October 2024 | Initial Study

HERITAGE COMMUNITY PARK MASTER PLAN

City of Irvine

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City of Irvine
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PLACEWORKS

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level

Abbreviations and Acronyms

CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L_{dn}	day-night noise level
L_{eq}	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service
LST	localized significance thresholds
M_W	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable
mgd	million gallons per day
MMT	million metric tons

Abbreviations and Acronyms

MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO_X	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TNM	transportation noise model

Abbreviations and Acronyms

tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan
WSA	water supply assessment

Abbreviations and Acronyms

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1. Introduction

1.1 PROJECT OVERVIEW

The City of Irvine has embarked on a Capital Improvement Project (CIP) to create the Heritage Community Park Master Plan that provides an array of improvements to the existing community park. The master plan serves as the vision for the proposed improvements of the existing community park over time, as funding allows.

Under the master plan, proposed improvements for the park site include a new community center; an expanded fine arts center; new play areas; new pickleball courts; new and updated water features; walking, exercise, and picnic amenities; a new swimming pool and ancillary locker/shower/restroom building addition to the Woollett Aquatics Center; a new interconnecting parking lot and a small expansion of an existing parking lot; circulation improvements throughout for pedestrians and vehicles; accessibility improvements; irrigation and lighting improvements; and various hardscape and landscape improvements. The provision of the new swimming pool and locker/shower/restroom building, and the small expansion of an existing parking lot would eliminate a soccer field and slightly reduce the footprint of the existing open meadow. The existing swimming pools (total of three), baseball fields, soccer fields (except for one that would be replaced with the proposed swimming pool), tennis courts (with the exception of one that would be replaced with four aforementioned pickleball courts) and basketball courts, and library would not be modified or improved under the master plan.

The project comprises the master plan and all proposed park 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, 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:

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- 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 44-acre Heritage Community Park site (Project Site) is in the central portion of the City of Irvine, which encompasses approximately 66 square miles (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 Yale Avenue to the east, Walnut Avenue to the south, Escolar to the west, and the Interstate-5 (I-5) to the north. The Project Site has an address of 14301 Yale Avenue and is in the City's El Camino Real Planning Area (Planning Area 11).

1.3.2 Existing Land Use and Conditions

The Project Site is developed with the Heritage Community Park, which is mostly owned and operated by the City; however, there are portions of the park that are owned by the Irvine Unified School District (IUSD). Heritage Community Park opened in 1978, and a majority of its existing facilities were constructed between 1978 and 1988. The park offers a diverse array of amenities and programs. As shown in Figure 3, the Heritage Community Park is currently developed with a variety of park amenities and facilities, including a 56,030-square-foot pond; children's and open play areas; a portion of the tennis courts and football stadium; racquetball, volleyball, and basketball courts; three natural turf soccer fields; two baseball/softball fields; an amphitheater and open meadow; barbecue and picnic areas; a surface parking lot with 463 stalls along the southeastern side of the Project Site, and various hardscape (e.g., walkways) and landscape (e.g., lawn, trees and shrubs) improvements. The park also includes the 19,354-square-foot fine arts center; 25,477-square-foot community center; 21,000-square foot library; and two modular buildings (each 3,000 square feet) totaling 6,000 square feet, one of which contains a youth employment and programs office and the other a nursery school and child resource center. As shown in Figure 3, the Project Site also includes an unpaved dirt lot in the northwestern end that is used for overflow and special even parking.

As shown in Figure 3, the property lines between the City-owned park and Irvine High School, which is owned and operated by IUSD, are not reflected in the layout of built amenities and facilities. For example, the Irvine High School Stadium, including the football field and track, open meadow, and small portion of the tennis courts spans across both properties. The Woollett Aquatics Center, portions of the meadow, racquetball courts, majority of the tennis courts, and one of the soccer fields is on IUSD property. The northern-most baseball field, most of the soccer fields located northeast on the Project Site, basketball courts, play areas, small portion of the tennis courts, a portion of the meadow and the rest of the Project Site are on City property. In terms of usage, the stadium is only used for school sports and not used by the public. The high school's baseball field, which is in the northwestern end of the Project Site, is located entirely on park land and is not used by the public. The aquatics center and tennis courts are owned by IUSD and operated by the City.

1.3.3 Surrounding Land Use

As shown in Figure 3, surrounding land uses consist of residential uses to the south, beyond Walnut Avenue; Irvine High School and residential uses to the west; residential uses to the east, beyond Yale Avenue; and residential uses to the north, beyond I-5.

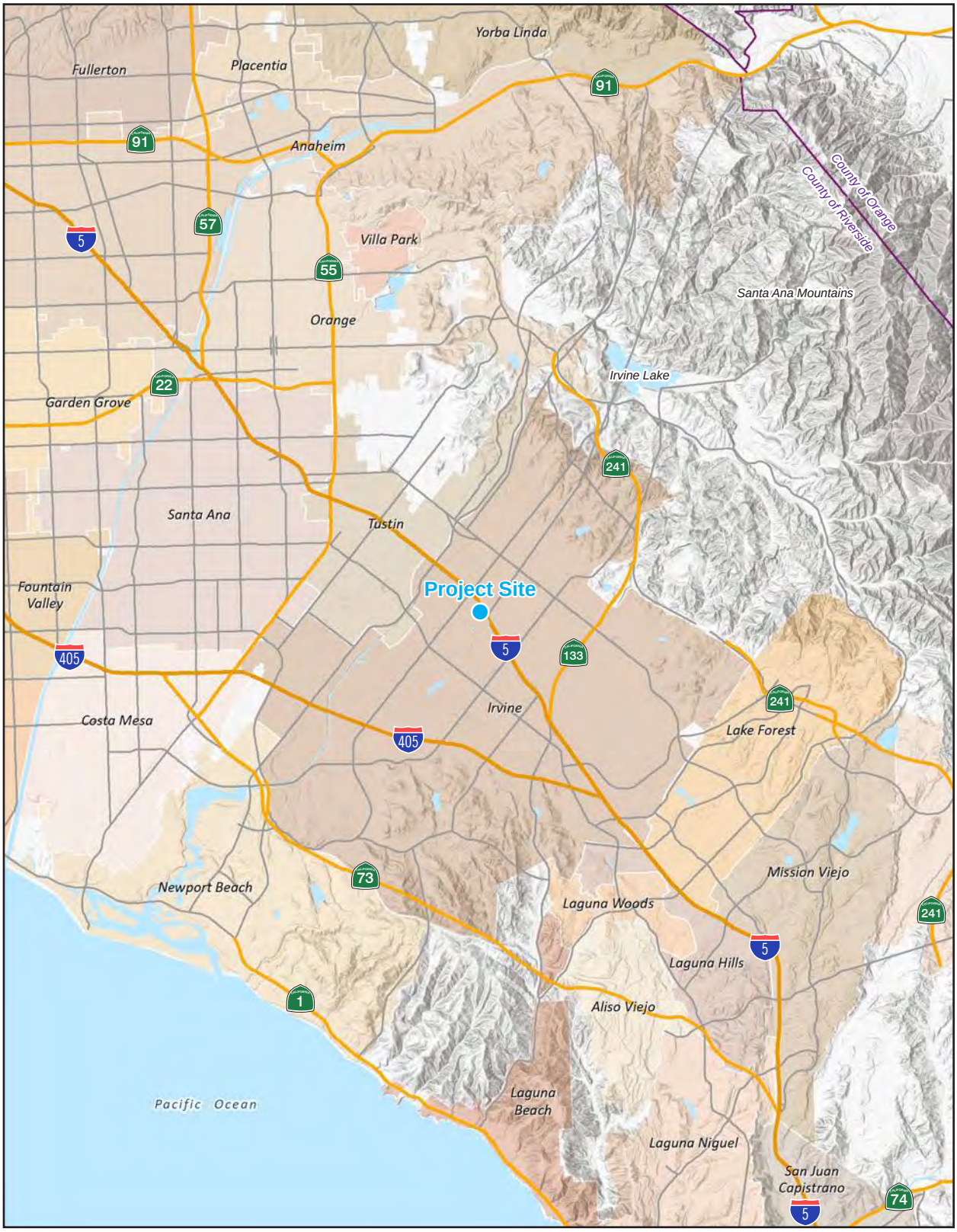
1.3.4 Existing Zoning and General Plan

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 44-acre Heritage Community Park. The Project Site contains no historic buildings, housing, scenic resources, or mineral resources. The Project Site contains an artificial pond. 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.

Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2023.

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Scale (Miles)

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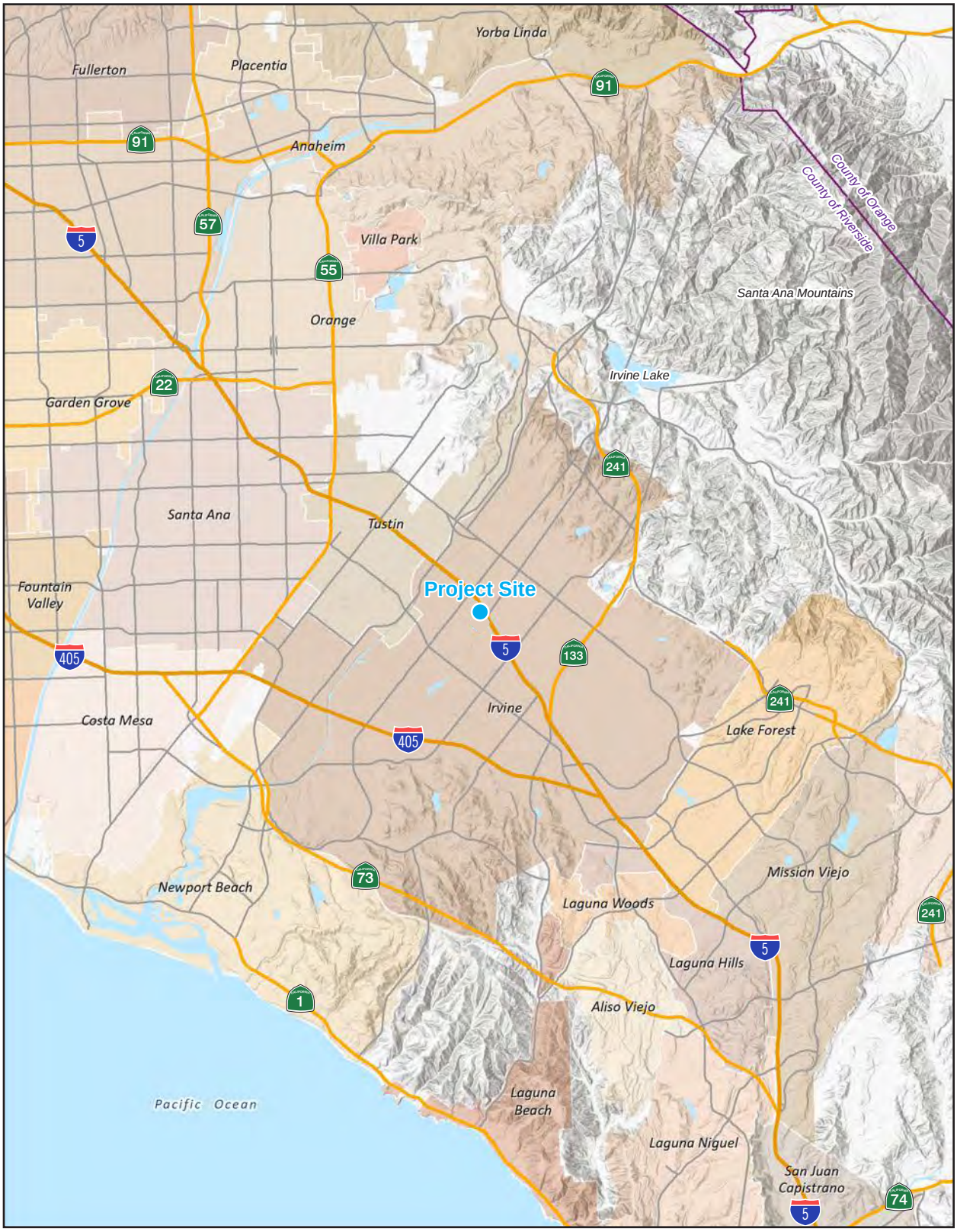
Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2023.

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Figure 3 - Aerial Photograph

Project Boundary

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Scale (Feet)

Source: Nearmap 2023.

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1.4 PROJECT DESCRIPTION

1.4.1 Proposed Land Use

Heritage Community Park is approximately 50 years old and is one of the City's first community parks. As Irvine's population has grown from 50,000 at the opening of the park to over 307,000 today, park programs and uses have evolved. Today, the size of the park and the multiple park amenities and facilities can no longer accommodate the existing service demands.

The City of Irvine has embarked on a Capital Improvement Project (CIP) to create a Master Plan that provides an array of improvements to the Heritage Community Park (Master Plan or Project). The purpose of the Master Plan is to create a framework for decision making that will allow the City to begin the process of determining how the park can accommodate existing and projected service demands. This Master Plan will serve as a vision for full improvements at Heritage Community Park and the improvements will happen over time as funding allows.

Under the Master Plan, proposed improvements for the park site include: accessibility improvements; irrigation and lighting improvements; new play areas; new pickleball courts; new and updated water features; walking, exercise, and picnic amenities; a new swimming pool and locker/shower/restroom building addition to the Woollett Aquatics Center; a new parking lot and a small expansion of an existing parking lot; circulation improvements throughout for pedestrians and vehicles; a new community center; an expanded fine arts center; and various hardscape and landscape improvements. The provision of the new swimming pool and locker/shower/restroom building, and the small expansion of an existing parking lot would eliminate a soccer field and slightly reduce the footprint of the existing open meadow. The existing swimming pools (total of three), baseball fields, soccer fields (with the exception of one that would be replaced with the proposed swimming pool), tennis courts (with the exception of one that would be replaced with the aforementioned pickleball courts) and basketball courts, and library would not be modified or improved (see Figure 4, *Heritage Community Park Master Plan*).

Following is a more detailed description of improvements that would occur under the Master Plan; refer to Figure 4 for proposed location of the various improvements.

Water Feature Plaza and Pond

Implementation of the Master Plan would include updates to the existing 56,030-square-foot pond. The general size would be maintained but edge conditions would be modified with seat walls and vegetation. This would provide additional seating for patrons, act as a subtle safety barrier, and would deter edge entry of ducks and geese. Other recommendations include up-lighted fountain sprays and arching stream jets inset in the seat walls that will shoot toward the center of the pond. This would not only create active water movement and sound for visitors enjoyment but would discourage the stillwater gathering of fowl. The pond would also be bordered by a multi-use pedestrian plaza. The current plumbing system within the pond would need to be assessed and updated for improved water efficiency.

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Play Areas

The children's play area would include the existing playground and expanded play features, including a nature play area and a splash play area. The new splash play area will feature misting and spray sculptures and interactive elements for cooling down on hot days. The new community center would include an outdoor integrated fenced nursery, which will be located directly adjacent to the destination play area.

Group Picnic and Flexible Workout Areas

The group picnic area would feature large-scale shaded picnic facilities, including tables, grills, and a restroom. This area would provide flexible space for large group picnic gatherings and outdoor exercise equipment as well as additional flexible plaza space for group fitness including group fitness classes.

Water Tower Plaza and Hammock Hill

Under the Master Plan a new water tower plaza would be centrally located in the park. The water tower that would serve as a focal point and park landmark, commemorating a feature of the park that was demolished several years ago. The hillside between the water tower plaza and the group picnic area would contain large shady canopies of existing mature trees, which would provide recreational lounging experiences, including suspended hammocks.

Sports Courts and Pool

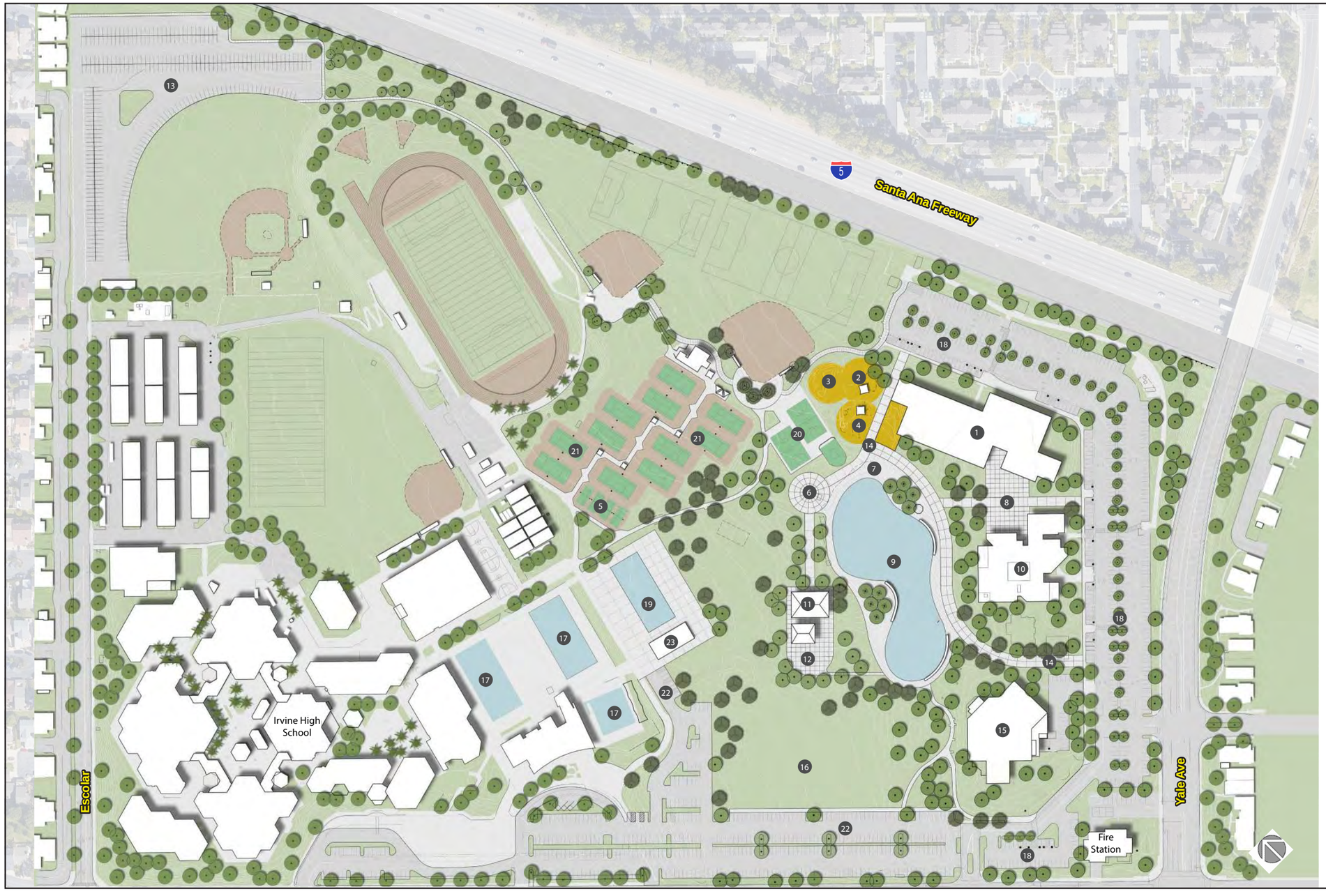
Under the Master Plan, one tennis court would be repurposed to create four new pickleball courts. Project implementation also includes the construction of a new 50-meter swimming pool that would be part of the Woollett Aquatics Center. The new swimming pool would replace the existing natural turf soccer field that is situated east of and adjacent to the three existing swimming pools. In addition to the swimming pool, a new 3,600 square foot ancillary locker/shower/restroom building would be constructed and bleachers to sit 600 spectators.

Community Center

Under the Master Plan, the existing community center would be demolished and rebuilt beyond its current size of 25,477 square feet to approximately 57,610 square feet. The new community center would be constructed as a frame steel structure with exposed architectural steel and an exposed heavy timber roof.

The new community center would be situated in the same general location as the existing community center. The new building would focus on teen programs, and early childhood and school-age education by incorporating youth/middle school programs and the nursery and child resource center currently in the modular buildings that would be removed. The new community center would also include a lobby, lounge, multi-purpose room, game room, meeting rooms and classrooms, a kitchen and food storage space, office space, makerspace, early childhood and childcare classrooms, storage space, a craft room, and restrooms. The new community center would also include an outdoor integrated fenced nursery, which would be located directly adjacent to the destination play area. The space just outside the building would be designed to support the indoor and outdoor activities of the new community center.

Figure 4 - Heritage Community Park Master Plan



LEGEND

1. New Community Center - 57,610 sq.ft.
2. New Nature Play
3. New Splash Play
4. Existing Children's Play
5. New Pickleball Courts w/ in Ex. Tennis Court Footprint
6. New Water Tower Plaza
7. New Water Feature Plaza
8. New Connecting Plaza
9. Updated Pond - 56,030 sq.ft.
10. Expanded Fine Arts Center - 25,854 sq.ft.
11. New Group Picnic Areas
12. New Flexible Workout Area
13. New Parking - 321 Stalls
14. New Promenade
15. Existing Library
16. Open Meadow
17. Existing Pool
18. Existing Parking - 463 Stalls
19. New Swimming Pool
20. Existing Basketball Courts
21. Existing Tennis Courts
22. New Expanded Parking
23. New Pool Building

0 250
Scale (Feet)

Source: MIG 2023.

1. Introduction

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Fine Arts Center

The existing fine arts center would be renovated by adding an additional 6,500 square feet to the existing 19,354 square-foot building, dispersed throughout the existing building and according to program needs and adjacency requirements. Space would be included for ceramics/sculpture, common/support, culinary, gallery, jewelry, mechanical, painting/drawing, photography, printmaking, and youth uses and programs. Improvements include the construction of an additional ceramics studio; expansion of a jewelry studio; updates to a culinary studio; reconfiguration and expansion of art galleries; and the addition of new offices, workstations, and meeting space, and additional general storage space. The expanded fine arts center would also include outdoor courtyard improvements. Additional outdoor space would be provided and shared with the community center with shade and flexibility for classes, meetings, and gatherings.

The existing wood frame structure would be upgraded, as required, including the repair of the structural shear panels and modernization of all building systems. The existing façade may be removed to the framing and replaced with a clear vertical grain, cedar rain screen with new waterproofing and flashing. The mechanical systems would be replaced with a high efficiency, multi-zone system with integrated solar panels.

Connecting Plaza

A new connecting plaza would be provided between the expanded fine arts center and the new community center. The connecting plaza would provide an outdoor courtyard for events and formal and informal seating. The pergola along the promenade would bisect the space, providing shade, directing circulation, and defining smaller seating areas. Additional amenities would include bicycle racks, above-grade planters, wayfinding signage, lighting, and outdoor gathering spaces.

Pedestrian Promenades

New pedestrian promenades would be provided to define clear entry points and paths of travel throughout the park, improving the overall pedestrian circulation. New wide promenades are proposed from the existing parking lot near the library, between the expanded Fine Arts Center and the new Community Center, and near the destination play area and ball fields. The promenades would help provide sight lines (visibility) into the park, including the central pond and the water tower. The promenades would feature amenities, such as benches at regular intervals, shade trees, kiosks with informational and wayfinding signage, and pedestrian lighting. Swing benches with integrated shade are also located along the promenades to provide a nontraditional seating option with views of different areas throughout the park.

The central promenade between the existing library and expanded fine arts center would include unique, pedestrian-scale monument signage with foundation planting at the entrance.

1.4.2 Operational Characteristics: Park Program/Use

Existing park programs and uses are not proposed to change after improvements are made. The Master Plan updates and renovates existing facilities that have reached the end of their lifespan. Expanded uses and buildings are meant to accommodate existing programs that have outgrown the park space as is currently configured.

1. Introduction

Park hours of operation would continue to be from 6:00 am to 10:00 pm daily. Following are details on programs and uses that would remain unchanged:

- Irvine Fine Arts Center (IFAC) art classes/workshops/camps, including, but not limited to drawing, painting, ceramics, jewelry making, printing, photography, and cooking/baking for approximately 6,500 participants annually. In addition, IFAC hosts studies, gallery showings, and art events with over 8,000 attendees each year.
- Youth arts, cooking, education, and recreation programs
- Teen college and job prep courses
- Sports activities for all ages, including Northwood High School and Novaquatics swim practices at Woollett Aquatics Center
- All City summer and vacation camps
- After-school/drop-in classes and tutoring

1.4.3 Access, Circulation, and Parking

Figure 4, *Heritage Community Park Master 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 driveways off Walnut Avenue and Yale Avenue. No modifications or improvements would be required or undertaken for the access driveway. The access driveways connect to the existing and proposed parking areas in the eastern end of the Project Site. Access to the northwestern end of the Project Site, which currently consists of an unpaved dirt lot that would be developed with a new paved parking lot, would continue to be provided via Escolar.

Parking for park patrons would be provided via existing and proposed parking areas. As shown in Figure 3, *Aerial Photograph*, the existing parking lot is situated along the eastern side of the Project Site and provides 463 parking spaces. As shown in Figure 4, Project implementation would include a new surface parking area in the northwestern end of the Project Site, which would provide an additional 319 parking spaces. As noted above, the new parking area would be accessed via Escolar. Additionally, Project implementation includes an expanded parking area along the southern end of the Project; this new parking area would connect the parking area in front of the library with the parking area of the adjacent high school (see Figure 4). The new parking area would accommodate approximately 163 parking spaces and would require removal of a portion of the open meadow and associated landscape improvements and walkways. The expanded parking area would be accessed via the existing driveway off Walnut Avenue.

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 Yale Avenue and Walnut Avenue, which connect to the park's internal walkways at key locations. Pedestrian access to the proposed parking area in the northeastern end of the Project Site would be provided via the existing sidewalk along Escolar. Under the Project, the existing public sidewalks would not undergo any modifications or improvements.

For internal walkways, new pedestrian promenades would be provided from the existing parking lot near the library, between the expanded fine arts center and new community center, near the play area and ball fields, and near the water tower plaza, group picnic area, and flexible workout area (see Figure 4). The promenades would feature additional amenities, including benches, swing benches, shade trees, kiosks with informational and wayfinding signage, and pedestrian lighting. The central promenade between the library and expanded fine arts center would include pedestrian-scale monument signage with foundation planting at the entrance. Additionally, walking loops would be established either along the central promenade or around the picnic and flexible workout areas, respectively, and may include wayfinding signage. The proposed water feature plaza, water tower plaza, and connecting plaza between the expanded fine arts center and new community center would also serve to improve internal pedestrian circulation. Also, a new walkway would be provided along the northern end of the new parking area to be provided in the southern end of the Project Site. All new walkways would be designed to be ADA (Americans with Disabilities Act) compliant.

1.4.3.3 BICYCLE ACCESS, CIRCULATION, AND PARKING

There are dedicated on-street bicycle lanes on Walnut Avenue and Yale Avenue, which form the Project Site's southern and eastern site boundaries, respectively. Under the Project, the existing bicycle lanes would not undergo any modifications or improvements. 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 buildings, restrooms and facilities, pool and splash pad, and recycled water is provided for irrigation purposes and the pond.

As a part of the Project and where necessary, new onsite water lines for general and fire suppression water use would be constructed and connect to the existing water lines onsite, which connect to the water main in Walnut Avenue and/or Yale Avenue. For example, demolition and reconstruction of the community center, expansion

of the fine arts building, and construction of the new swimming pool at the Woollett Aquatics Center would require new water lines. Additionally, new drinking fountains would be provided for park users, and a new water splash area is proposed for the children's play area. Also, new onsite water lines for recycled water use would connect to the existing water lines onsite and the water main in Walnut Avenue and/or Yale Avenue. No offsite construction or upsizing for water lines would be required to accommodate the Project. The proposed potable and 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

IRWD provides wastewater collection and conveyance service to the existing uses of the Project Site and would continue to do so after Project implementation. As a part of the project and where necessary, new onsite sewer lines would be constructed and connect to the existing sewer lines onsite, which connect to the sewer main in Walnut Avenue and/or Yale Avenue. For example, demolition and reconstruction of the community center and expansion of the fine arts building would require new sewer lines. No offsite sewer line construction or upsizing would be required to accommodate the Project. The proposed wastewater system improvements would be designed and constructed in accordance with City requirements and would require City approval.

1.4.4.3 DRAINAGE SYSTEM

Under existing conditions, runoff from the existing park generally drains westerly, and flows are routed by a 42-inch storm line in Walnut Avenue and a 30-inch storm line in Escolar. These lines are tributary to a 74-inch storm line, north of the Project Site, at Culver Drive and ultimately discharges into an Orange County Flood Control District (OCFCD) Facility (Como Channel).

Under Project Implementation, the post-development condition would change the drainage patterns of the pre-development condition and treated runoff from the onsite drainage improvements would drain into the 42-inch storm line in Walnut Avenue and the 30-inch storm line at Escolar. Onsite flows would be routed to proposed bioretention basins and Filterra units[1] before discharging to the offsite storm drain system. The bioretention systems would be designed to treat the design capture volume for the 85th percentile, 24-hour storm event.

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. Existing solid waste and recycling bins located onsite in enclosures, as well as existing and new solid waste and recycling receptacles provided throughout the Project Site, would be adequate to serve the Project's proposed uses.

[1] Filterra units are proprietary biotreatment devices manufactured to simulate natural systems and provide treatment at higher flowrates or higher volumes and with smaller footprints than their natural counterparts.

1.4.4.5 UTILITIES AND SERVICE SYSTEMS

Utilities and service systems that serve the existing uses onsite (and would serve the Project's proposed uses) include electricity (Southern California Edison), natural gas (Southern California Gas Company), and telecommunications (Spectrum, Frontier, and AT&T). Any new utility infrastructure needed to serve the project uses would be installed underground or placed in enclosed spaces (e.g., utility closets).

1.4.4.6 GREEN BUILDING STANDARDS

According to the U.S. Green Building Council, green building is the practice of designing, constructing, and operating buildings to maximize occupant health and productivity, use fewer resources, reduce waste and negative environmental impacts, and decrease life cycle costs. The project would be designed and constructed using green building practices, including those of the most current California Building Energy Efficiency Standards (Title 24, California Code of Regulations [CCR], Part 6) and California Green Building Standards Code (CALGreen [24 CCR Part 11])), which is incorporated by reference in Section 5-9-403 (Green Building Code) of the Irvine Municipal Code. The Building Energy Efficiency Standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. CALGreen is California's statewide "green" building code. Its purpose is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the categories of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

As proposed, development under the Master Plan would include mandatory standards from CALGreen Divisions 5.1, Planning and Design; 5.2, Energy Efficiency; 5.3, Water Efficiency and Conservation; 5.4, Material Conservation and Resource Efficiency; and 5.5, Environmental Quality. Some of the specific green building standards include but are not limited to:

- Bicycle parking
- Designated parking for clean air vehicles
- Electric vehicle charging (facilitate future installation of electric vehicle supply equipment)
- Light pollution reduction
- Water-conserving plumbing fixtures and fittings
- Construction waste reduction, disposal, and recycling
- Recycling by occupants
- Finish material pollutant control

1.4.5 Project Construction and Phasing

As noted earlier, the Master Plan will serve as a vision for full improvements proposed at Heritage Community Park and the improvements would happen over time as funding allows. Construction of the improvements is anticipated to occur over a period of approximately four years, from December 2024 to December 2028.

Construction activities are anticipated to disturb approximately 17.92 acres of the 44-acre Project Site. No soil import is anticipated; however, approximately 15,000 cubic yards of soil export are anticipated.

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 Master Plan implementation:

- Adoption of a MND and Mitigation Monitoring and Reporting Program
- Approval of a park design for the Master Plan

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.
- Approval of a fire master plan and corresponding permits through the Orange County Fire Authority.

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.

2. Environmental Checklist

2.1 PROJECT INFORMATION

1. **Project Title:** Heritage Community Park Master Plan

2. **Lead Agency Name and Address:**
   City of Irvine
   Public Works and Sustainability
   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 the 44-acre Heritage Community Park, which is generally bounded by Yale Avenue to the east, Walnut Avenue to the south, Escolar to the west, and I-5 to the north. The Project Site has an address of 14301 Yale Avenue and is in the City's El Camino Real Planning Area (Planning Area 11).

5. **Project Sponsor's Name and Address:**
   City of Irvine
   Public Works and Sustainability
   One Civic Center Plaza
   Irvine, CA 92623

6. **General Plan Designation:** Recreation

7. **Zoning:** 1.5 Recreation

8. **Description of Project:** The City of Irvine has embarked on a Capital Improvement Project (CIP) to create the Heritage Community Park Master Plan that provides an array of improvements to the existing community park. The master plan serves as the vision for the proposed improvements of the park over time, as funding allows. Under the master plan, proposed improvements for the park site include a new community center; an expanded fine arts center; new play areas; a new pickleball court; new and updated water features; walking, exercise, and picnic amenities; a new swimming pool and locker/shower/restroom building; a new interconnecting parking lot; circulation improvements throughout for pedestrians and vehicles; accessibility improvements; irrigation and lighting improvements; and various hardscape and landscape improvements. The existing swimming pools, baseball fields, soccer fields (with the exception of one that would be replaced with the proposed

swimming pool as a part of the Woollett Aquatics Center expansion), tennis courts (with the exception of one that would be replaced with the aforementioned pickleball court) and basketball courts, and library would not be modified or improved under the master plan. Refer to Section 1.4, *Project Description*, for a more detailed description of the Project.

9. **Surrounding Land Uses and Setting:** Surrounding land uses consist of residential uses to the south, beyond Walnut Avenue; Irvine High School and residential uses to the west; residential uses to the east, beyond Yale Avenue; and residential uses to the north, beyond I-5.

10. **Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participating agreement):** Not applicable

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.

_____	_____
Signature	*Date*
_____	_____

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 off-site as well as on-site, 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 dedicated cemeteries?			X	

2. Environmental Checklist

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 off-site 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	

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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		
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 off-site;			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

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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
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

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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	
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	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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	
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 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	
c) 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 or bordering the Project Site. Project development would not affect nearby scenic highways because it would not introduce visual obstructions that would affect motorists and passersby.

Furthermore, 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 would include an array of improvements to the existing park, including new and expanded park uses and facilities.

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

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 2023a).

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 2023b). 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 approximately nine miles to the southwest of the Project Site. Due to distance and intervening land uses and built features, 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 Heritage 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?

Less Than Significant 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 located in an urbanized area as defined by CEQA Guidelines 15191(m)(1). For an incorporated city, "Urbanized area" means the city that either by itself or in combination with two contiguous incorporated cities has a population of at least 100,000 persons. In 2023, the City of Irvine had a population of approximately 303,051 persons (Irvine 2023). As such, Irvine meets the criteria for an urbanized area.

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 Heritage Community Park and associated site features and improvements. Surrounding land uses consist mainly of residential and institutional uses.

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 demolition, 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. 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 trees that line the Project Site boundaries, the existing walls and fences that abut the northern and western site boundaries, and existing building and structures along the eastern site boundary 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 Heritage Community Park is currently developed with a variety of park amenities and facilities, including a 56,030-square-foot pond; children's and open play areas; a portion of the tennis courts and football stadium; racquetball, volleyball, and basketball courts; three natural turf soccer fields; two baseball/softball fields; an open meadow; barbecue and picnic areas; a surface parking lot with 463 stalls along the southeastern side of the Project Site, and various hardscape (e.g., walkways) and landscape (e.g., lawn, trees and shrubs) improvements. The park also includes the 19,354-square-foot fine arts center; 25,477-square-foot community center; 21,000-square foot library; the Woollett Aquatics Center; and two modular buildings totaling 6,000 square feet, one of which contains a youth employment and programs office and the other a nursery school and child resource center. As shown in Figure 3, the Project Site also includes an unpaved dirt lot in the northwestern end that is used for overflow and special event parking.

Under the master plan, proposed improvements for the park site include a new community center; an expanded fine arts center; new play areas; a new pickleball court; new and updated water features; walking, exercise, and picnic amenities; a new swimming pool and locker/shower/restroom building; a new interconnecting parking lot; circulation improvements throughout for pedestrians and vehicles; accessibility improvements; irrigation and lighting improvements; and various hardscape and landscape improvements. The existing swimming pools, baseball fields, soccer fields (with the exception of one that would be replaced with the proposed swimming pool), tennis courts (with the exception of one that would be replaced with the aforementioned pickleball court) and basketball courts, and library would not be modified or improved under the master plan. The project

comprises the master plan and all proposed park improvements and associated City actions described in this Initial Study. Figure 4, *Heritage Community Park Master Plan*, demonstrates how Project implementation would help create a more unified and enhanced development plan for the community park.

Overall, Project development would enhance and strengthen the visual character of the Project Site and its surroundings through new park improvements. The proposed buildings, 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 on- and offsite and along the Project Site boundaries. Although newer than the existing uses onsite and in the surrounding area, the proposed site improvements and buildings 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 developed with the Heritage 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 institutional 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 includes building materials and architectural treatments that could cause daytime glare, but not to such an extent that they would result in a significant impact. For example, the architectural treatments of the proposed buildings (community center redevelopment and fine arts center expansion) would include building materials such as pre-engineered/-fabricated metal structures and plastered walls, glazing (glass windows and doors), and other decorative elements. With the exception of the glass windows and doors, the building materials and architectural treatments would be non-reflective and would therefore not create substantial day or nighttime glare.

The proposed building glazing could increase sources of glare because it would reflect some level of sunlight during certain times of the day. Also, vehicles parked onsite would increase the potential for reflected sunlight during certain times of the day. However, glare from these sources is typical of the surrounding area and would not increase beyond what is expected for a developed area of the city. Furthermore, as noted above, the project site is developed with the Heritage Community Park, and sources of glare already exist on the project site.

Therefore, daytime glare impacts from project-related architectural treatments and building materials 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 Heritage Community Park, and sources of artificial light already exist on the site. Project development would introduce new sources of artificial light to the Project Site and surrounding area. Nighttime site lighting would consist of exterior, building-mounted light fixtures; interior lighting for the new buildings; lighting for pedestrian walkways and park amenity areas; lighting for the new pool and pickle ball court; lighting for the new parking areas; 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. Majority of the lighting improvements would occur

away from the Project boundary; however, nighttime lighting and glare from the Project Site would be visible from the surrounding roadways and residential 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 institutional uses. Existing nighttime lighting also emanates from streetlights along the surrounding roadways, including Yale Avenue and Walnut Avenue. 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 all Project improvements comply with the requirements of the Irvine Zoning Ordinance (including those of Chapter 3-16, as noted above) and thus precludes or effectively minimizes potential light/glare overspill onto adjacent/surrounding properties or roadways.

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 Project Site is designated as Urban and Built-Up Land (DOC 2023a). The Project Site is developed with the Heritage Community and designated as 1.5 Recreation in the City's zoning map. 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 is developed with the Heritage Community Park. The Project 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[2] (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, the Project Site is in a highly urbanized area of Irvine and is surrounded by residential and institutional 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.

[2] 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 unhealthy 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 can be found 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 2023).

Furthermore, the South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, nitrogen oxides (NO_X), SO_2, 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 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?

Less Than Significant Impact. The South Coast AQMD adopted the 2022 Air Quality Management Plan (AQMP) on December 2, 2022. 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 regional growth projections. In addition, the consistency analysis is generally only required in connection with the adoption of general plans, specific plans, and significant projects. 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. These demographic trends are incorporated into SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to determine priority transportation projects and vehicle miles traveled in the SCAG region.

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. As described in Section 1.4.1, *Proposed Land Use*, the Project involves improvements to an existing community park, including demolition and reconstruction of the existing community center and an expanded fine arts center. Therefore, the Project would not be a regionally significant project that has the potential to result in changes in population,

housing, or employment in the City of Irvine. Due to the nature of the Project, it would not result in new long-term employment. Construction activities associated with the Project would result in short-term employment only and would end upon completion.

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, Project implementation 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.

Short-Term Construction Impact

Project-related 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 approximately 17.92 acres of the 44-acre Project Site. The Project would involve demolition, site preparation, grading and soil haul, utilities trenching, building construction, paving, architectural coating, and finishing/landscaping. Construction is anticipated to occur from December 2024 to December 2028. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1, and are based on the preliminary construction duration provided by the City. Construction emissions modeling is shown in Table 1. As shown 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 would be less than significant and no mitigation measures are necessary.

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}	$PM_{2.5}$
Building Demolition 2024	3	26	23	<1	2	1
Building Demolition 2025	2	23	21	<1	2	1
Site Preparation	3	32	31	<1	9	5
Grading	2	19	20	<1	4	2
Utility Trenching	<1	3	4	<1	<1	<1
Building Construction 2025	1	11	16	<1	1	1
Building Construction 2026	1	11	15	<1	1	1
Building Construction 2027	1	10	15	<1	1	<1
Building Construction 2028	1	10	15	<1	1	<1
Building Construction 2028, Paving, and Architectural Coating	11	17	27	<1	2	1
Building Construction 2028, Paving, Architectural Coating, and Finishing/Landscaping	11	18	28	<1	2	1
Maximum Daily Construction Emissions						
Maximum Daily Emissions	11	32	31	<1	9	5
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1.
Notes: lbs = pounds.
[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 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 1,349 weekday vehicle trips over existing conditions (Appendix F). As shown in Table 2, it is anticipated that operation of the Project would result in overall minimal increase in net emissions over existing conditions and would not exceed the South Coast AQMD regional operation-phase significance thresholds. Therefore, impacts 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}	$PM_{2.}$
Emissions						
Mobile[1]	4	4	41	<1	11	3
Area	2	<1	<1	<1	<1	<1
Energy[2,3]	<1	1	1	<1	<1	<1
Total	6	4	41	<1	11	3
South Coast AQMD Regional Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1.
Notes: lbs = pounds. Highest winter or summer emissions report.
[1] Mobile emission estimates consider a net increase of 1,349 weekday vehicle trips as provided in Appendix F.
[2] Estimated electricity and natural gas consumption based on health club energy rates from EDFZ 7 from CalEEMod Appendix G, *Default Data Tables*, as an approximation since CalEEMod "City Park" land use default rates do not account for electricity or natural gas use.
[3] Calculations for electricity and natural gas consumption consider the net increase in building square feet by 61,587 square feet only. As CalEEMod Version 2022.1 does not include historical energy rates, it is assumed that existing buildings and new buildings will have the same energy rate.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Project implementation 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 (LSTs) 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 single-family residences to the south beyond Walnut Avenue, single-family residences to the west beyond Butterfly, and students of Irvine High School to the immediate west.

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) generated during onsite construction activities compared with the South Coast AQMD Screening-level LSTs, for sensitive receptors within 82 feet (25 meters) for NO_X and CO, and 140 feet (43 meters) for PM_{10} and $PM_{2.5}$[3]. As shown in Table 3, the Project's construction-related emissions would not exceed the screening-level LSTs. Therefore,

[3] Distances are based on closest receptor at 82 feet who would not be exposed to daily emissions 24 hours a day and 140 feet for residences who are assumed to be exposed to daily emissions 24 hours a day.

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	91	696	8.95	3.71
Building Demolition 2024	25	22	1.34	1.02
Building Demolition 2025	22	20	1.20	0.88
Utility Trenching	3	4	0.09	0.08
Exceeds LST?	No	No	No	No
South Coast AQMD 1.31 Acre LST	103	789	10.68	4.24
Building Construction 2025	10	13	0.43	0.40
Building Construction 2026	10	13	0.38	0.35
Building Construction 2027	9	13	0.34	0.31
Building Construction 2028	9	13	0.30	0.28
Building Construction 2028, Paving, and Architectural Coating	16	24	0.58	0.53
Building Construction 2028, Paving, Architectural Coating, and Finishing/Landscaping	17	25	0.60	0.55
Exceeds LST?	No	No	No	No
South Coast AQMD 2.50 Acre LST	142	1128	17.01	6.20
Grading	16	18	3.49	2.00
Exceeds LST?	No	No	No	No
South Coast AQMD 3.50-Acre LSTs	164	1398	22.08	7.77
Site Preparation	32	30	9.04	5.20
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2022.1. South Coast AQMD 2008 and 2023.

Notes: lbs = pounds. 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 82 feet (25 meters) for NO_X and CO who would not be exposed 24 hours/day and residences located 140 ft (43 meters) for PM_{10} and $PM_{2.5}$, who are assumed to be exposed 24 hours/day, 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 (DPM). In 2015, the Office of Environmental Health Hazards Assessment (OEHHA) 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 DPM 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 a period of approximately 48 months, which would limit the exposure to on- and offsite receptors. Additionally, construction activities would not generate onsite exhaust emissions that would exceed the screening-level construction LSTs. Therefore, construction emissions would not pose a

health risk to on- or offsite receptors, and Project-related construction health impacts would be less than significant. 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 and would require a permit from South Coast AQMD. The Project involves improvements to an existing park and would not fall within these categories of uses. Therefore, impacts 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 been designated in 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 to 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 2023). The project-related 97 AM and 226 PM peak hour vehicle trips (Appendix F) would be minimal compared to the AAQS screening levels. The project would not substantially increase CO hotspots at intersections. Therefore, 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 improvements to an existing park and would not fall within the objectionable odors land uses. Emissions from construction equipment, such as diesel exhaust and VOCs 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, 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. No critical habitat for threatened and endangered species exists on or within proximity of the Project Site (USFWS 2023a). There are also no biotic resources in or within proximity of the Project Site, as designated in Figure L-4, Biotic Resources, of the Irvine General Plan Conservation and Open Space Element.

As shown in Figure 3, *Aerial Photograph*, the Project Site is in a highly urbanized area of Irvine and surrounded by residential and institutional uses. The Project Site is currently operating as a public park 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 as a result of Project implementation. 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 the 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 exist within or abutting the Project Site. The Project Site is currently operating as a public park and surrounded by residential and institutional uses. The nearest riparian habitat is north of the Project Site beyond I-5; it is a soft bottom drainage facility (named F25) that is owned and maintained by OCFCD. Per the United States Fish and Wildlife Service's national wetlands inventory, the drainage facility is designated riverine habitat (USFWS 2023b). However, Project development would have no impact on this drainage facility because all improvements would occur within the confines of the Project Site, as well as due to the distance of the facility from the site. Also, no runoff from the site (either under existing or proposed conditions) is directed toward the drainage facility. 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. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as streams, swamps, marshes, and bogs.

The Project Site is currently operating as a park and surrounded by residential and institutional uses. No watercourse runs through or adjacent to the Project Site and no wetland habitat exists onsite (USFWS 2023b). As discussed in Section 3.4.b, the nearest wetland is a soft bottom drainage facility (named F25) north of the Project Site beyond I-5, which is owned and maintained by OCFCD. Per the United States Fish and Wildlife Service's national wetlands inventory, the drainage facility is designated riverine habitat (USFWS 2023b). However, Project development would have no impact on this drainage facility because all improvements would occur within the confines of the Project Site and due to the distance. Also, no runoff from the site (either under existing or proposed conditions) is directed toward the drainage facility. 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 residential and institutional uses. No critical habitat exists on, butting or within the vicinity of the Project Site (USFWS 2023a). 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 number of trees onsite would be removed because of Project implementation, and construction activities would be in proximity to existing trees to remain. 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 is developed with a public park, which contains a number of mature trees. Project development would involve the removal or displacement of a number of trees to make room for a some of the park improvements that would be undertaken as a result of the Project. The majority of existing trees onsite would be protected in place. However, the trees to be removed or displaced 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, additional trees would be planted throughout the Project Site as a result of Project implementation. 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 2023). 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 is development with the Heritage Community Park. Therefore, no impact would occur and no mitigation measures are necessary.

3.5 CULTURAL RESOURCES

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 Project Site is developed with the Heritage Community Park. The park site is currently developed with a number of buildings and structures, which include a community center, a fine arts center, an amphitheater, sports courts, picnic and barbecue areas, and play structures. Project implementation would involve the demolition and replacement of the community center, as well as expansion of the fine arts center. It would also include construction of an additional 50-meter swimming pool at the Woollett Aquatics Center and construction of ancillary park lots.

The community center building was built in 1979 per information provided by City staff. Buildings less than 45 years old are typically not evaluated for historical significance in cultural resources investigations. The state-recommended threshold under which buildings may be considered historic resources is a construction age of 50 years (California Code of Regulations, §4852.d.2). Additionally, the existing building does not exhibit any unique architectural style or features; it is a common building design found throughout southern California.

Furthermore, none of the buildings or structures onsite are considered historical. 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 2023). 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.

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; the majority 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.

The Sacred Lands File record search conducted by the Native American Heritage Commission (NAHC) was completed for the Project Site and did not find records for the site. No additional cultural resources work or monitoring is necessary beyond disclosure of information on the history of the impacted subsurface soils as part of the Project. 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 the 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, 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 and Aejachemen 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 dedicated 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 seven 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 the majority 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 involve some ground disturbance, but not at substantial depths. 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 or she 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

Project-related construction activities 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

The majority of construction equipment would be gas- or diesel-powered, and electricity would not be used to power most of the construction equipment. Electricity use during construction would vary during different phases of construction. Later construction phases could result in the use of electric-powered equipment for interior construction and architectural coatings (if applicable). 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. 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.

3. Environmental Analysis

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 vehicles and equipment would fluctuate according to the phase of construction and would be temporary. In addition, all construction equipment would cease operating upon completion of project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

Construction trips would also not result in unnecessary use of energy since the Project Site is centrally located and is served by numerous regional freeway systems (e.g., I-5) that provide the most direct routes from various areas of the region. Thus, energy use during construction of the Project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant and no mitigation measures are necessary.

Long-Term Operation Impacts

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 heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, use of on-site equipment and appliances; and indoor and outdoor lighting.

Electrical Energy

Operation of the Project would result in the consumption of electricity for various purposes, including, but not limited to heating, cooling, and ventilation of buildings as well as operation of electrical systems, lighting, and use of on-site equipment and appliances. Electrical service to the Project Site would continue to be provided by Southern California Edison (SCE) through connections to existing off-site electrical lines and new on-site infrastructure (where needed). As shown in Table 4, implementation of the Project would result in a net increase of 784,725 kilowatt hours (kWh) of electricity use per year over existing conditions.

Table 4 Net Electricity Consumption

Land Use	Electricity (kWh/year)
City Park[1,2]	590,788
Parking Lot[2]	193,937
Net New Electricity Consumption	784,725

Source: CalEEMod Version 2022.1. Appendix A.
Note: kWh = kilowatt hour(s)
[1] Estimated electricity consumption based on health club energy rates from EDFZ 7 from CalEEMod Appendix G, *Default Data Tables*, as an approximation since CalEEMod "City Park" land use default rates do not account for electricity use.
[2] Calculations for electricity use consider the net increase in building square feet by 61,587 square feet only. Parking lot energy use is assumed to be entirely new for the most conservative estimates. As CalEEMod Version 2022.1 does not include historical energy rates, it is assumed that existing buildings and new buildings will have the same energy rate.

While Project implementation would result in a net increase in electricity demand, it would be required to comply with all applicable Building Energy Efficiency Standards and CALGreen requirements. In addition, the Building Energy Efficiency Standards mandate an increase in building energy efficiency every three years, therefore the new and expanded park buildings would be designed to be more energy efficient.

In addition to the proposed building energy efficiency, SCE is required to comply with the state's renewable portfolios standard (RPS), which mandates utilities to procure a certain proportion of electricity from eligible renewable and carbon-free sources and increasing the proportion through the coming years with an ultimate procurement requirement of 100 percent by 2045. The RPS requirements would support use of electricity by the Project that is generated from renewable or carbon-free sources. Overall, the Project would generally be consistent with the goals outlined in Appendix F of the CEQA Guidelines regarding increasing energy efficiency, decreasing reliance on fossil fuels, and increasing renewable energy sources.

Compliance with all applicable standards would contribute to minimizing inefficient energy use with the proposed city park buildings and parking lot. 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

Table 5 shows that the net increase over existing conditions in natural gas demand associated with the new and expanded park buildings would be 2,636,043 kilo-British thermal units per year. While the Project would result in a higher natural gas demand, the proposed buildings would be designed consistent with the requirements of the Building Energy Efficiency Standards. Compliance with the Building Energy Efficiency Standards would include installation of a high efficiency heating, ventilation, and air conditioning system and thermal envelope (e.g., insulation materials), which would contribute to reducing natural gas demands and decreasing overall reliance on fossil fuels. Therefore, operation of the Project would result in less than significant impacts and no mitigation measures are necessary.

Table 5 Net Operation-Related Natural Gas Consumption

Land Use	Natural Gas (kBTU/year)[1]
Net New Natural Consumption	2,636,043

Source: CalEEMod Version 2022.1. Appendix A.
Notes: kBTU=kilo-British thermal units.
[1] Estimated natural gas consumption based on health club energy rates from EDFZ 7 from CalEEMod Appendix G, *Default Data Tables*, as an approximation since CalEEMod "City Park" land use default rates do not account for natural gas use.
[2] Calculations for natural gas consumption consider the net increase in building square feet by 61,587 square feet only. As CalEEMod Version 2022.1 does not include historical energy rates, it is assumed that existing buildings and new buildings will have the same energy rate.

Transportation Energy

Project implementation would consume transportation energy during operations from the use of motor vehicles associated with visitors to the improved community park improvements and facilities. The efficiency of the motor vehicles in use (average miles per gallon) is unknown and highly variable. Thus, estimates of transportation energy use are based on the overall vehicle miles traveled (VMT) and related transportation energy use. The Project-related VMT would primarily come from park visitors. The Project includes improvements to the community park and would continue to be a locally serving use.

Fuel efficiency of vehicles after Project buildout would on average improve compared to vehicle fuel efficiencies experienced under existing conditions, thereby resulting in a lower per capita fuel consumption assuming travel distances, travel modes, and trip rates remain the same. The improvement in fuel efficiency would be attributable to the statewide fuel reduction strategies and regulatory compliances (e.g., CAFE standards), resulting in new cars that are more fuel efficient and the attrition of older, less fuel-efficient vehicles. The CAFE standards are not directly applicable to land use development projects, but to car manufacturers. Thus, the visitors do not have direct control in determining the fuel efficiency of vehicles manufactured and that are made available. However, compliance with the CAFE standards by car manufacturers would ensure that vehicles produced in future years have greater fuel efficiency and would generally result in an overall benefit of reducing fuel usage by providing the population of the Project Site's region more fuel-efficient vehicle options.

Lastly, as electricity consumed in California is required to meet the increasing renewable energy mix requirements under the State's RPS and accelerated by SB 100, greater and greater proportions of electricity consumed for transportation energy demand envisioned under the Project would continue to be sourced from renewable energy sources rather than fossil fuels. Since vehicle fuel efficiencies would improve year over year through the buildout and result in a decrease in overall per capita transportation energy consumption, 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?

Less Than Significant Impact. The following evaluates consistency of the Project with California's Renewables Portfolio Standard program and the Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

California Renewables Portfolio Standard Program

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 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 also 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 in meeting its objective in transitioning to renewable energy. In addition, the Project would be required to comply with the applicable Building Energy Efficiency Standards and CALGreen requirements. Therefore, implementation of the Project would not conflict with or obstruct implementation of California's RPS Program. Impacts would be less than significant 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 (SCAG 2020). Connect SoCal finds that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options would be 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 energy consumption.

Project implementation does not involve the development of new homes or businesses, and therefore would not directly or indirectly induce population growth in the area. Thus, the Project would not exceed the growth projections described in SCAG's RTP/SCS. Additionally, since the park improvements would continue to be a

locally serving land use and most of the trips accessing the Project Site would be generated within the City, impacts to VMT would be less than significant (Appendix F). Therefore, implementation of the Project would not interfere with implementation of Connect SoCal. Impacts would be less than significant 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 B to this Initial Study:

- *Geotechnical Investigation and Water Percolation Test Report*, Converse Consultants, December 2022.

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 3.3 miles, 10 miles, and 15 miles, respectively, from the Project Site (DOC 2023b; Appendix B). 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. During the life of the project, seismic

activity associated with active faults can be expected to generate moderate to strong ground shaking at the 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 3.3 miles south of the Project Site (DOC 2023b; Appendix B). 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 state regulates development in California through a variety of tools that reduce hazards from earthquakes and other geologic hazards. The California Building Code (CBC: 14 CCR Part 2), adopted by reference in Division 9, Chapter 1, Adoption of Building and Fire Code, of the Irvine Municipal Code, contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site. Project development would be required to adhere to the provisions of the CBC, which are enforced by the City during the building plan check and development review process. Compliance with the requirements of the CBC for structural safety during a seismic event would reduce hazards from strong seismic ground shaking.

Furthermore, incorporation of the recommended design parameters from the geotechnical investigation prepared for the project (Appendix B) would also reduce hazards from strong seismic ground shaking. Compliance would be ensured through the City's building plan check and development review process.

In summary, compliance with the provisions of the CBC and implementation of the recommended design parameters outlined in the geotechnical investigation would reduce impacts resulting from strong seismic ground shaking. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

iii) Seismic-related ground failure, including 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, based on a review of state and county hazard maps, the project site is located within an area at risk for liquefaction by the State of California. Due to the limitation of field investigation depth, site specific liquefaction analysis was not performed. However, due to the presence of clayey soil and groundwater not being encountered up to a depth of 21.5 feet below ground surface, the potential for liquefaction is considered low (Appendix B).

Furthermore, Project Site grading, design, and construction would conform with the recommended design parameters of the limited geotechnical investigation prepared for the Project (Appendix B), 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 2023b). 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 necessary.

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 Title 5, 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 improved portions of the Project Site 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 off-site 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

Subsidence is defined as the settlement of native materials from the equipment load applied during grading. 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 for the Project Site as a part of the geotechnical investigation, the Project Site is underlain by a mixture of sand, silt, clay, and gravel (Appendix B). 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

2023). However, there is no evidence that land subsidence has interfered with surface uses since 2002 (DWR 2019). Also, groundwater storage by the Orange County Water District (OCWD) and statutory commitments to sustainable groundwater management practices reduce the potential for future land subsidence, and ongoing surveying of the ground surface by OCWD provides a way to verify that its efforts in preventing subsidence are effective. Furthermore, groundwater was not encountered during the field investigation up to the explored depth of 21.5 feet below ground surface (Appendix B). Therefore, impacts 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.

Based on a field investigation conducted for the Project Site as a part of the geotechnical investigation, the expansion potential for site soils is considered low (Appendix B). Additionally, Project development would be implemented in accordance with the recommendations of the geotechnical investigation prepared for the Project (Appendix B). Therefore, Project development would not subject people to substantial hazards arising from ground subsidence. 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 Project would include construction of new sewer laterals onsite to existing sewers lines onsite, which connect to the sewer lines offsite. 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 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.

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 are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) 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 within the 20th and 21st centuries. Other GHG

identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[4]

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.[5] Black carbon emissions are not included in the GHG analysis because the California Air Resources Board (CARB) does not include this pollutant in the state's Senate Bill 32 (SB 32) and Assembly Bill 1279 (AB 1279) inventory and treats this short-lived climate pollutant separately.[6] A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix A to this Initial Study.

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 6, *Net Project-Related Operation GHG Emissions*. As identified in Section 3.17, *Transportation*, the Project would generate a net increase of 1,349 weekday vehicle trips over existing conditions (Appendix F). Furthermore, operation of the Project would result in a net increase in water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), and energy usage (i.e., electricity and natural gas). Annual average construction 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. Overall, construction and operation of the Project would not generate net annual GHG 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). In addition, GHG emissions from building energy use

[4] Water vapor (H_2O) 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.

[5] 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).

[6] 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 2017).

would be minimized because the proposed park buildings would be designed to be more energy-efficient in order to meet the current California Building and Energy Efficiency Standards. Therefore, the Project's cumulative contribution to GHG emissions would be less than significant and no mitigation measures are necessary.

Table 6 Net Project-Related Operation GHG Emissions

Source	GHG ($MTCO_2e$/Year)	
	Operations	Percentage
Mobile (Vehicle Trips)[1]	1,905	82%
Area	<1	<1%
Energy	264	11%
Water[3]	16	1%
Solid Waste[2]	85	4%
Refrigerants	<1	<1%
Amortized Construction Emissions[4]	60	3%
Total	2,330	100%
South Coast AQMD Bright-Line Threshold	3,000 $MTCO_2e$/Yr	NA
Exceeds Bright-Line Threshold?	No	NA

Source: CalEEMod, Version 2022.1.
Notes: $MTCO_2e$: metric ton of carbon dioxide equivalent
[1] Vehicle trips provided by EPD (Appendix F).
[2] Solid waste based on CalEEMod input type for solid waste. See Section 3.19, *Utilities and Service Systems*.
[3] Annual indoor and outdoor water use is based on proposed calculations for increase in potable water demand. See Section 3.19, *Utilities and Service Systems*.
[4] 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?

Less Than Significant Impact. Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and the SCAG's RTP/SCS. A consistency analysis with these plans is presented below.

CARB Scoping Plan

CARB's latest Climate Change Scoping Plan (2022) outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32, SB 32, and AB 1279 (CARB 2022). The 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.

Statewide strategies to reduce GHG emissions in the 2022 Climate Change Scoping Plan include: implementing SB 100, which expands the RPS to 60 percent by 2030; expanding the Low Carbon Fuel Standards (LCFS) to 18 percent by 2030; implementing the Mobile Source Strategy to deploy zero-electric vehicle buses and trucks; implementing the Sustainable Freight Action Plan; implementing the Short-Lived Climate Pollutant Reduction

Strategy, which reduces methane and hydrofluorocarbons to 40 percent below 2013 levels by 2030 and black carbon emissions to 50 percent below 2013 levels by 2030; continuing to implement SB 375; creating a post-2020 Cap-and-Trade Program; and developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Statewide strategies to reduce GHG emissions include the low carbon fuel standards, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the CAFE standards, and other early action measures as necessary to ensure the State is on target to achieve the GHG emissions reduction goals of AB 32, SB 32, and AB 1279. In addition, new developments are required to comply with the current Building Energy Efficiency Standards and CALGreen. Development accommodated by the Project would be required to comply with these GHG emissions reduction measures since they are statewide strategies. Project GHG emissions would be further reduced from compliance with statewide measures that have been adopted since AB 32, SB 32, and AB 1279 were adopted. Therefore, the Project would not obstruct implementation of the 2022 Scoping Plan. Impacts would be less than significant, 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 (SCAG 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 park improvements that would occur under the Master Plan would continue to be a local-serving land use and implementation of the Project 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 the Connect SoCal Plan, and impacts would be less than significant.

3.9 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?

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 throughout the duration of the 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 is developed with Heritage Community Park. 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's operation phase would not involve the use, generation, storage, or transport of 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 With Mitigation Incorporated. 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 as 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 construction and operation 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, buildings) would either be reused onsite (where possible) for development of the project's site improvements (e.g., drive aisles, parking areas, walkways, or building improvements) 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, development of the new 57,610 square-foot community center building under the Master Plan requires demolition of the existing 25,477 square-foot community center building. Due to the age of the existing community center building (just over 40 years old as it was developed in the late 70s), suspect asbestos-containing materials (ACM)[7] and/0r lead-based paints (LBP)[8] may be present in the construction materials of this building. ACMs may include drywall, acoustical ceiling tiles, and linoleum flooring.

Demolition of the building can cause encapsulated ACMs (if present) to become friable and, once airborne, they are considered a carcinogen. A carcinogen is a cancer-causing substance or helps cancer grow. Demolition of the existing building can also cause the release of lead into the air if not properly removed and handled. The United States Environmental Protection Agency (EPA) has classified lead and inorganic lead compounds as "probable human carcinogens" (EPA 2013). Such releases could pose significant risks to persons living and working in and around the Project Site, as well as to project construction workers.

Abatement of all ACM and LBP encountered during building demolition (if any) would be required to be conducted in accordance with all applicable laws and regulations, including those of EPA; which regulates

[7] According to the U.S. Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) regulations, any material that contains more than one percent of any type of asbestos is considered an asbestos-containing material.
[8] Lead-based paint is defined by OSHA and EPA as paint containing 0.5 percent lead by weight.

disposal; US Occupational Safety and Health Administration (OSHA); California Occupational Safety and Health Administration (Cal/OSHA), which regulates employee exposure; and South Coast AQMD.

For example, Cal/OSHA's regulations for exposure of construction employees to ACMs requires demolition materials be handled and transported the same as other, non-friable ACMs. EPA requires all asbestos work performed within regulated areas be supervised by a competent person who is trained as an asbestos supervisor (EPA Asbestos Hazard Emergency Response Act, 40 CFR 763). SCAQMD's Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities; the rule requires that buildings undergoing demolition or renovation be surveyed for ACM prior to any demolition or renovation activities. Should ACM be identified, Rule 1403 requires that ACM be safely removed and disposed of at a regulated site, if possible. If it is not possible to safely remove ACM, Rule 1403 requires that safe procedures be used to demolish the building with asbestos in place without resulting in a significant release of asbestos. Additionally, during demolition, grading, and excavation, all construction workers would be required to comply with the requirements of Title 8 of the California Code of Regulations, Section 1529 (Asbestos), which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos.

OSHA Regulation 29 (CFR Standard 1926.62) regulates the demolition, renovation, or construction of buildings involving lead-based materials. It includes requirements for the safe removal and disposal of lead, and the safe demolition of buildings containing LBP or other lead materials. Additionally, during demolition, grading, and excavation, all construction workers would be required to comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1 (Lead), which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead.

However, to prevent impacts from the potential release of ACM or LBP during building demolition activities, Mitigation Measure HAZ-1 is provided. With implementation of this mitigation measure and compliance with all applicable federal and state laws and regulations, impacts would be reduced to a less than significant level.

Mitigation Measures

HAZ-1 Prior to the demolition any buildings or structures onsite, the City of Irvine shall have implemented the following measures:

- Have retained a California Certified Asbestos Consultant (CAC) to perform abatement project planning, monitoring (including air monitoring), oversight, and reporting of all asbestos-containing materials (ACM) encountered. The abatement, containment, and disposal of all ACM shall be conducted in accordance with the South Coast Air Quality Management District's Rule 1403 and California Code of Regulation Title 8, Section 1529 (Asbestos).
- Have retained a licensed or certified lead inspector/assessor to conduct the abatement, containment, and disposal of all lead waste encountered. The contracted lead inspector/assessor shall be certified by the California Department of Public Health (CDPH). All lead abatement shall be performed by a CDPH-certified lead supervisor or

worker under the direct supervision of a lead supervisor certified by CDPH. The abatement, containment, and disposal of all lead waste encountered shall be conducted in accordance with the US Occupational Safety and Health Administration Rule 29, CFR Part 1926, and California Code of Regulation, Title 8, Section 1532.1 (Lead).

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

Less Than Significant Impact. Irvine High School abuts the western end of the Project Site. As noted in Section 3.7.a, above, project operation would not emit hazardous substances or hazardous wastes in quantities posing substantial hazards to the public or the environment. Additionally, the use of hazardous materials during the project's construction phase 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. The use, storage, transport, and disposal of hazardous materials would also be required to conform to existing laws and regulations.

As also noted in Section 3.7.b above, due to the age of the community services building, there is a potential that some of its building materials contain ACMs or LPB. Demolition of the building could cause the release of ACMs or LPB, if present. However, to prevent impacts from the potential release of ACM or LBP during building demolition activities, Mitigation Measure HAZ-1 is provided.

Therefore, impacts would be less than significant, 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 2023)
- **EnviroStor.** Department of Toxic Substances and Controls (DTSC 2023)
- **EJScreen.** US Environmental Protection Agency (USEPA 2023a)
- **EnviroMapper.** US Environmental Protection Agency (USEPA 2023b)
- **Solid Waste Information System.** California Department of Resources, Recycling and Recovery (CalRecycle 2021)

3. Environmental Analysis

Per the databases reviewed, no hazardous materials sites were listed on the Project Site. Therefore, no impact to the public or 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 or within two miles of an airport. The closest public airport is John Wayne Airport (AirNav 2023), which is approximately 4.8 miles southwest 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 an array of 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 2023). 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 C and D, respectively, to this Initial Study:

- *Preliminary Water Quality Management Plan*, BKF Engineers, February 2023. (Appendix C)
- *Preliminary Hydrology Report*, BKF Engineers, February 2023. (Appendix D)

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.

3. Environmental Analysis

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-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. 2022-0057-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 7.

Table 7 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.

Table 7 Construction Best Management Practices

Category	Purpose	Examples
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.
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 2019.

The Project's construction contractor(s) 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 7, 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 provisions of 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[9] 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.

[9] 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.

3. Environmental Analysis

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 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.

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.

Structural source control BMPs proposed for the project include:

- Storm drain system stenciling and signage
- The use of efficient irrigation systems and landscape design, water conservation, and smart controllers

Nonstructural source control BMPs proposed for the project include:

- Right-of-way landscape management
- BMP maintenance
- Right-of-way litter control
- Employee training
- Right-of-way catch basin inspection
- Street sweeping

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. For priority projects, the design capture flow[10] needs to be retained onsite through infiltration, evapotranspiration, stormwater runoff harvest and use, or a combination thereof.

The Project involves an array of improvements to the Heritage Community Park. The proposed site improvements include a new and expanded community center, play and workout areas, picnic areas, pickleball courts, swimming pool, water features, updated pond, expanded fine arts center, and parking. Per the MS4 permit and the City's requirements for priority projects, a preliminary WQMP was prepared for the Project (Appendix C). Portions of the Project Site interface with Irvine High School. Where this occurs, those areas

[10] 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.

are included in the WQMP. However, the high school's main campus is not undergoing redevelopment and thus is not a part of the Project or included in the WQMP. 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 WQMP include hydromodification, source control, and treatment control measures.

Streams located downstream from the Project Site are potentially susceptible to hydromodification impacts[11] and the post-development runoff volume for the 2-year, 24-hour storm events would exceed the predevelopment runoff volume for these storm events by more than five percent for six of the 10 drainage management areas (DMAs) on the Project Site (see Figure 5, *WQMP Exhibit – Existing Conditions,* and Appendix C). The Project is required to fully mitigate off-site drainage impacts caused by hydromodification such as changes in water quality, flow velocity, flow volume, and depth/width of flow.

The Project Site is in the Selenium Contamination Area per the North Orange County Groundwater Protection Areas, and infiltration is not feasible. Therefore, onsite flows would be routed to proposed bioretention basins and Filterra units[12] before discharging to the offsite storm drain system. The bioretention systems would be designed to treat the design capture volume[13] for the 85th percentile, 24-hour storm event. Additionally, these BMPs would retain the delta 2-year, 24-hour runoff volume to mitigate hydromodification impacts (see Figure 6, *WQMP Exhibit – Proposed Conditions).*

Runoff from the existing park generally drains westerly, and flows are routed by a 42-inch storm line at Walnut Avenue and a 30-inch storm line at Escolar. These lines are tributary to a 74-inch storm line, north of the Project Site, at Culver Drive and ultimately discharges into an OCFCD Facility (Como Channel). The Project's post-development condition would change the drainage patterns of the pre-development condition and treated runoff from the onsite BMPs would drain into the 42-inch storm line at Walnut Avenue and a 30-inch storm line at Escolar.

Additionally, 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 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 continue to provide water to the Project Site. IRWD's water supply sources

[11] Hydromodification impacts related to 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.

[12] Filterra units are proprietary biotreatment devices manufactured to simulate natural systems and provide treatment at higher flowrates or higher volumes and with smaller footprints than their natural counterparts.

[13] The MS4 Permit requires designated projects to treat, on-site, the Design Capture Volume from a design storm event. The design storm event is determined using the 0.75-inch 24-hour rain event or the 85th percentile 24-hour rain event, whichever is greater.

include imported water, local groundwater, recycled water, and local surface water. Groundwater supplies are extracted from both the Orange County Groundwater Basin and the Irvine and Lake Forest sub basins. 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 estimates that water demands in its service area for normal years would increase from approximately 96,557 acre-feet per year (afy) in 2025 to approximately 118,483 afy in 2040. IRWD forecasts that it will have sufficient water supplies to meet water demands in its service area for normal, single-dry, and multiple dry years and projects surpluses in water supply that range from a maximum of approximately 82,000 afy to a minimum of approximately 55,000 afy. Therefore, water demands associated with the Project would not substantially deplete groundwater supplies.

Additionally, as stated in the geotechnical investigation report prepared for the Project (see Appendix B), groundwater was not encountered during the on-site investigation at depths up to 20 feet below ground level. Therefore, groundwater is not expected to be encountered during the construction phase.

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

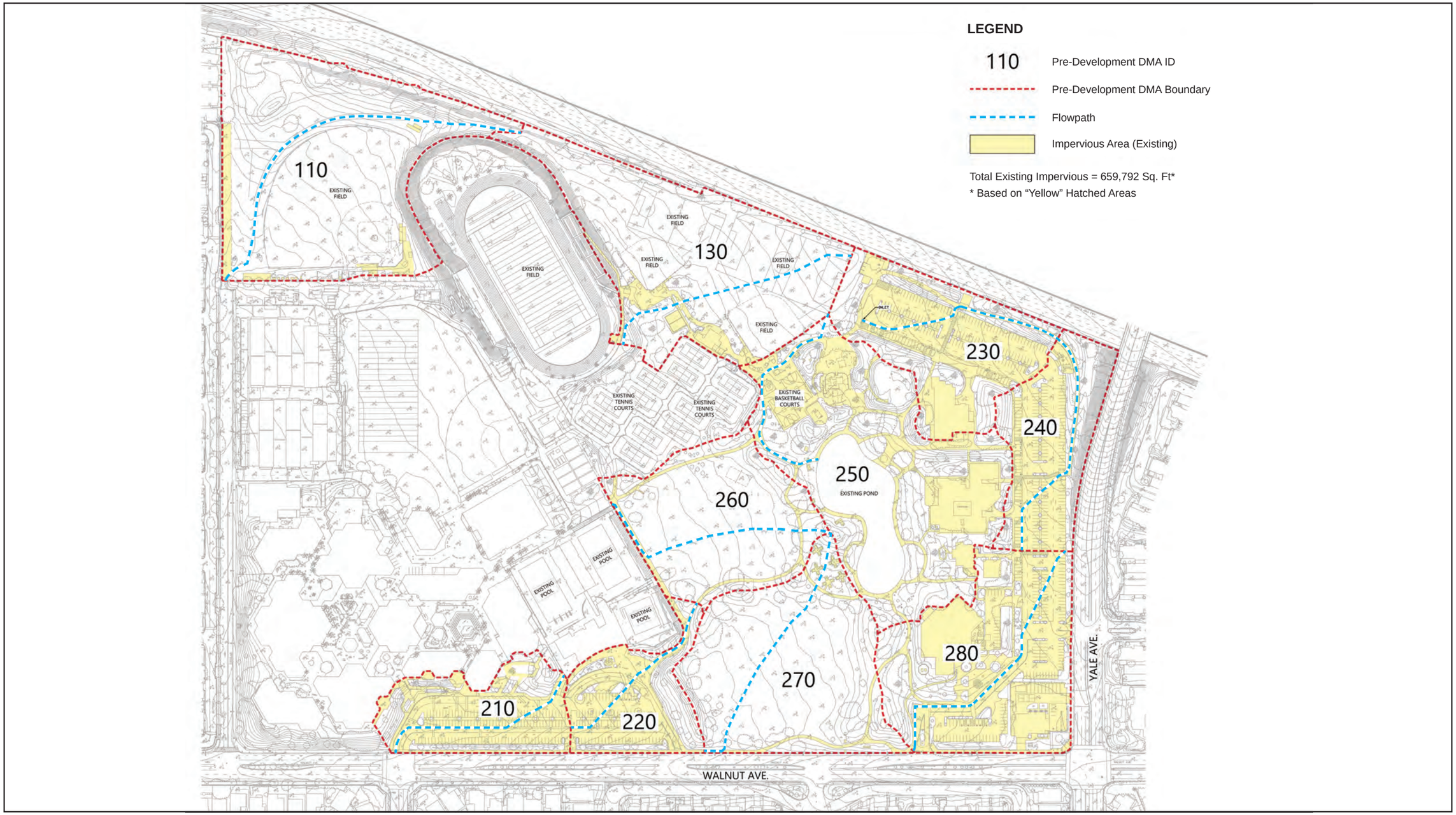
Therefore, the Project would not substantially interfere with groundwater supplies or recharge. Impacts to groundwater supplies would be less than significant and no mitigation measures are necessary.

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 off-site?

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 5 - WQMP Exhibit – Existing Conditions



Source: BKF 2023.

3. Environmental Analysis

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Project Construction

As discussed above in Section 3.10.a, the Project's construction contractor(s) 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 could include 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 Heritage Community Park and its associated buildings, 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 Project Site would be routed to proposed bioretention basins and Filterra units onsite before discharging to the offsite storm drain system (see Figure 6, *WQMP Exhibit – Proposed Conditions*).

3. Environmental Analysis

Additionally, the Project would be implemented in accordance with the WQMP and abide by the requirements of the MS4 permit and 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. Runoff from the existing park generally drains westerly and the hydrology analysis conducted for the Project Site includes the project site and the adjacent Irvine High School Campus. A portion of the runoff from the Project Site is routed through the Irvine High School campus before draining into the 42-inch storm line at Walnut Avenue or a 30-inch storm line at Escolar (see Figure 7, *Existing Hydrology Map*). The Project's post-development condition would not change the drainage patterns of the pre-development condition (see Figure 8, *Proposed Hydrology Map*).

The preliminary hydrology report prepared for the Project (Appendix D) determined the pre- and post-development runoff for the 25-year and 100-year storm events. As shown in Table 8, the cumulative runoff for both storm events shows a negligible and insignificant change in runoff due to Project implementation. Due to the minor differences in peak flows, no significant changes to storm drain lines in Walnut Avenue or Escolar are anticipated for the proposed condition. Additionally, BMPs specified in the WQMP would further decrease peak flows.

Table 8 Existing and Proposed Peak Runoff Rates

Condition	Peak Runoff Rate for a 25-Year Storm Event (cfs)	Peak Runoff Rate for a 100-Year Storm Event (cfs)
Existing	239	307
Proposed	240	308

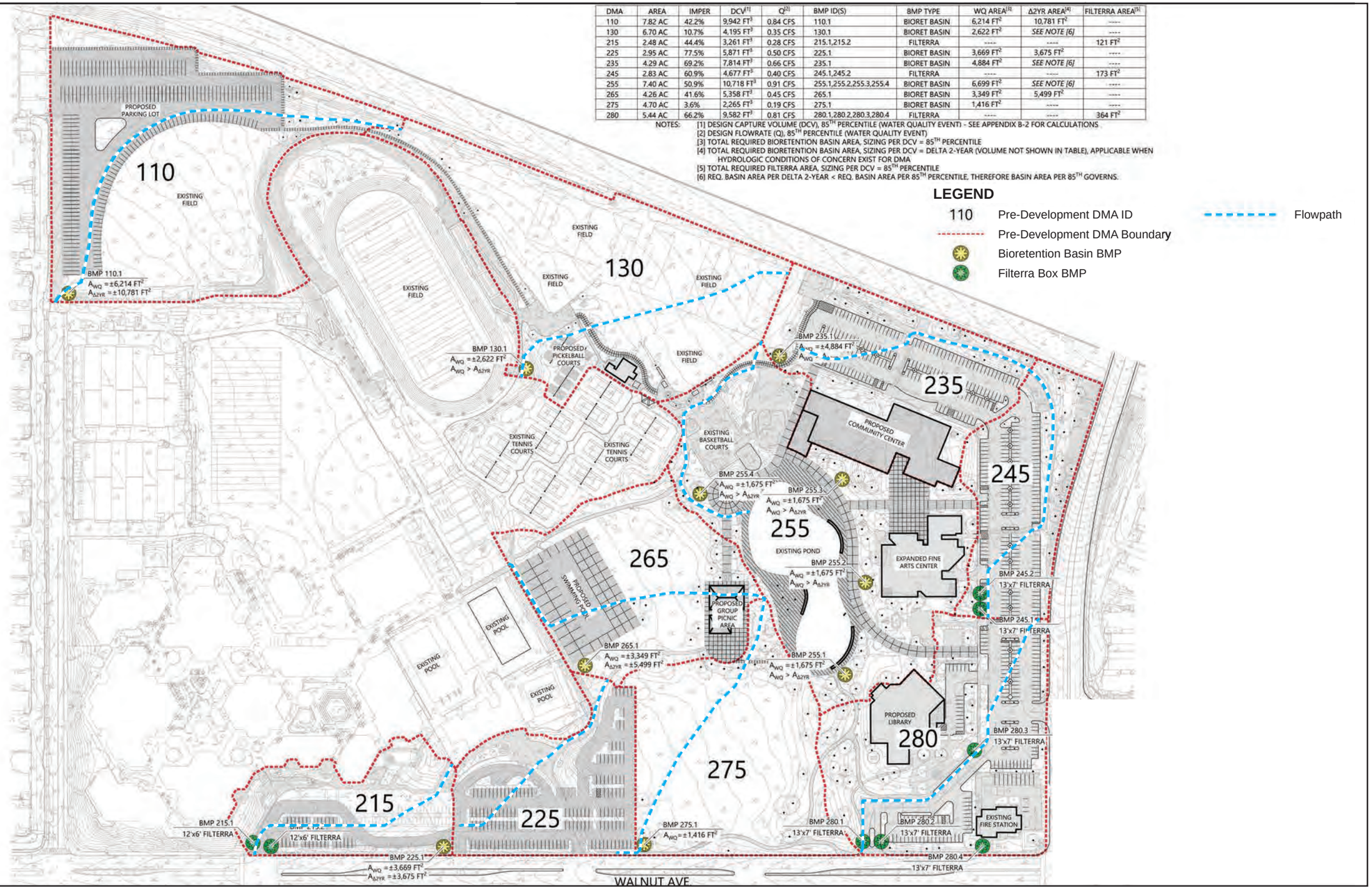
Source: BFK 2023.
Notes: cfs = cubic feet per second

Based on the preceding, post-development runoff from the Project Site 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.

Figure 6 - WQMP Exhibit – Proposed Conditions

DMA	AREA	IMPER	DCV[1]	Q[2]	BMP ID(S)	BMP TYPE	WQ AREA[3]	Δ2YR AREA[4]	FILTERRA AREA[5]
110	7.82 AC	42.2%	9,942 FT³	0.84 CFS	110.1	BIORET BASIN	6,214 FT²	10,781 FT²	----
130	6.70 AC	10.7%	4,195 FT³	0.35 CFS	130.1	BIORET BASIN	2,622 FT²	*SEE NOTE [6]*	----
215	2.48 AC	44.4%	3,261 FT³	0.28 CFS	215.1,215.2	FILTERRA	----	----	121 FT²
225	2.95 AC	77.5%	5,871 FT³	0.50 CFS	225.1	BIORET BASIN	3,669 FT²	3,675 FT²	----
235	4.29 AC	69.2%	7,814 FT³	0.66 CFS	235.1	BIORET BASIN	4,884 FT²	*SEE NOTE [6]*	----
245	2.83 AC	60.9%	4,677 FT³	0.40 CFS	245.1,245.2	FILTERRA	----	----	173 FT²
255	7.40 AC	50.9%	10,718 FT³	0.91 CFS	255.1,255.2,255.3,255.4	BIORET BASIN	6,699 FT²	*SEE NOTE [6]*	----
265	4.26 AC	41.6%	5,358 FT³	0.45 CFS	265.1	BIORET BASIN	3,349 FT²	5,499 FT²	----
275	4.70 AC	3.6%	2,265 FT³	0.19 CFS	275.1	BIORET BASIN	1,416 FT²	----	----
280	5.44 AC	66.2%	9,582 FT³	0.81 CFS	280.1,280.2,280.3,280.4	FILTERRA	----	----	364 FT²

NOTES:
[1] DESIGN CAPTURE VOLUME (DCV), 85TH PERCENTILE (WATER QUALITY EVENT) - SEE APPENDIX B-2 FOR CALCULATIONS
[2] DESIGN FLOWRATE (Q), 85TH PERCENTILE (WATER QUALITY EVENT)
[3] TOTAL REQUIRED BIORETENTION BASIN AREA, SIZING PER DCV = 85TH PERCENTILE
[4] TOTAL REQUIRED BIORETENTION BASIN AREA, SIZING PER DCV = DELTA 2-YEAR (VOLUME NOT SHOWN IN TABLE), APPLICABLE WHEN HYDROLOGIC CONDITIONS OF CONCERN EXIST FOR DMA
[5] TOTAL REQUIRED FILTERRA AREA, SIZING PER DCV = 85TH PERCENTILE
[6] REQ. BASIN AREA PER DELTA 2-YEAR < REQ. BASIN AREA PER 85TH PERCENTILE, THEREFORE BASIN AREA PER 85TH GOVERNS.



Source: BKF 2023.

3. Environmental Analysis

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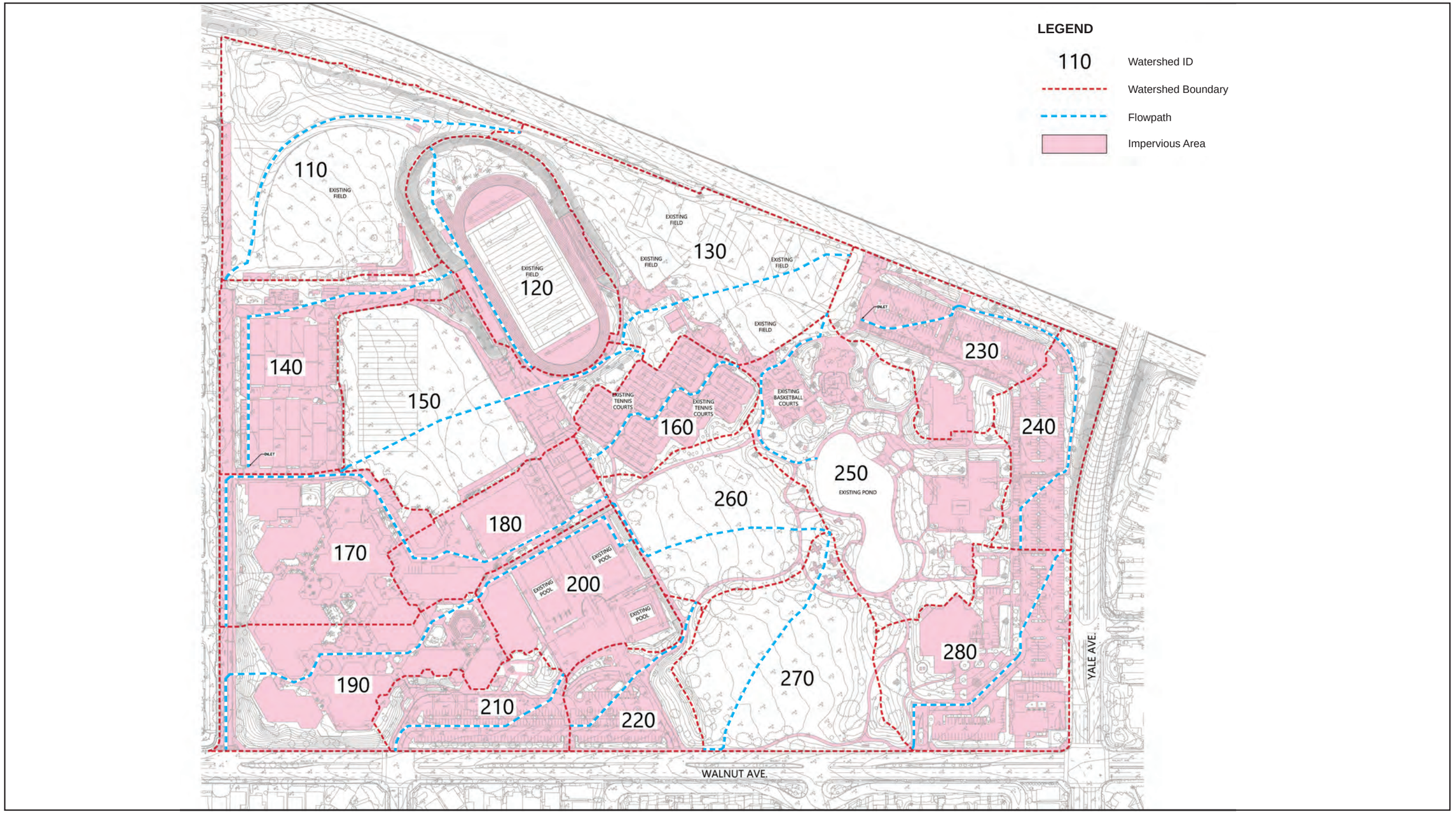
Figure 7 - Existing Hydrology Map



Source: BKF 2022.

3. Environmental Analysis

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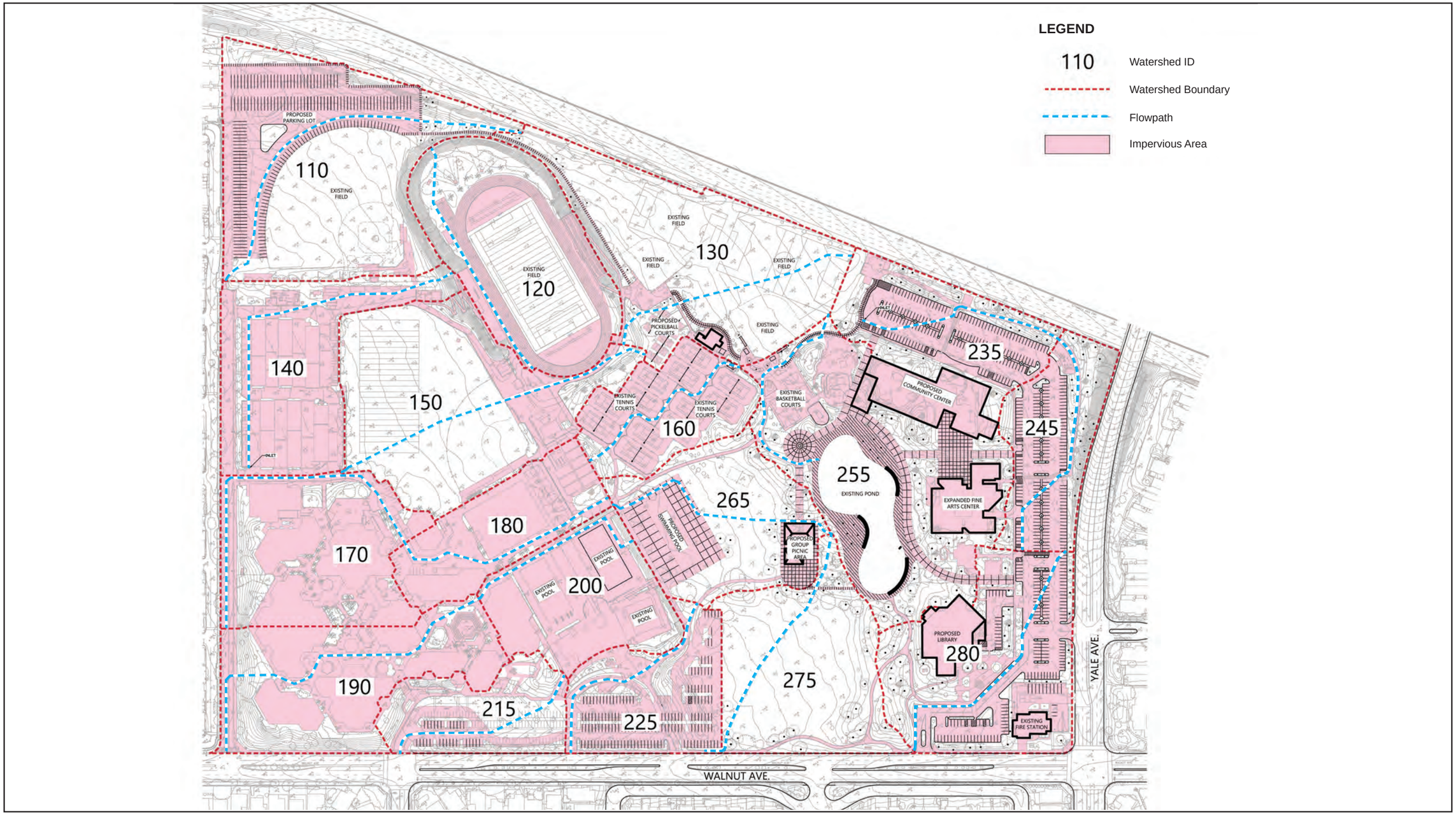
Figure 8 - Proposed Hydrology Map



Source: BKF 2022.

3. Environmental Analysis

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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 substantiated 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 in 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, portions of the Project Site are within the inundation zone of the Syphon Canyon Dam (DWR 2021; Irvine 2020a). The dam is owned and maintained by IRWD.

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.

Furthermore, Project implementation does not include any new buildings within the portion of the site that is within the dam inundation zone.

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 Syphon Canyon Dam. However, impacts from dam failure would be less than significant as discussed in Section 3.10.c.iv.

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 Site is approximately 9.5 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 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 above, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Project would not conflict or obstruct 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 improvement to the existing Heritage Community Park, which operates from the Project Site. As shown in Figure 3, *Aerial Photograph*, the Project Site is predominantly surrounded by residential and institutional 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 institutional 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 institutional 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 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.

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

General Plan Consistency

Per the Irvine General Plan, 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 this category.

The improvements and uses proposed under the Project are permitted under the existing land use designation. Project development does not include or require any amendments to the Irvine General Plan. Project implementation would also help support a number of policies from the Irvine General Plan Parks and Recreation Element, including:

- **Policy (b).** Encourage the development of special areas in community parks that will enhance recreational and leisure opportunities in the City.
- **Policy (e).** Ensure that public parks are developed pursuant to Table G-2 in the Public Facilities and Service Element, with recreational amenities such as active play areas, passive open space, picnic facilities, and athletic fields and courts per standards identified in the Community Parks Master Plan.
- **Policy (b).** Maintain and rehabilitate the City's public parks consistent with the Strategic Business Plan and the availability of capital improvement funds.

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 1.5 Recreation. This zoning district allows active recreational opportunities and activities for public use and enjoyment. The improvements and uses proposed under the Project are permitted 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.

Pursuant to Section 1-1-6 (Public Projects) of the Irvine Zoning Ordinance, the provisions of the City's Zoning Ordinance do not apply to any buildings, improvements, lots or premises, owned, leased, operated or controlled by the City or any City project for public purposes by the City of Irvine. Although not applicable, the City would consider designing and developing the various Project improvements and uses in accordance with the development and design standards of the Irvine Zoning Ordinance, including those related to site plan design, landscaping, and parking.

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 (Miller 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.

Mining would also 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 residential and institutional 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 approximately 11 miles northwest of the Project Site (DMR 2023).

Finally, no oil or energy extraction and/or generation activities exist on or near 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 2023).

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, when overexposed, 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, both the 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 E.

Environmental Setting

The Project Site is adjacent to Irvine High Schools and Orange County Fire Station 26. Surrounding land uses located further away from the Project Site boundary are predominantly residential uses to the north, east, south, and west. The nearest major source of transportation noise to the Project Site is I-5, which abuts the northern end of the Project Site. Intermittent noise from nearby residential uses (e.g., property maintenance and parking lot noise) also contribute to the overall noise environment in the project vicinity.

To establish existing noise conditions in the project vicinity, traffic noise contours published in the City of Irvine's General Plan Future Roadway Noise Contours 2020 table (Table F-3 in the General Plan Noise Element) are referenced. According to the Future Roadway Noise Contours, the Project Site is within the Santa Ana Freeways' 60-70 dBA CNEL roadway noise contour.

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 a quiet environment is necessary for the enjoyment, public health, and safety of the community. Noise sensitive land uses surrounding the Project Site include residences to the north, east, west, and south; with the nearest off-site sensitive receptor being single-family residences 75 feet to the west.

Applicable Standards

City of Irvine Noise Regulations

Irvine Municipal Code

The City's Noise Ordinance (Irvine Municipal Code Title 6, Division 8, Chapter 2), adopted in 1975 and revised in July 2023, establishes the maximum permissible noise level from a stationary source that may intrude into adjoining property. Section 6-8-20 (General Provision) of the ordinance establishes noise level standards for various land use categories affected by stationary noise sources. For residential properties, noise generated offsite is prohibited from exceeding 55 dBA during daytime hours of 7:00 a.m. to 10:00 p.m. and 50 dBA during the nighttime hours of 10:00 p.m. to 7:00 a.m. for more than 30 minutes in any hour at the property line. Article II, Noise, Section 18-63(b)(7), under Chapter 18, Nuisances, prohibits the erection (including excavating),

demolition, alteration or repair of any building or structure outside the hours 7:00 a.m. to 6:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays. 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 2 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 Municipal Code states that construction activities may occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and 9:00 a.m. to 6:00 p.m. 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 which is based on the noise standards adopted by the City of Irvine. 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 velocity decibels (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 non-engineered structure (e.g., wood-frame residential).

Adopted Standards

The City has limited allowable construction hours but does not have quantified construction noise threshold. Therefore, the Federal Transit Administration criteria of 80 dBA $L_{eq(8hr)}$ for detailed analysis of residential uses construction noise impact is adopted for this analysis and 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 of Irvine does not have established quantified standards for traffic noise. Therefore, the following thresholds of significance similar to those recommended by the Federal Aviation Administration (FAA), 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.

Construction Noise

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 on the project site.

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/or vendor vehicles. However, these occurrences would generally be infrequent and last for a short period of time.

Worker and vendor trips would total a maximum of approximately 84 daily trips and a total of 21 haul trips during overlapping construction activity phases. Site access could be through Walnut Avenue between Culver Drive and Yale Avenue, which currently has an existing average daily traffic (ADT) volume of 17,158 based on the existing roadway segment data provided by the traffic consultant (EPD Solutions, Inc.). The addition of 105 daily construction trips would result in a temporary noise increase of 0.1 dBA CNEL or less, which would not be substantial nor permanent. Therefore, construction-vehicle noise impacts would be considered less than significant and no mitigation measures are necessary.

3. Environmental Analysis

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 Leq 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.

Equipment for demolition, grading, and site preparation is modeled at spatially averaged distances (i.e., from the acoustical center of the general construction site to the property line of the nearest receptors) 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 remodeled parking lot to the west. Construction equipment for building construction and architectural coating is modeled from the edge of the proposed building to the nearest sensitive receptors. Lastly utility trenching and landscaping and finishing typically occurs along the edge of projects, and it is assumed that it could occur within 100 feet of the nearest sensitive receptors to the north, south, and to the west and is assumed to occur 250 feet from the nearest sensitive receptors to the east.

The expected construction equipment mix was categorized by construction activity using FHWA's Roadway Construction Noise Model (RCNM). Average noise levels from project-related construction activities are calculated by modeling the three loudest pieces of equipment per activity phase. RCNM modeling input and output worksheets are included in Appendix E. Table 10 presents RCNM modeling, which indicates that the demolition, grading, and utilities trenching phase would generate the highest noise levels of up to 85 dBA Leq at a distance of 50 feet. As shown in the table, at the nearest residences, construction noise is estimated to attenuate up to79 dBA Leq at a distance of 100 feet under utilities trenching activity. This conservatively does not take into account intervening terrain, buildings, and other barriers which may attenuate noise levels further. Construction-related noise levels would not exceed the Federal Transit Administration (FTA) threshold of 80 dBA Leq(8hr) at the nearest sensitive residences. Therefore, construction-equipment noise impacts would be considered less than significant and no mitigation measures are necessary.

Table 10 Project-Related Construction Noise, dBA Leq

Construction Activity Phase	RCNM Reference Noise Level	Residences to the north	Residences to the east	Residences to the south	Residences to the west
Distance in feet	50	1200	1100	1250	925
Demolition	85.0	57.0	58.0	57.0	60.0
Site Preparation	83.0	55.0	56.0	55.0	58.0
Rough Grading	85.0	57.0	58.0	57.0	60.0
Distance in feet	50	1075	730	425	555
Building Construction	82.0	55.0	59.0	63.0	61.0
Architectural Coating	74.0	47.0	51.0	55.0	53.0
Distance in feet	50	560	1350	585	200
Paving	84.0	63.0	55.0	63.0	72.0
Distance in feet	50	100	250	100	100
Finish and Landscaping	77.0	71.0	63.0	71.0	71.0
Utility Trenching	85.0	79.0	71.0	79.0	79.0
Maximum dBA L_{eq}		79	71	79	79
Exceed 80 L_{eq} dBA Threshold?		No	No	No	No

Notes: Calculations performed with the FHWA RCNM software are included in Appendix E.

Operational Noise

Mobile Noise

Project implementation would result in an additional 1,501 vehicle trips over existing conditions (existing trip generation = 1,292 and proposed trip generation = 2,793). The lowest existing average daily traffic from the roadway segments analyzed by the traffic consultant (EPD Solutions, Inc.) found that Trabuco Road between Culver Drive and the I-5 northbound ramps produced approximately 12,900 daily trips. Conservatively assuming that no Project related trips occurred on this segment previously and applying the full 2,793 modified Project related trips to this segment would result in a total increase of less than 1 dBA (0.85 dBA increase). Since this is the lowest volume for daily traffic compared to the other segments analyzed by the traffic consultant, other roadway segments with much larger ADTs would result in a smaller increase (<1 dBA increase) from Project implementation. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

Stationary Noise

Project implementation includes new pickleball courts, which could possibly increase noise levels above the noise standards set forth by the City of Irvine at the surrounding residences. Studies have shown that pickleball activity can reach noise levels of up to 70 dBA L_{max} when the hard surface of the racket hits the pickleball. The nearest residence to the proposed pickleball courts is approximately 875 feet to the west. Therefore, when attenuating for the distance to the nearest receptor, the proposed pickleball courts could result in a maximum noise level of 42.4 dBA L_{max} at the exterior of the receptor. When assuming that a pickleball is hit at the exact

same time amongst all proposed pickleball courts, the noise produced at the exterior of the nearest receptor could approach up to 51 dBA L_{max}, which would be below the thresholds set by the City for sensitive land uses.

The Project also includes the addition of a new swimming pool and a new community center building. However, pool activity is typically not of concern and is located at a similar distance to the nearest sensitive receptor as the pickleball court (which pickleball activity is brought up more often as a noise concern). Also, the proposed community center building, although larger, is to replace an existing building and would be at a similar distance from sensitive receptors as the existing building Therefore, HVAC and other possible noises to be emitted from the exterior of the building would be similar to the existing building, or lower since newer equipment tends to generate lower noise levels.

Therefore, the Project would not result in a significant increase in noise levels to the surrounding sensitive receptors. Impacts 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 With Mitigation Incorporated. Following is a discussion of the Project's temporary and permanent vibration impacts as a result of the Project's construction and operational phases.

Construction Vibration Impacts

Vibration Annoyance

Groundborne vibration is rarely annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers. For annoyance, vibration is typically noticed nearby when objects in a building generate noise from rattling windows or picture frames. Since construction activities would typically be distributed throughout the Project Site, vibration annoyance impacts are typically based on average vibration levels (levels that would be experienced by sensitive receptors most of the time). Therefore, to represent the worst-case scenario of vibration levels, distances to the nearest sensitive receptor buildings are measured from the closest distances the equipment in Table 9 might be to the sensitive receptor. As a result, the north, east, south, and west calculations were measured from the edge of the Project Site boundary. For vibration annoyance, the Federal Transit Administration (FTA) vibration level limit of 78 VdB applies to the surrounding residential receptors.

Table 11 shows the vibration levels from typical earth-moving construction equipment at the nearest receptors. As shown in the table, construction-generated vibration levels would exceed 78 VdB at the nearby sensitive receptors to the north with the use of a vibratory roller, thus, making impacts potentially significant. However, with implementation of Mitigation Measure N-1, impacts would be reduced to less than significant.

Table 11 Worst-Case Annoyance Vibration Levels from Construction Equipment

Equipment	Vibration Levels (VdB)				
	Reference Levels at 25 feet	Residence 75 feet North at 1 Pandora	Residence 265 feet East at 204 Roosevelt	Residence 125 feet South at 11 Sacramento	Residence 100 feet West at 14511 Countrywood lane
Vibratory Roller	94.0	79.7	63.2	73.0	75.9
Static Roller	82.0	67.7	51.2	61.0	63.9
Large Bulldozer	87.0	72.7	56.2	66.0	68.9
Caisson Drilling	87.0	72.7	56.2	66.0	68.9
Loaded Trucks	86.0	71.7	55.2	65.0	67.9
Jackhammer	79.0	64.7	48.2	58.0	60.9
Small Bulldozer	58.0	43.7	27.2	37.0	39.9
FTA Threshold	—	78	78	78	78
Exceeds Threshold?	—	Yes	No	No	No

Source: FTA 2018.
Note: Distances are from the nearest distance from where these equipment pieces may be used to the nearest receptor building within each land use type.

Vibration Damage

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 architectural 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 apply to the surrounding residential structures (FTA 2018). Vibration damage is measured from the edge of the Project Site to the nearest structural façade because vibration damage, unlike human vibration perception or annoyance, is determined by measuring instantaneous peak particle velocity generated by equipment. Table 12 summarizes vibration levels for typical construction equipment at a reference distance of 25 feet and at the nearest buildings. The nearest structure to proposed construction activities is the single-family residence 75 feet or less to the west of the Project Site. As shown in Table 12, vibration levels would not result in an exceedance of 0.2 in/sec PPV at nearby buildings. Therefore, impacts would be less than significant and no mitigation measures are necessary.

3. Environmental Analysis

Table 12 Vibration Damage Levels for Typical Construction Equipment

Equipment	PPV (in/sec)				
	FTA Reference at 25 feet	Residence 75 feet North at 1 Pandora	Residence 265 feet East at 204 Roosevelt	Residence 125 feet South at 11 Sacramento	Residence 100 feet West at 14511 Countrywood Lane
Vibratory Roller	0.21	0.040	0.006	0.019	0.026
Static Roller	0.089	0.017	0.003	0.008	0.011
Large Bulldozer	0.089	0.017	0.003	0.008	0.011
Caisson Drilling	0.089	0.017	0.003	0.008	0.011
Loaded Trucks	0.076	0.015	0.002	0.007	0.010
Jackhammer	0.035	0.007	0.001	0.003	0.004
Small Bulldozer	0.003	0.001	0.000	0.000	0.000

Source: FTA 2018.
Notes: PPV = peak particle velocity

Operation Vibration Impacts

Operation of the Project would not generate substantial levels of vibration because there are no known sources of vibrational energy associated with the Project, such as industrial machinery or railroad operations. Therefore, operation-related vibration impacts would be less than significant and no mitigation measures are necessary.

Mitigation Measure

NOI-1 The City of Irvine and its construction contractor shall implement the following measures during all ground-disturbing activities:

- Vibratory compaction that is within 90 feet of any surrounding residential structure shall be conducted with the use of a static roller in lieu of a vibratory roller. At a distance greater than 90 feet, a vibratory roller would no longer exceed 78 velocity decibels (VdB) threshold for vibration annoyance and would be allowed for use. Therefore, a static roller shall be used within 90 feet where levels would be reduced to 78 VdB or less and mitigate vibration annoyance.

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 public airport to the Project Site is John Wayne Airport (AirNav 2023), approximately 4.8 miles southwest of the site. Project implementation would not expose people residing or 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. Project implementation does not propose new homes or businesses; the Project involves improvements to 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 (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, including the entire City of Irvine (including the Project Site). The nearest fire station to the Project Site is Fire Station 26 at 4691 Walnut Ave, which abuts the southeastern end of the Project Site. Two additional fire stations, Fire Stations 36 and 20, are within 1.9 and 2.3 miles of the Project Site, respectively.

The Project involves an array of improvements to the Heritage Community Park. The proposed site improvements include a new and expanded community center, play and workout areas, picnic areas, pickleball courts, swimming pool, water features, updated pond, expanded fine arts center, and parking. 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 26 could provide,

3. Environmental Analysis

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?

No Impact. See response to Section 3.16.a, 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.

Additionally, rebuilding and expanding the community center; and expanding the children's play areas and Irvine Fine Arts Center, as well as addition of a new swimming pool would result in an increase in the use of the community park once all park improvements are completed under the Project. However, the increase in the park use due to the new additions and improvements is not anticipated to be substantial.

Furthermore, the purpose of the Master Plan for the park is to create a framework for decision making that will allow the City to begin the process of determining how the park can accommodate existing and projected service demands. The Master Plan will serve as a vision for full improvements at Heritage Community Park and the improvements will happen over time as funding allows. The improvements under the Master Plan would not only help accommodate existing and projected service demands but would also ensure that physical deterioration of existing park amenities and facilities would not occur or be accelerated.

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 Mitigation Incorporated. The Project includes the enhancement of an existing park. For example, the pond, children's play areas, Irvine Fine Arts Center, and swimming pool facilities would be renovated and/or expanded. New additions would include a community center, water feature plaza surrounding the pond, another plaza connecting the Irvine Fine Arts Center and the community center, group picnic area, water tower plaza, pickleball courts, pedestrian walkways, and an additional parking lot. The potential adverse physical effects on the environment caused by the 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

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

- *Vehicle Miles Traveled (VMT) Screening Analysis*, EPD Solutions, Inc., December 2023.

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 would result in improvements to the Heritage Community Park by providing recreation, athletic, and education services. The proposed site improvements include a new and expanded community center, play areas, workout areas, picnic areas, pickleball courts, swimming pool, water features, updated pond, expanded fine arts center, and parking.

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. Specifically, the following discussion demonstrates that Project development would not conflict with nor preclude the City from implementing adopted programs, plans, and policies addressing the circulation system. The evaluation was conducted by reviewing City documents related to transportation: the Irvine General Plan Circulation Element.

Impact to Roadway Facilities

A trip generation analysis was prepared for the Project as a part of the traffic impact (TIA) analysis completed for the project (EPD 2023). Based on the trip generation analysis, existing park land uses generate 1,332 daily vehicle trip ends, with 89 trip ends during the morning (AM) peak hour and 116 trip ends during the evening (PM) peak hour. Under the Project, proposed park land uses are estimated to generate a total of 2,671 daily vehicle trip ends on weekdays, with 186 trip ends during the morning peak hour and 342 trip ends during the evening peak hour. Project development would result in a net increase of 1,349 daily vehicle trips, 41 AM peak hour trips, and 226 PM peak hour trips.

The traffic impact analysis (TIA) conducted for the Project summarizes the level of service (LOS) analysis at study area intersections and roadway segments. As substantiated in the TIA, with addition of the Project, all of the intersections analyzed operate at an acceptable (LOS) in accordance with the LOS standards of the Irvine General Plan Circulation Element and no roadway segments have a significant deficiency.

Additionally, as shown in Figures 3, *Aerial Photograph*, and 4, *Heritage Community Park Master Plan*, vehicular access to the Project Site would continue to be provided via the unsignalized access driveways off Walnut Avenue and Yale Avenue. No modifications or improvements would be required or undertaken for the access driveways.

Further, the street classification and standards for Walnut Avenue and Yale Avenue (which form the southern and eastern Project Site boundaries, respectively) were reviewed and compared to existing and future conditions of these roadway as a result of Project development. Per the Irvine Circulation Element, Walnut Avenue and Yale Avenue are classified as Primary Highways. Project implementation would not require or result in any changes or improvements to these roadways; they would remain in their existing condition and continue to function as Primary Highways.

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 Walnut Avenue and Yale Avenue, which connect to the park's internal walkways at key locations along these roadways. Under the Project, the existing public sidewalks would not undergo any modifications or improvements. Therefore, Project development would not result in an impact to the pedestrian circulation system around the Project Site. However, new walkways would be provided internal to the Project Site, connecting to the proposed site improvements and facilities. All new walkways would designed to be ADA (Americans with Disabilities Act) compliant.

There are dedicated on-street bicycle lanes on Walnut Avenue and Yale Avenue, which form the Project Site's southern and easter site boundaries, respectively. 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) operates public transit bus routes in Irvine. OCTA bus route 66 is the closest bus route to the Project Site; the bus route travels east-west along Walnut Avenue, which abuts the southern Project Site boundary. The closest bus stops for bus route 66 are near the Walnut Avenue and Yale Avenue intersection and Walnut Avenue and Vaquero Way intersection, both withing feet of the Project Site. This bus route and stops would be available to serve visitors and users of the Project Site. Also, the route has 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 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.

3. Environmental Analysis

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

Less Than Significant Impact. The City's CEQA VMT Impact Analysis Guidelines (November 2021) provide VMT screening thresholds to identify projects that would be considered to have a less-than significant impact on VMT and therefore could be screened from further analysis. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than significant and no further analysis of VMT would be required:

1. The project requires an Addendum to a certified EIR and can demonstrate that it is not subject to VMT analysis per CEQA Guidelines Sections 15064.3 and 15007(c) and applicable guidance from the Governor's Office of Planning and Research.

2. The project results in a net increase of 250 or less weekday daily trips based on latest edition of the Institute of Transportation Engineers (ITE) trip rates (or other trip generation rate approved by the City).

3. The project is located in a Transit Priority Area (TPA). (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) except when the project:

    a. Has a Floor Area Ratio (FAR) of less than 0.75;

    b. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);

    c. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization; or

    d. Replaces affordable residential units with a smaller number of moderate, or high income residential units.

4. The project is 100 percent restricted affordable housing units.

5. The project is considered a local-serving land use such as 100,000 square feet or less of retail use, a daycare use, or a locally serving public school (kindergarten through 12th grade).

The applicability of each criterion to the Project is discussed below (Appendix F).

Screening Criteria 1 – Addendum Screening. The Project does not provide an Addendum to a certified EIR so it does not meet screening criteria 1.

Screening Criteria 2 – Net Increase of 250 or Less Weekday Daily Trips. As stated in the VMT Screening Analysis prepared for the Project (Appendix F), the Project would in an increase of 1,501 net increase daily trips over existing conditions. Therefore, it would not meet the screening criteria 2.

Screening Criteria 3 – Transit Priority Area Screening. The project is not located in a TPA; therefore, the Project would not satisfy the requirements of screening criteria 3.

Screening Criteria 4 – Restricted Affordable Housing Units. The Project does not involve any residential development; it involves improvements to an existing public park. Therefore, it would not satisfy the requirements of screening criteria 4.

Screening Criteria 5 – Local Serving Land Use. Because the Project involves improvement to a community park that would serve residents of the City of Irvine, it is presumed that the Project would be considered a locally serving use. Furthermore, the trip distribution from the Irvine Transportation Analysis Model shows that most trips accessing the Project Site are generated within the City of Irvine, with less than 20 percent of trips traveling on I-5 to access the Project Site from outside of the immediate area. Therefore, the Project can be considered a local serving use and would satisfy the requirements of screening criteria 5.

Based on the preceding, the Project's VMT impacts would be considered less than significant and further analysis of VMT would not be required. 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 improvements to the Heritage Community Park. The Project Site currently operates as a park, 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 new onsite vehicular access and circulation improvements. In addition, the existing driveways on Walnut Avenue and Yale Avenue 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 and 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 Project Site is developed with the Heritage Community Park and related buildings, structures, and site improvements. 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 2023). 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. Therefore, 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 Month 10, 2023, 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
- Juaneño Band of Mission Indians Acjachemen Nation 84A
- Gabrielino/ Tongva Nation
- Gabrielino-Tongva Tribe
- 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 Month X, 2023, 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) requesting consultation. The City followed up with the tribe. The Kizh Nation requested a formal consultation meeting and provided their concerns in written form for this project in lieu of the in-person meeting with the City. 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 Kizh Nation also requested that any and all information that the City may possess or has access to be provided regarding the history of the subsurface soils to be impacted as part the Project's ground disturbance activities.

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 TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency 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 project applicant/lead agency 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 project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

TCR-2 **Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial).** 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 Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3 **Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial 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 Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 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). Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

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, stormwater drainage, electric power, natura gas, and telecommunication 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).

3. Environmental Analysis

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 subbasin. IRWD has constructed the Irvine Desalter Project (IDP) to treat some of the water produced for potable use from this subbasin. 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 subbasin; however, the Lake Forest subbasin 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). One IRWD recycled water main borders the project site along Walnut Avenue (IRWD 2021c). This recycled water main currently services the park's irrigation water needs.

As shown in Figure 3, *Aerial Photograph*, the Project Site is currently developed with a variety of park amenities, facilities, and improvements. Under existing conditions, the park includes approximately 13.5 acres of irrigated area. All outdoor irrigation water use is recycled water. [14] The existing indoor and outdoor water demand for the Project Site was approximately 12 afy from January 2022 to December 2022.[15]

[14] Based on information received from Kathleen Haton, Senior Planner at the City of Irvine, on February 22, 2023.
[15] Based on the total metered water demand usage on the site from January 2022 to December 2022.

Table 13 shows the existing buildings that would be demolished or expanded and their associated water demand. The Project also includes the addition of a standard 50-meter pool and a children's splash area, and the potable water demand for these uses are also included in Table 13.

Table 13 Proposed Increase in Potable Water Demand

Category	Demolished (SF)	Expanded (SF)	New Facility (SF)	Water Demand Rate gpd/SF[1]	Daily Water Demand (gpd)
Community Center	—	32,133	—	0.57[2]	18,380
Modular Buildings	6,000	—	—	0.12[3]	(720)
Fine Arts Center	—	6,500	—	0.57[2]	3,718
Swimming Pool	—	—	9,240	—	1,440
Children's Splash Area	—	—	1,200	—	3,750[4]
Total	6,000	38,633	10,440	—	26,568

Source: CAPCOA 2022a and 2022b.
Notes: gpd = gallons per day; SF = square feet
[1] 350 days per year is used to convert gallons per year to gallons per day.
[2] The rate for "Government (Civic Center)" is used.
[3] The rate for "Day-Care Center" is used.
[4] This is the total of 3,000 gallons to fill the underground take plus 25 percent for water loss to evaporation and bather carry off.

The pool is assumed to be 165 feet long, 56 feet wide, and 7.5 feet deep with a surface area of 9,240 square feet. The average pool water evaporation rate of the surface of the pool is about a quarter of an inch of water per day (American Leak Detection 2022). Therefore, the water use needed to account for pool water evaporation is approximately 1,440 gpd.[16]

The proposed children's play area would include the existing playground with expanded play features, including a nature play area and a splash play area. The square footage of the play area would not increase and is approximately 12,000 square feet under existing conditions.[17] The new splash play area would feature misting and spray sculptures. Further design refinement would be explored and detailed in future design phases. For this analysis, it is assumed that the splash play area would occupy 10 percent of the playground or, 1,200 square feet, and is assumed to be a recirculated spray park. A recirculating spray park only uses water to initially fill the holding tank and then water to make up for losses due to evaporation and bather carry off. It is assumed that the recirculated system would have a 3,000-gallon underground tank and that 25 percent is lost to evaporation and bather carry off (Playquest 2023, CIRSA 2004).

As shown in Table 13, the Project would result in a net increase in potable water demand of 26,568 gpd (30 afy). IRWD estimates it will have a residual potable water capacity of 51,880 afy in 2025 and 28,270 afy in 2040. 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, development of the Project would not require the construction of new or expanded potable water facilities.

[16] Evaporation off the surface of the pool is calculated by multiplying 0.021 ft/day (half an inch a day) by the surface area of the pool (9,240 square feet) for a total of 194 cubic feet per day of water lost to evaporation. 194 cubic feet per day is 1,440 gpd.
[17] Based on information received from Kathleen Haton, Senior Planner at the City of Irvine, on February 22, 2023.

3. Environmental Analysis

The Project includes approximately 12 acres of irrigated areas, which would result in a net decrease of approximately 1.5 acres compared to existing conditions. Additionally, the water tower would not circulate water and is intended as a landmark that commemorates a feature of the park that was demolished several years ago.[18] The size of the existing pond would not change and the current plumbing system within the pond would be assessed and updated for improved water efficiency. Therefore, the Project would not require the construction of new or expanded recycled water facilities.

Based on the preceding, impacts would be less than significant and no mitigation measures are necessary.

Wastewater Treatment Facilities

IRWD's sewer collection system stretches approximately 963 miles. Wastewater in the City of Irvine travels through IRWD's collection system to the Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Recycling Plant, where it is treated for use as recycled water (Irvine 2020b). Wastewater from the project site is treated at the MWRP, which has a treatment capacity of 28 million gallons per day (mgd) (IRWD 2021a). Based on flow-monitoring information, approximately 20.3 mgd were conveyed to the MWRP for treatment in 2018 (IRWD 2018). Therefore, the MWRP has a residual capacity of 7.7 mgd.

Wastewater generation for the Project is assumed to be 95 percent of the potable water use and does not include water lost to evaporation and bather carry off from the pool and splash area. Evaporation from the proposed pool is 1,440 gpd and evaporation and bather carry off from the proposed splash area is 750 gpd. Therefore, the Project would result in an additional wastewater generation rate of about 23,159 gpd (95 percent of 24,378 gpd) over existing conditions. The amount of wastewater that would be generated is less than one percent of MWRP's total remaining daily treatment capacity. Therefore, project development would not require the construction of new or expanded wastewater treatment facilities. No impact would occur and no mitigation measures are necessary.

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, *Net 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.

[18] Based on information received from Kathleen Haton, Senior Planner at the City of Irvine, on February 22, 2023.

Additionally, Project development 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 would help 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 the Project's water demands, as substantiated in Section 3.19.a. The Project would result in a net increase in potable water demand of 33 afy and a net decrease in recycled water demand. IRWD estimates it will have a residual potable water capacity of 51,880 afy in 2025 and 28,270 afy in 2040. 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, the Project's net increase in potable 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 and water conservation measures for indoor 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 would be less than significant and no mitigation measures are necessary.

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?

Less Than Significant Impact. As discussed above in Section 3.19.a, there is existing wastewater treatment capacity in the region for the estimated project wastewater generation. Project development would not require construction of new or expanded wastewater treatment facilities. Therefore, impacts would be less than significant, 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 of Orange County 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 4,156 tons per day.

Table 14 Landfill Capacity

Landfill Name	Current Remaining Capacity (tons)[1]	Maximum Daily Disposal Capacity (tons)	Average Daily Disposal, 2020 (tons)[2]	Residual Daily Disposal Capacity (tons)	Estimated Close Date
Frank R. Bowerman Sanitary Landfill	205,000,000	11,500	7,344	4,156	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 272 tons per year (0.75 tons per day) over existing conditions, as shown in Table 15.

Table 15 Proposed Increase in Solid Waste Generation

Category	Demolished (SF)	Expanded (SF)	New Facility (SF)	Generation Rate (tons/1,000 SF/year)	Total (tons/year)
Community Center	—	32,133	—	5.7[1]	183
Modular Buildings	6,000	—	—	1.3[2]	(8)
Fine Arts Center	—	6,500	—	5.7[1]	37
Swimming Pool	—	—	9,240	5.7[3]	53
Children's Splash Area	—	—	1,200	5.7[3]	7
Total	6,000	38,623	10,440	—	272

Source: CAPCOA 2022q and 2022b.
Notes: SF = square feet
[1] The rate for "Government (Civic Center)" is used.
[2] The rate for "Day-Care Center" is used.
[3] The rate for "Recreational Swimming Pool" is used.

As demonstrated in Table 15, 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 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 an SRA and very high in a LRA. The nearest FHSZ in the SRA to the Project Site is a Moderate FHSZ approximately 2.3 miles east of the Project Site. The nearest FHSZ in the LRA is a Very High FHSZ approximately 2.6 miles northeast of the Project Site (CAL FIRE 2023). 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 an 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 an 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 an 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 an 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 Heritage Community Park. The site is in a highly urbanized area of Irvine and is mainly surrounded by residential and institutional 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 Section 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 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.

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

Less Than Significant Impact with Mitigation Incorporated. 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, hydrology and water quality, or wildfire, which may cause adverse effects on human beings. As demonstrated in Section 3.9, *Hazards and Hazardous Materials*, impacts regarding hazards would be reduced to a level of less than significant with implementation of Mitigation Measure HAZ-1. Furthermore, as demonstrated in Sections 3.18, Noise, impacts related to noise and vibration would be reduced to a level of less than significant with implementation of Mitigation Measure NOI-1.

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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5. References

Table 16 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 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	City of Irvine, biologist, and construction contractor	Prior to the commencement of any site clearing and/or grading activities	Public Works and Sustainability, Community Development	

4. Mitigation Monitoring and Reporting Program

Table 16 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	Public Works and Sustainability, Community Development	

Table 16 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 the 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 16 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 and Aejachemen 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, paleontologist, and construction contractor	Prior to the issuance of grading permits	Public Works and Sustainability, Community Development	

Table 16 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.				
Hazards and Hazardous Materials					
HAZ-1	Prior to the demolition any buildings or structures onsite, the City of Irvine shall have implemented the following measures: • Have retained a California Certified Asbestos Consultant (CAC) to perform abatement project planning, monitoring (including air monitoring), oversight, and reporting of all asbestos-containing materials (ACM) encountered. The abatement, containment, and disposal of all ACM shall be conducted in accordance with the South Coast Air Quality Management District's Rule 1403 and California Code of Regulation Title 8, Section 1529 (Asbestos). • Have retained a licensed or certified lead inspector/assessor to conduct the abatement, containment, and disposal of all lead waste encountered. The contracted lead inspector/assessor shall be certified by the California Department of Public Health (CDPH). All lead abatement shall be performed by a CDPH-certified lead supervisor or worker under the direct supervision of a lead supervisor certified by CDPH. The abatement, containment, and disposal of all lead waste encountered shall be conducted in accordance with the US Occupational Safety and Health Administration Rule 29, CFR Part 1926, and California Code of Regulation, Title 8, Section 1532.1 (Lead).	City of Irvine, certified asbestos consultant, certified lead inspector/assessor, and construction contractor	Prior to the demolition any buildings or structures	Public Works and Sustainability, Community Development	

4. Mitigation Monitoring and Reporting Program

Table 16 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
Noise					
NOI-1	The City of Irvine and its construction contractor shall implement the following measures during all ground-disturbing activities: • Vibratory compaction that is within 90 feet of any surrounding residential structure shall be conducted with the use of a static roller in lieu of a vibratory roller. At a distance greater than 90 feet, a vibratory roller would no longer exceed 78 velocity decibels (VdB) threshold for vibration annoyance and would be allowed for use. Therefore, a static roller shall be used within 90 feet where levels would be reduced to 78 VdB or less and mitigate vibration annoyance.	City of Irvine and Construction Contractor	During ground-disturbing activities	Public Works and Sustainability, Community Development	
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,	City of Irvine, Native American monitor, and construction contractor	Prior to the commencement of any ground-disturbing activities	Public Works and Sustainability, Community Development	

Table 16 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency 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 project applicant/lead agency 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 project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.				
TCR-2	Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial). 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 Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.	City of Irvine, Native American monitor, and construction contractor	Prior to the commencement of any ground-disturbing activities and ongoing during construction	Public Works and Sustainability	
TCR-3	Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of	City of Irvine, Native American monitor, and construction contractor	Prior to the commencement of any ground-disturbing	Public Works and Sustainability	

4. Mitigation Monitoring and Reporting Program

Table 16 Mitigation Monitoring Requirements

Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
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 Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 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). Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.		activities and ongoing during construction		

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