increase of solid waste expected to be generated under the Project would be minimal compared to the total permitted daily maximum solid waste tonnage per day of the Frank R. Bowerman Sanitary Landfill.

Additionally, Project development would be required to implement the requirements of Division 7, Refuse, of the Irvine Municipal Code. The intent and purpose of this division is for Irvine to comply with state law on solid waste management. State law requires that waste streams to landfills be reduced by 50 percent by 2020 and beyond pursuant to Assembly Bill 939 and requires mandatory solid waste and recycling collection (Public Resources Code Section 41780).

Furthermore, substantial reductions in solid waste from construction materials can be achieved through recycling, reuse, and diversion programs. For example, project development would be required to comply with the provisions of Chapter 9, Recycling and Diversion of Construction and Demolition Waste, of the Irvine Municipal Code, which outlines requirements for construction waste reduction, material selection, and natural resource conservation. Chapter 9 requires that, of all non-hazardous excavated soil and land-clearing debris, at least 75 percent of all nonhazardous concrete and asphalt construction and demolition debris and 65 percent of all other nonhazardous construction and demolition debris be delivered to a material recovery facility. To comply with this provision, the City requires all general contractors and subcontractors to prepare and submit a Waste Management Plan (WMP). The WMP outlines how construction-related recoverable material will be diverted from disposal at a landfill. The City's construction contractor would prepare a WMP for implementation.

Finally, existing solid waste and recycling bins located onsite in an enclosure within the parking area, as well as existing and new solid waste and recycling receptacles provided throughout the park site, would be adequate to serve the Project's proposed uses.

Based on the preceding, impacts on landfill capacity and the City's ability to attain solid waste reduction goals would be less than significant and no mitigation measures are necessary.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. See response to section 3.19.d.

Additionally, the Project would be in compliance with the following federal, state, and local laws and regulations governing solid waste disposal, including:

- The EPA administers the Resource Conservation and Recovery Act of 1976 and the Solid Waste Disposal Act of 1965, which govern solid waste disposal.
- AB 341 (Chapter 476, Statutes of 2011) increases the statewide waste diversion goal to 75 percent by 2020, and mandates recycling for commercial and multifamily residential land uses.

- AB 939 (Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) required every California city and county to divert 50 percent of its waste from landfills by the year 2000 by such means as recycling, source reduction, and composting. In addition, AB 939 requires each county to prepare a countywide siting element specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the county that cannot be reduced or recycled for a 15-year period.

- AB 1327 (California Solid Waste Reuse and Recycling Access Act of 1991) requires local agencies to adopt ordinances mandating the use of recyclable materials in development projects.

Project-related construction and operation phases would be implemented in accordance with all applicable federal, state, and local laws and regulations pertaining to solid waste disposal. Therefore, no impact would occur, and no mitigation measures are necessary.

3.20 WILDFIRE

Wildland fire protection in California is the responsibility of either the local government, state, or federal government. State Responsibility Areas (SRA) are the areas in the state where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA forms one large area over 31 million acres to which the State Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services.

Local responsibility areas (LRA) include incorporated cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by the California Department of Forestry and Fire Protection (CAL FIRE) under contract to local governments. CAL FIRE uses an extension of the SRA Fire Hazard Severity Zone model as the basis for evaluating fire hazard in LRAs. The local responsibility area hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area. OCFA currently provides fire protection and emergency medical services to Irvine.

Fire hazard severity zones (FHSZ) are identified by moderate, high and very high in a SRA and very high in a LRA. The nearest FHSZ in the SRA to the Project Site is a Very High FHSZ approximately 2.75 miles south of the Project Site. The nearest FHSZ in the LRA is a Very High FHSZ approximately 1.70 miles southwest of the Project Site (CAL FIRE 2021). Land between the edge of the nearest FHSZ and the Project Site is dense urban development.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. As demonstrated above, the Project Site is not in, adjacent to or within proximity of a SRA or LRA or lands classified as high fire hazard severity zones. Therefore, the Project would not impact an adopted emergency response plan or emergency evacuation plan. No impact would occur, and no mitigation measures are necessary.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. As demonstrated above, the Project Site is not in, adjacent to or within proximity of a SRA or LRA or lands classified as high fire hazard severity zones. Therefore, the Project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur, and no mitigation measures are necessary.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. As demonstrated above, the Project Site is not in or near a SRA or LRA or lands classified as high fire hazard severity zones. Additionally, the Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. Therefore, no impact would occur, and no mitigation measures are necessary.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. As demonstrated above, the Project Site is not in or near a SRA or LRA or lands classified as high fire hazard severity zones. Project development would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur, and no mitigation measures are necessary.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact With Mitigation Incorporated. As shown in Figure 3, *Aerial Photograph*, the Project Site is developed with the Oak Creek Community Park and an undeveloped SCE property. The site is in a highly urbanized area of Irvine and is mainly surrounded by residential and office uses. As demonstrated in Section 3.4, *Biological Resources*, impacts to biological resources would be reduced to a level of less than significant with implementation of Mitigation Measure BIO-1. Additionally, as demonstrated in Section 3.5, *Cultural Resources*, no historic resources were identified onsite, and therefore the project does not have the potential to eliminate important examples of California history or prehistory. Impacts were deemed to be less than significant. As also demonstrated in Sections 3.5, impacts to archeological resources would be reduced to a level of less than significant with implementation of Mitigation Measure CUL-1. Furthermore, as

demonstrated in Sections 3.18, *Tribal Cultural Resources*, impacts to tribal cultural resources would be reduced to a level of less than significant with implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?

Less Than Significant Impact. Because this Initial Study analyzes long- and short-term impacts and determined that all potential impacts would be less than significant, the Project would not achieve short-term environmental goals to the disadvantage of long-term environmental goals.

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact. The issues relevant to project development are confined to the immediate Project Site and surrounding area. Additionally, the Project Site is in an urbanized area of Irvine where supporting utility infrastructure (e.g., water, wastewater, and drainage) and services (e.g., solid waste collection, police and fire protection) currently exist. As substantiated in this Initial Study, Project implementation would not require the construction of new or expansion of existing utility infrastructure or services. The Project Site is also generally too small in scope to appreciably contribute to existing cumulative impacts.

Furthermore, impacts related to other topical areas such as air quality, GHG, hydrology and water quality, and traffic would not be cumulatively considerable with development of the Project in conjunction with other cumulative projects.

In consideration of the preceding factors, the Project's contribution to cumulative impacts would be rendered less than significant; therefore, Project impacts would not be cumulatively considerable.

d) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. The Project's potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, has been discussed throughout this Initial Study. As discussed in the respective topical sections of this Initial Study, implementation of the project would not result in significant impacts, either directly or indirectly, in the areas of air quality, GHG, geology and soils, hazards and hazardous materials, hydrology and water quality, noise or wildfire, which may cause adverse effects on human beings.

3. Environmental Analysis

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4. Mitigation Monitoring and Reporting Program

Project-specific mitigation measures have been categorized in matrix format, as shown in Table 16. The matrix identifies the environmental factor, specific mitigation measures, schedule, and responsible monitor. The mitigation matrix serves as the basis for scheduling the implementation of, and compliance with, all mitigation measures and conditions of approval.

4. Mitigation Monitoring and Reporting Program

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Table 14 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
Biological Resources					
BIO-1	To avoid impacts to nesting birds within or adjacent to the Project Site and to comply with the California Fish and Game Code Sections 3503 and 3513 and the Migratory Bird Treaty Act, any site clearing and ground-disturbing activities should occur between during the non-nesting (or non-breeding) season for birds (generally, September 1 to January 31). If this avoidance schedule is not feasible, prior to the commencement of any proposed actions (e.g., site clearing, demolition, grading) during the breeding/nesting season, a qualified monitoring biologist contracted by the City of Irvine shall conduct a preconstruction survey(s) to identify any active nests in and adjacent to the Project Site no more than 14 days prior to initiation of the action. If the biologist does not find any active nests that would be potentially impacted, the proposed action may proceed. However, if the biologist finds an active nest within or directly adjacent to the action area (within 100 feet) and determines that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest using temporary plastic fencing or other suitable materials, such as barricade tape and traffic cones. The buffer zone shall be determined by the biologist in consultation with applicable resource agencies; and in consideration of species sensitivity and existing nest site conditions; and in coordination with the construction contractor. The qualified biologist shall serve as a construction monitor when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests. Only specified activities (if any) approved by the qualified biologist in coordination with the construction contractor shall take place within the buffer zone until the nest is vacated. Activities that may be prohibited within the buffer zone by the biologist include but are not limited to grading	City of Irvine, biologist, and construction contractor	Prior to the commencement of any site clearing and/or grading activities	City of Irvine Project Management Division	

4. Mitigation Monitoring and Reporting Program

Table 14 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	and tree clearing. Once the nest is no longer active and upon final determination by the biologist, the proposed action may proceed within the buffer zone. The monitoring biologist shall prepare a survey report summarizing his/her findings and recommendations of the preconstruction survey. Any active nests observed during the survey shall be mapped on a current aerial photograph, including documentation of GPS coordinates, and included in the survey report. The completed survey report shall be submitted to the City of Irvine Project Management Division prior to the commencement of construction-related activities that have the potential to disturb any active nests during the nesting season.				
Cultural Resources					
CUL-1	Prior to the issuance of grading permits, the City of Irvine shall retain a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications for Archeology as defined at 36 CFR Part 61, Appendix A (Professional Archeologist). The qualified archaeologist shall be on call during all grading and other significant ground-disturbing activities. In the event that potential archeological resources are discovered during ground-disturbing activities, all such activity shall cease in the immediate area of the find (i.e., not less than a 50-foot buffer), and the professional archeological monitor shall have the authority to halt any activities adversely impacting potentially significant cultural resources until they can be formally evaluated. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the archaeological monitor has evaluated the discovery to assess whether it can be classified a significant cultural resource pursuant to the CEQA (California Environmental Quality Act) definition of historical and/or unique archeological	City of Irvine, archeologist, and construction contractor	Prior to the issuance of grading permits	City of Irvine Project Management Division	

Table 14 Mitigation Monitoring Requirements

Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
resource (State CEQA Guidelines Section 15064.5[a] and/or Public Resources Code Section 21083.2[g]). Work may continue in other areas of the Project Site outside of the buffered area and for other project elements while the encountered find is evaluated. Additionally, the Gabrieleño Band of Mission Indians – Kizh Nation and Juaneño Band of Mission Indians Aejachemen Nation – Belardes shall be contacted regarding any pre-contact and/or historic era finds and be provided information after the archaeologist makes his/her initial assessment in order to provide Kizh Nation and Aejachemen Nation input with regards to significance and treatment. The City shall, in good faith, consult with Kizh Nation and Aejachemen Nation throughout the duration of ground-disturbing activities. If, upon completion of the assessment, the archeological monitor determines that the find qualifies as a significant cultural resource, the qualified archeologist shall make recommendations on the treatment and disposition of the deposits, which shall be developed in accordance with all applicable provisions of California Public Resource Code Section 21083.2 and State CEQA Guidelines Sections 15064.5 and 15126.4. For example, if significant cultural resources are discovered, and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan (MTP). The MTP shall be overseen and implemented by the archeologist and include mitigation measures to follow regarding identification and recording methods, and evaluation and final treatment of any cultural resources identified. The MTP shall allow for a Kizh Nation monitor to be present for the remainder of the ground-disturbing activities, should Kizh Nation elect to place a monitor onsite. Likely mitigations would involve temporary avoidance of the area of discovery plus a 60-foot buffer, development of a cultural resources eligibility evaluation plan in consultation with Kizh				

4. Mitigation Monitoring and Reporting Program

Table 14 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	Nation, Aejachemen Nation and the City of Irvine, and test excavation to determine eligibility of any discovery for the California Register of Historical Resources. Final disposition of any artifacts recovered shall be determined during development of the evaluation plan and would be likely to include reburial onsite, donation to Kizh Nation, Aejachemen Nation or other Native American entities, or curation at a federally approved repository. The draft MTP and any/all archaeological/cultural documents created (isolate records, site records, survey reports, testing reports, etc.) shall be provided to the City of Irvine for dissemination to Kizh Nation. The archaeologist shall monitor the remainder of the Project Site and implement the MTP accordingly. The archaeologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the City for dissemination to Kizh Nation or Aejachemen Nation. If disturbed resources are required to be collected and preserved, the City shall be required to participate financially up to the limits imposed by Public Resources Code Section 21083.2.				
Geology and Soils					
GEO-1	Prior to the issuance of grading permits, the City shall retain a qualified paleontologist. The qualified paleontologist shall be on call during all grading and other significant ground-disturbing activities. In the event that potential paleontological resources are discovered during ground-disturbing activities, all such activity shall cease in the immediate area of the find, and the professional archeological monitor shall have the authority to halt any activities adversely impacting potentially significant paleontological resources until they can be formally evaluated. Suspension of ground disturbances in the vicinity of the discovery shall not be lifted until the paleontological	City of Irvine, archeologist, and construction contractor	Prior to the issuance of grading permits	City of Irvine Project Management Division	

Table 14 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	monitor has evaluated the discovery. Work may continue in other areas of the Project Site and for other project elements while the encountered find is evaluated. If the resource is classified as a significant paleontological resource, the qualified paleontologist shall make recommendations on the treatment and disposition of the deposits. The paleontologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the City				
Tribal Cultural Resources					
TCR-1	**Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** The City of Irvine shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation (Kizh or Tribe). The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both onsite and any offsite locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. A copy of the executed monitoring agreement shall be submitted to the City prior to the commencement of any ground-disturbing activity. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered tribal cultural resources (TCRs), as defined by Section 21074(a) of the Public Resources Code. Copies of monitor logs will be	City of Irvine, Native American monitor, and construction contractor	Prior to the commencement of any ground-disturbing activities	City of Irvine Project Management Division	

4. Mitigation Monitoring and Reporting Program

Table 14 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	provided to the City upon written request to the Tribe. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the City that all ground-disturbing activities and phases that may involve ground-disturbing activities on the Project Site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the City that no future, planned construction activity and/or development/construction phase at the Project Site possesses the potential to impact Kizh TCRs. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the monitor and/or archeologist. The Kizh will recover and retain discovered TCRs in the form and/or manner the Tribe deems appropriate, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.				
TCR-2	**Procedures for Burials and Funerary Remains.** To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated	City of Irvine, Native American monitor, and construction contractor	Prior to the commencement of any ground-disturbing activities	City of Irvine Project Management Division	

Table 14 Mitigation Monitoring Requirements

Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. In the event preservation in place is not possible despite good faith efforts by the City of Irvine, before ground-disturbing activities may resume on the Project Site, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects, and objects of cultural patrimony will be removed to a secure container onsite if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the Project Site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically, and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data, recovery data, recovery-related forms of documentation, shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report				

4. Mitigation Monitoring and Reporting Program

Table 14 Mitigation Monitoring Requirements

Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
shall be submitted to the Tribe and the Native American Heritage Commission. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.				

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