MOIOLA PARK RESIDENCES

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

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December 2020

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J Traffic Impact Analysis Report

1 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

This Initial Study (IS) has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.); and
- California Code of Regulations, Title 14, Division 6, Chapter 3 (State CEQA Guidelines, Sections 15000 et seq.).

Pursuant to CEQA, this IS has been prepared to analyze the potential for significant impacts on the environment resulting from implementation of the proposed project. As required by State CEQA Guidelines Section 15063, this IS is a preliminary analysis prepared by the Lead Agency, The City of Fountain Valley, in consultation with other jurisdictional agencies, to determine if a Mitigated Negative Declaration (MND) or an Environmental Impact Report (EIR) is required for the project.

This IS informs The City of Fountain Valley decision-makers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the project. A "significant effect" or "significant impact" on the environment means "*a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project*" (Guidelines §15382). As such, the documents intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service and infrastructure requirements, and other local and regional environmental considerations. (Pub. Res. Code §21003.1)
- Encourage the applicant to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time. (State CEQA Guidelines §15004[b][3])
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit The City of Fountain Valley and the applicant to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted. (State CEQA Guidelines §15126.4)

Existing Plans, Programs, or Policies (PPPs)

Throughout the impact analysis in this IS, reference is made to requirements that are applied to all development on the basis of federal, state, or local law, and Existing Plans, Programs, or Policies currently in place which effectively reduce environmental impacts. Existing Plans, Programs, or Policies are collectively identified in this document as PPPs. Where applicable, PPPs are listed to show their effect in reducing potential environmental impacts. Where the application of these measures does not reduce an impact to below a level of significance, a project-specific mitigation measure is introduced. The City of Fountain Valley will include these PPPs along with mitigation measures in the Mitigation Monitoring and Reporting Program (MMRP) for the project to ensure their implementation.

1.2 DOCUMENT ORGANIZATION

This IS/MND includes the flowing sections:

Section 1.0 Introduction

Provides information about CEQA and its requirements for environmental review and explains that an IS/MND was prepared by the City of Fountain Valley to evaluate the proposed project's potential to impact the physical environment.

Section 2.0 Environmental Setting

Provides information about the proposed project's location.

Section 3.0 Project Description

Includes a description of the proposed project's physical features and construction and operational characteristics and provides a list of the discretionary approvals that would be required by the proposed project.

Section 4.0 Environmental Checklist

Includes the Environmental Checklist and evaluates the proposed project's potential to result in significant adverse effects to the physical environment and includes a list of existing regulations, plans, and policies that reduce potential impacts and mitigation measures, as required, to reduce potentially significant impacts to a less than significant level. In addition, references are listed at the end of each environmental topic section.

Section 5.0 Document Preparers and Contributors

Includes a list of the persons that prepared this IS/MND.

2 ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

The project site is located within the southern portion of the City of Fountain Valley, south of Interstate 405 (I-405). The address of the property is 9790 Finch Avenue. Regional access to the project site is provided by I-405 and Ellis Avenue. Local access to the site from Ellis Avenue is provided by Hawthorn Street, to Starling Avenue, to Redwood Street, to the site on Finch Avenue. Local Access to the site from Bushard Street is provided by Starling Avenue, Robin Avenue, or Nightingale Avenue, to Redwood Street, to the site on Finch Avenue. Local Access to the site from Bushard Street can also be provided by Smoke Tree Avenue, to Arbutus Street, to Guava Avenue, to Redwood Street, to Finch Avenue. Local Access to the site from Garfield Avenue is provided by Persimmon Street, to Smoke Tree Avenue, to Arbutus Street, to Guava Avenue, to Redwood Street, to Finch Avenue. In addition, a pedestrian bridge that crosses the adjacent Orange County concrete lined flood control channel at the southeastern portion of the site, provides non-vehicular access from Mt. Cimarron Street. The project site and surrounding area is shown in Figure 1, *Regional Location*.

The site is identified by Assessor's Parcel Number 157-033-15 and is located within the Newport Beach United State Geological Survey (USGS) 7.5-Minute Quadrangle and Section 31, Township 5 South, Range 10 West.

2.2 EXISTING PROJECT SITE

The project site encompasses approximately 13-acres and is the former Fred Moiola Elementary School, which was operational between 1971 and 2012. The project site is developed with 40,073 square feet of school buildings including four classroom buildings, each with six classrooms, a central multipurpose room, one administrative building, three restroom/custodial pods, three modular classrooms, paved play areas, and parking lots. The onsite buildings and paved areas are surrounded by grass play fields. In addition, a limited number of ornamental trees are scattered throughout the site.

The school site is currently unoccupied. The Fred Moiola school closed in June 2012 and then a private school—LePort Montessori—occupied the site until it closed this location at the end of the 2018 school year. The project site's existing conditions are shown in Figure 2, *Local Vicinity* and Figures 3A and 3B, *Site Photos*.

2.3 EXISTING LAND USES AND ZONING DESIGNATION OF THE PROJECT SITE

As shown on Figure 4, *Existing General Plan Land Uses*, the project site currently has a General Plan land use designation of Public Facilities. Figure 5, *Existing Zoning Designation*, shows that the project site is zoned as Public Institution (PI). Section 21.12.020 of the Fountain Valley Municipal Code states that the PI zoning district is applied to areas suitable for public, civic, government, education, cultural or quasi-public services and that the PI zoning district is consistent with the public facilities land use designation of the General Plan. Also, Municipal Code Section 21.12.040 states that the general development standards for the PI zone is determined through the City's development review process.

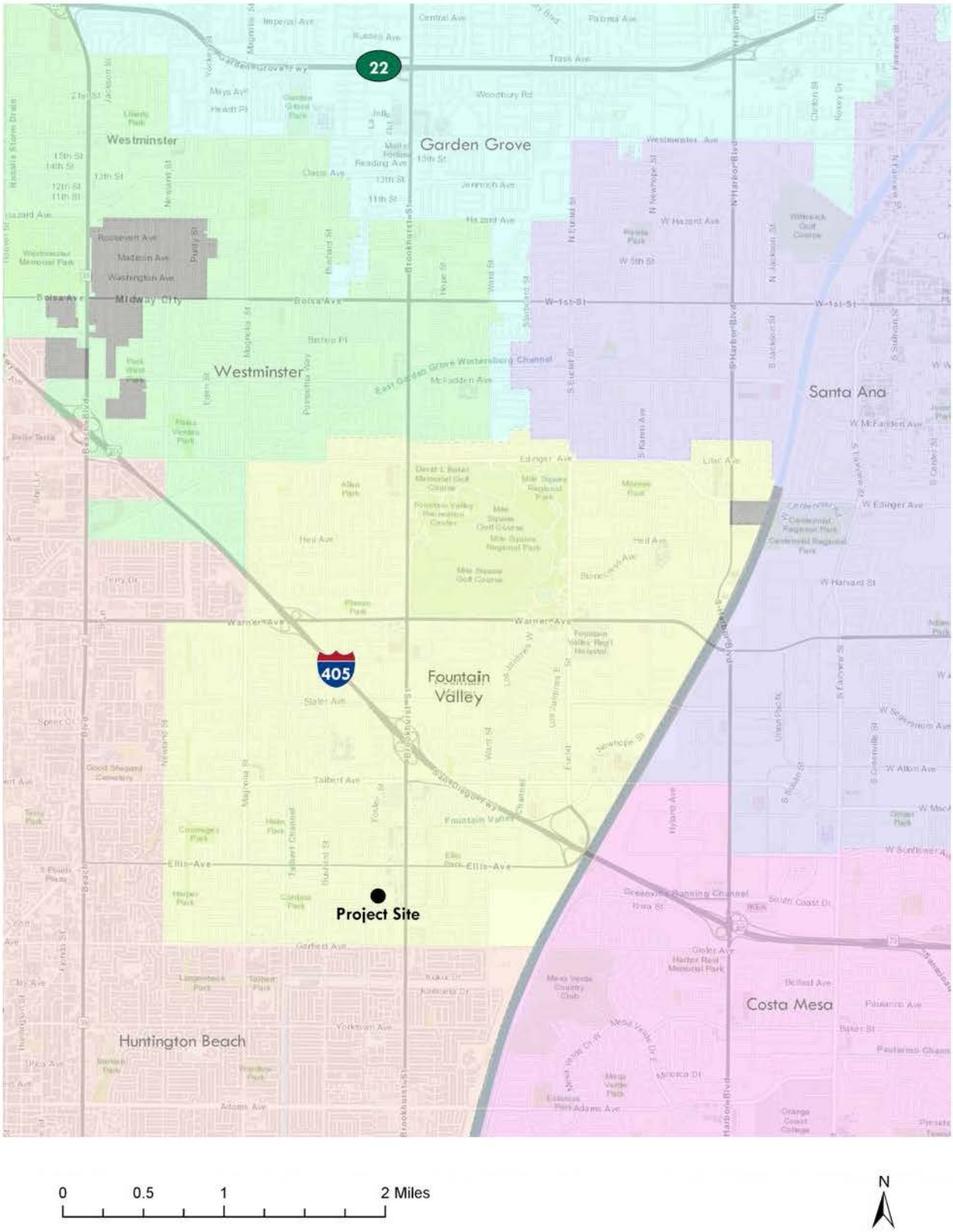
2.4 SURROUNDING GENERAL PLAN AND ZONING DESIGNATIONS

The project site is located within a fully developed and urbanized area. The project site is bound by Finch Avenue followed by single-family residences and a commercially used agricultural parcel to the north, the Orange County concrete lined flood control channel followed by single-family residences to the south, a retail shopping center to the east, and single-family residences that front Redwood Street to the west. The surrounding land uses are described in Table 1 along with the General Plan Land Use and zoning designations.

Table 1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
North	Finch Avenue followed by Smith Farms Agricultural and Single-Family Residential	Low Medium Density Residential & General Commercial	Garden Home (GH); Local Business (C1); Single-Family Residential (R1)
West	Single-Family Residential followed by Redwood Street	Low Density Residential	Single Family Residential (R-1)
South	Orange County flood control channel followed by Single-Family Residential	Low Density Residential	Single Family Residential (R-1)
East	Retail Shopping Center	General Commercial	Local Business (C1)

Regional Location



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Local Vicinity



Project Site

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Site Photos A



Photo from the north west end of the school looking southeast at one of the playgrounds on site.



Photo of the parking lot at the north end of the site with residential homes across Finch Ave.

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Site Photos B



Photo from the southwest end of the school looking north east with the resevoir to the right.



Photo from the northeast of the site looking south at the field with the strip mall on Brookhurst to the left and the resevoir at the end of the field.

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Existing General Plan Land Use



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Existing Zoning Designation



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3 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The proposed project would demolish the existing school buildings, accessory structures, pavement, and infrastructure on the project site, and construct 74 new single-family residences, onsite roadways with sidewalks, and an approximately 1.12-acre park. Figure 6, *Conceptual Site Plan*, illustrates the proposed project.

The project includes a General Plan Amendment to change the Land Use designation of the site from Public Facilities to Low Density Residential (LDR), Low Medium Density Residential (LMDR) and Park to align with the single-family development (zoned R1) along the west side of the site. The project also includes a zone change to change the zone from PI-Public and Institutional to R-1-Single-Family Residential and GH-Garden Homes with a Planned Development (PD) Overlay to allow flexibility on the maximum coverage in the GH zoning and the ratio of second story building area to first story building in the R1 zoned areas; and PI to P/OS-Parks and Open Space for the approximately 1.12-acre park. The proposed project would result in a gross density of 5.69 dwelling units per acre (du/ac), with a density of 4.72 du/ac in the portion of the project within the R1 zone and 6.69 du/ac within the GH zone. A Tentative Tract Map and Precise Plan of Design is also proposed. A Conditional Use Permit is also proposed to allow for the development of single-family dwellings in the GH zone.

3.2 PROJECT FEATURES

Development Summary
The proposed project would redevelop the project site with 74 single-family residences. The residences would range in size from 2,790 square feet (SF) to 3,419 SF and include four different two-story floor plan options, as detailed below in Table 2.

Table 2: Residence Plan Options

Plan 1	Plan 2	Plan 3	Plan 4
4 Bedrooms, 3 Bathrooms, 1 Bonus Room 2,790 SF 2 Car Garage	4 Bedrooms, 3 Bathrooms, Bonus Room 2,893 SF 2 Car Garage	5 Bedrooms, 3 Bathrooms, 1 Bonus Room 1 Office Suite 3,132 SF 3 Car Garage	4 Bedrooms, 4.5 Bathrooms, 1 Bonus Room 1 Office 3,419 SF 2 Car Garage

All residences would have either a private patio or a private covered entry; and each lot would include a private front yard and back yard. The minimum lot size is 4,500 SF in the GH zone. However, Lots 1-10 on the westernmost portion of the site (in the R1 zone) would have a minimum lot size of 7,200 SF. The typical lot diagram for these lots are shown in Figures 7 and 8.

The project proposes to use existing perimeter walls along the eastern boundary of the site. A new 6-foot high block wall would be constructed along the western boundary, abutting the existing perimeter walls. The project would also build a new 6-foot high block wall along the southerly boundary and new 6-foot high block walls, as required between individual adjacent parcels. The

proposed residences facing Finch Avenue would not have a front yard wall. Individual lots would have solid masonry walls on all side and rear property lines.

The proposed 74 single-family residential lots do not include development of Accessory Dwelling Units (ADUs). However, California Government Code Section 65852.2 allows for the future development of ADUs pursuant to the City's Municipal Code. As described by the Government Code Section 65852.2(J)(2), an ADU is incidental to a dwelling unit on the same lot and may not be sold or otherwise conveyed separate from the primary residence. Also, the Government Code Section 65852.2(D)(8) states that because an ADU is deemed to be an accessory use or an accessory building they shall not be considered to exceed the allowable density for the lot upon which it is located, and shall be deemed to be a residential use that is consistent with the existing general plan and zoning designations. Therefore, it is important to note that the Government Code provides that ADUs are considered an accessory use; and are not considered to contribute towards maximum build-out densities.

In addition, development of ADUs is an allowable use for most single-family parcels throughout the City of Fountain Valley and County of Orange. However, the large majority of single-family residential parcels in the City and County do not include ADUs. The City currently has a total of 44 ADUs built, 78 ADUs with permits issued, and 115 ADUs submitted for plan check. The number of existing or planned ADUs are small in comparison to the number of single-family parcels in the City. Therefore, it would be speculative and not reasonably foreseeable to assume that the proposed single-family residential lots would include future ADUs.

As described by CEQA Guidelines Section 15378, "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. As the future development of ADUs is not reasonably foreseeable, the potential of their development are not considered part of the project. Furthermore, CEQA requires impact determinations based upon substantial evidence, and does not allow speculation to be included in evaluation of potential impacts. Thus, the proposed project as evaluated herein, is limited to the development of 74 single-family dwelling units as described within this IS/MND.

Architectural Design

The proposed two-story single-family residences would be designed with Prairie, Craftsman, and Spanish architectural elements, multi-level rooflines, and an earth tone color scheme. The residences would incorporate stucco finishes, detailed roof elements, awnings, metal railings, and decorative windows and doors in the exterior design. The tallest roofline of the two-story residences would be approximately 27-feet 4-inches in height. Figures 9A through 9D, *Exterior Elevations*, illustrate the proposed exterior elevations for Plans 1 through 4.

Solar Panels

Consistent with the 2019 CA Building Energy Efficiency Standards (Title 24 Part 6), the project would include photovoltaic (PV) solar panels on the rooftop of each residence to offset its energy demand.

Conceptual Site Plan



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Figure 7: *Typical Lot Diagram for proposed GH zoned lots (Lots 11 – 74), which measures setback to covered patio areas (dashed line) and building*

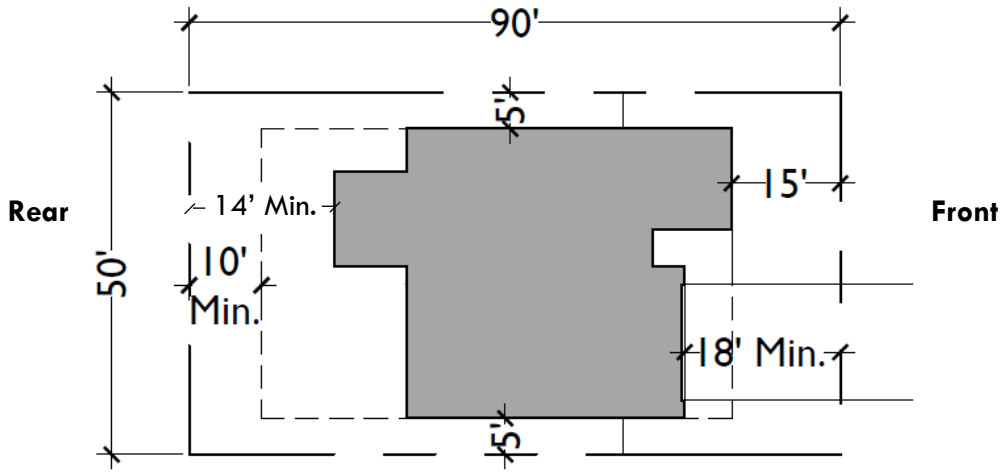
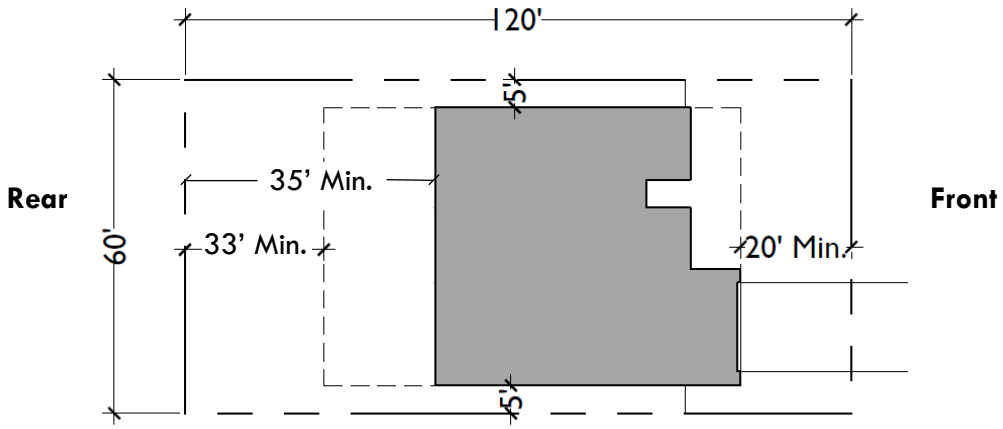


Figure 8*: Typical Lot Diagram for proposed R1 zoned lots (Lots 1 – 10), which measures setback to covered patio areas (dashed line) and building*



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Exterior Elevation Plan 1



FRONT SPANISH
1/4"=1'-0"



FRONT CRAFTSMAN
1/4"=1'-0"



FRONT PRAIRIE
1/4"=1'-0"

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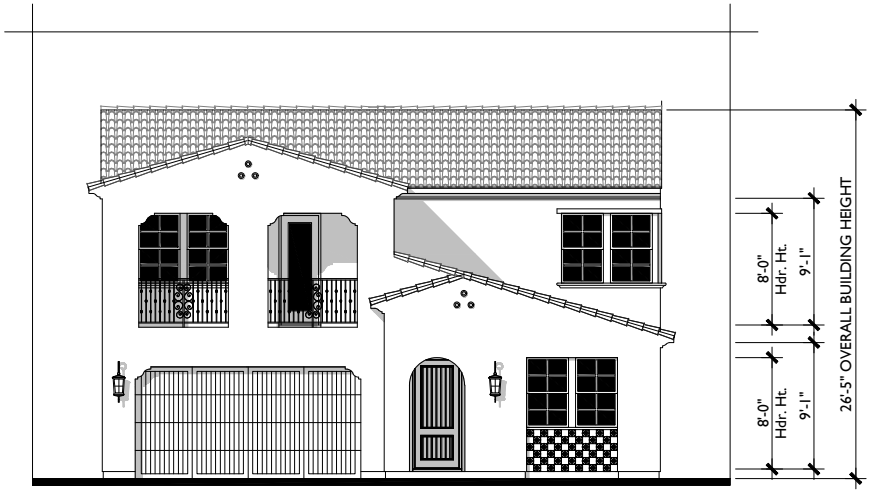
Exterior Elevation Plan 2



FRONT SPANISH
1/4"=1'-0"



FRONT CRAFTSMAN
1/4"=1'-0"



FRONT PRAIRIE
1/4"=1'-0"

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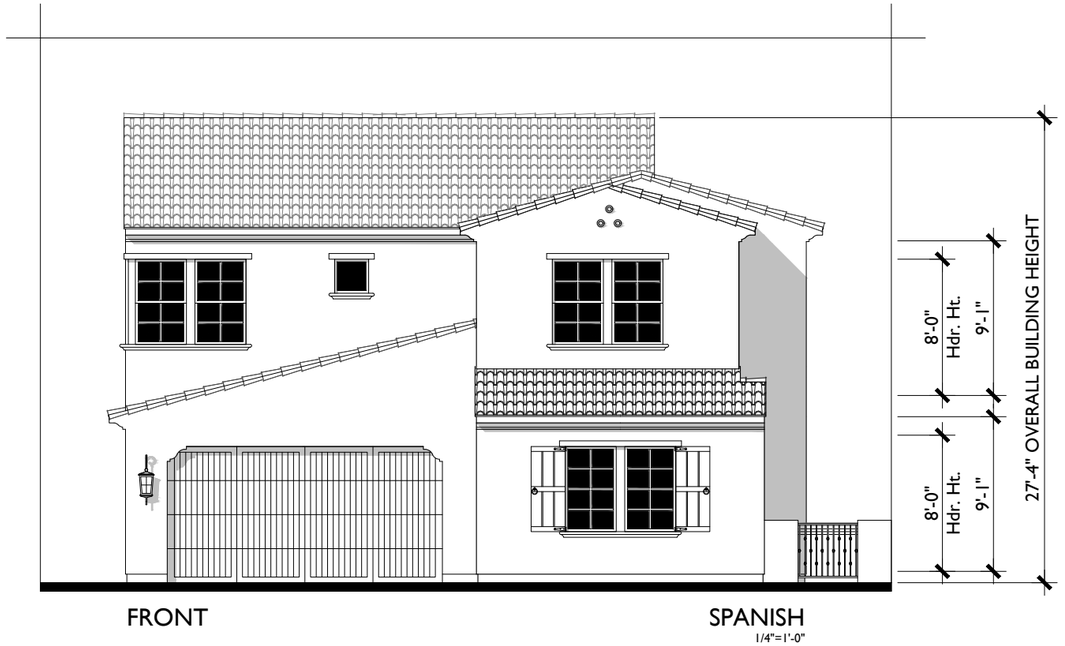
Exterior Elevation Plan 3



FRONT SPANISH

1/4"=1'-0"



FRONT CRAFTSMAN

1/4"=1'-0"



FRONT PRAIRIE

1/4"=1'-0"

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Exterior Elevation Plan 4



FRONT SPANISH

1/4"=1'-0"



FRONT CRAFTSMAN

1/4"=1'-0"



FRONT PRAIRIE

1/4"=1'-0"

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Circulation
As depicted in Figure 6, *Conceptual Site Plan*, the project site would remain accessible via Finch Avenue, with Lots 35-42 fronting directly onto Finch Avenue, and the balance of the homes accessed from the four proposed private streets within the site. Two of the proposed streets would be oriented north-south extending from Finch Avenue, and the additional two proposed streets would connect to the new north-south streets and be oriented east-west.

In addition, the existing pedestrian bridge over the Orange County flood control channel to the southeastern portion of the site would remain and would connect to the proposed north-south street on the eastern portion of the site and continue to provide non-vehicular access to and through the project site, facilitating public access to the proposed public park.

Parking
The proposed project would provide garage, driveway, and on-street parking. Each residence would have a minimum of a two-car garage and a minimum of two driveway parking spaces. The project would also provide 80 on-street parking spaces for residences and visitors, as well as 15 on-street parking spaces on Finch Avenue to serve the proposed public park. Table 3 shows the parking to be provided by the project.

Table 3: Proposed Parking[1]

Type of Parking	Quantity	Percentage
Garage Parking Spots	148	38%
Open Stall Parking Spots (driveway and onsite on-street)	228	58%
Open Stall Parking Spots (offsite on-street)	15	4%
Total Parking Spots Provided	**391**	100%
Parking to Unit Ratio	5.3 / Dwelling Unit	

[1] Total may not sum due to rounding

Recreation and Open Space
The project includes development of a 1.12-acre park on the northern portion of the site, adjacent to Finch Avenue. The park would include a grassy area/playfield, a tot lot, shade structure, BBQs, benches and picnic benches. Figure 10, *Moiola Park,* illustrates the proposed park's landscaping and amenities.

Landscaping
Landscaping proposed as part of the project would consist of ornamental trees, vines, shrubs, and groundcovers throughout the common areas of the development, such as along roadways, common walls, and the park area. In addition, street trees would be installed adjacent to the project site along Finch Avenue. The street trees would consist of 24-inch ornamental box trees with 48-inch box trees at street corners. The roadway entrances to the project area would have decorative pavement to enhance the entrance to the residential neighborhood. Figure 11, *Landscape Plan*, illustrates the proposed landscape pallet. The landscape plan would be consistent with the Water Efficient Landscape Ordinance and includes a tree in front of every house in the parkway area between the sidewalk and the street compliant with the City of Fountain Valley's Tree Maintenance, Removal, and Reforestation Policy.

Lighting
Outdoor lighting included as part of future development on the project site would be typical of single-family residential uses and would consist of wall-mounted lighting as well as pole-mounted

lights along the proposed internal roadways. Nighttime lighting would be used as accent/security lighting in the park area. All of the project's outdoor lighting would be directed downward and shielded to minimize off-site spill. The location of all exterior lighting would comply with lighting standards established in the City's Municipal Code.

Infrastructure Improvements

Roadway

The project includes off-site improvements to provide a new 5-foot wide sidewalk within the Finch Avenue right-of-way that is adjacent to the site. As shown on Figure11, *Landscape Plan*, the sidewalk would be located adjacent to the proposed park and would connect to the proposed onsite sidewalks. In addition, street trees would be installed along the sidewalks and a 5-foot wide landscaped parkway is proposed along Finch Avenue, adjacent to the proposed park.

Water and Sewer

The proposed project would install onsite 8-inch water and sewer lines that would be located within each of the residential streets and serve each of the proposed residences. The new onsite water and sewer lines would connect to the existing 8-inch water and sewer infrastructure in Finch Avenue. In addition, a new 8-inch water line would be installed along the pedestrian bridge to connect to an existing 8-inch water line in Mt. Cimarron Street. The project also includes installation of a sewer lift station in the park to convey wastewater flows to the existing sewer line in Finch Avenue.

Drainage

The project site contains an existing 36-inch public storm drain that collects drainage from Finch Avenue and portions of the project site and coveys it through the site to discharge into the existing Orange County flood control channel that is adjacent to the site. There is also an 18-inch private storm drain and two smaller drains that collects runoff from the balance of the site. There are currently four drains that connect to the channel at the project site.

The project would remove the existing onsite drainage system and develop new connections to the existing flood control channel. The new onsite drainage would convey runoff to one of five modular wetland units or catch basins that would be installed throughout the site, which would retain and treat stormwater flows. From the modular wetland units and catch basins, treated flows would be conveyed through new storm drains that would connect to the County flood control channel. In addition, a portion of the treated flows would be conveyed to an underground cistern in the proposed park to be used for park irrigation.

The proposed new connections to the Orange County flood control channel are described below:

- **Drain Line A:** The existing 18-inch storm drain connecting to the channel at the southwestern portion of the project site would be abandoned. The existing drain would be removed and the connection to the channel would be filled with cement. A new 24-inch storm drain connection to the flood control channel would be developed adjacent to the existing 18-inch drain at the southwestern portion of the site. New rip rap would be installed in the channel pursuant to City and County requirements. Storm flows would be treated by a proposed catch basin to be located at the end of the proposed onsite roadway (adjacent to Lot 11) prior to discharge into the County flood control channel.
- **Drain Line B:** The existing 36-inch storm drain that collects drainage from Finch Avenue and portions of the project site and connects to the Orange County flood control channel in the southeastern portion of the project site would be abandoned. The existing drain would be removed and the connection to the channel would be filled with cement. A new 36-inch storm

drain connection to the flood control channel would be developed to the south of the existing drain location. The new drain would be realigned but would continue to collect drainage from Finch Avenue and the eastern portions of the project site. New rip rap would be installed in the channel pursuant to City and County requirements. Storm flows would be treated by a proposed catch basin to be located at the end of the proposed onsite roadway (adjacent to Lot 22) prior to discharge into the County flood control channel.

3.3 GENERAL PLAN AND ZONING

The project site has an existing General Plan land use designation of Public Facilities. As part of the project, a General Plan Amendment is proposed to change the designation of the site to Low Density Residential (LDR), Low Medium Density Residential, and Park, which would allow the proposed single-family residences at a density of about 5.69 units per gross acre with a density of 4.72 du/ac in the portion of the project within the R1 zone and 6.69 du/ac within the GH zone.

The project site currently has a zoning designation of PI-Public Institution. The project includes a zone change to change the zoning designation of the site from zone from PI to R-1-Single-Family Residential and Garden Homes (GH) with a Planned Development (PD) Overlay and PI to P/OS-Parks and Open Space.

3.4 CONSTRUCTION

Construction activities include demolition of the existing structures, pavement, and the existing utility infrastructure; grubbing, recycling concrete and reusing onsite (concrete crushing) and hauling building demolition debris offsite for recycling, excavation, grading, and re-compaction of soils; utility and infrastructure installation; building construction; roadway pavement; and architectural coatings.

Excavation and grading would occur to a minimum depth of 5 feet below existing grade or 3 feet below the base of the foundations, whichever is deeper. Also, grading is expected to require the import of approximately 30,000 cubic yards (cy) of fill. The concrete crushing activities for reuse of pavement as road base material would occur in the northeastern portion of the site, at a minimum of 400-feet from the closest residences, which would be verified through the City's permitting process.

In addition, project construction includes installation of vapor barrier systems under the proposed residences within Lots 36, 37, 38, 39, and 47, pursuant to California Department of Toxic Substances Control (DTSC) regulations. The vapor barrier system would consist of a physical barrier under the foundations and a passive venting system for each of the residences on the identified lots.

Construction activities are anticipated to last 16 months and would occur within the hours allowable by the City of Fountain Valley Municipal Code Chapter 6.28.070, which states that construction shall occur only between the hours of 7:00 a.m. and 8:00 p.m. Monday through Friday, and between 9:00 a.m. and 8:00 p.m. on Saturday. No construction is allowed on Sundays and legal holidays.

Table 4: Construction Schedule

Construction Phase	Working Days
Demolition	20
Site Preparation	10
Grading	30
Building Construction	300
Pavement & Architectural Coatings	20

3.5 DISCRETIONARY APPROVALS AND PERMITS

The following discretionary approvals and permits are anticipated to be necessary for implementation of the proposed project:

CITY OF FOUNTAIN VALLEY

- General Plan Amendment from Public Facilities to Low Density Residential, Low Medium Density Residential, and Park
- Zone change from PI-Public and Institutional to R1-Single Family Residential and GH-Garden Homes with a Planned Development (PD) Overlay to allow for the development of 74 single family residences; and PI to P/OS-Parks and Open Space for the approximately 1-acre park.
- Tentative Tract Map
- Precise Plan of Design
- Grading Permits
- Water Quality Management Plan (WQMP) and Storm Water Storm Water Pollutant and Prevention Plan (SWPPP)
- Temporary Use Permit for model homes complex
- Conditional Use Permit for development of single-family homes in the GH zone

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

- Response Action

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

- Section 1602 Lake or Streambed Alteration Permit

SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

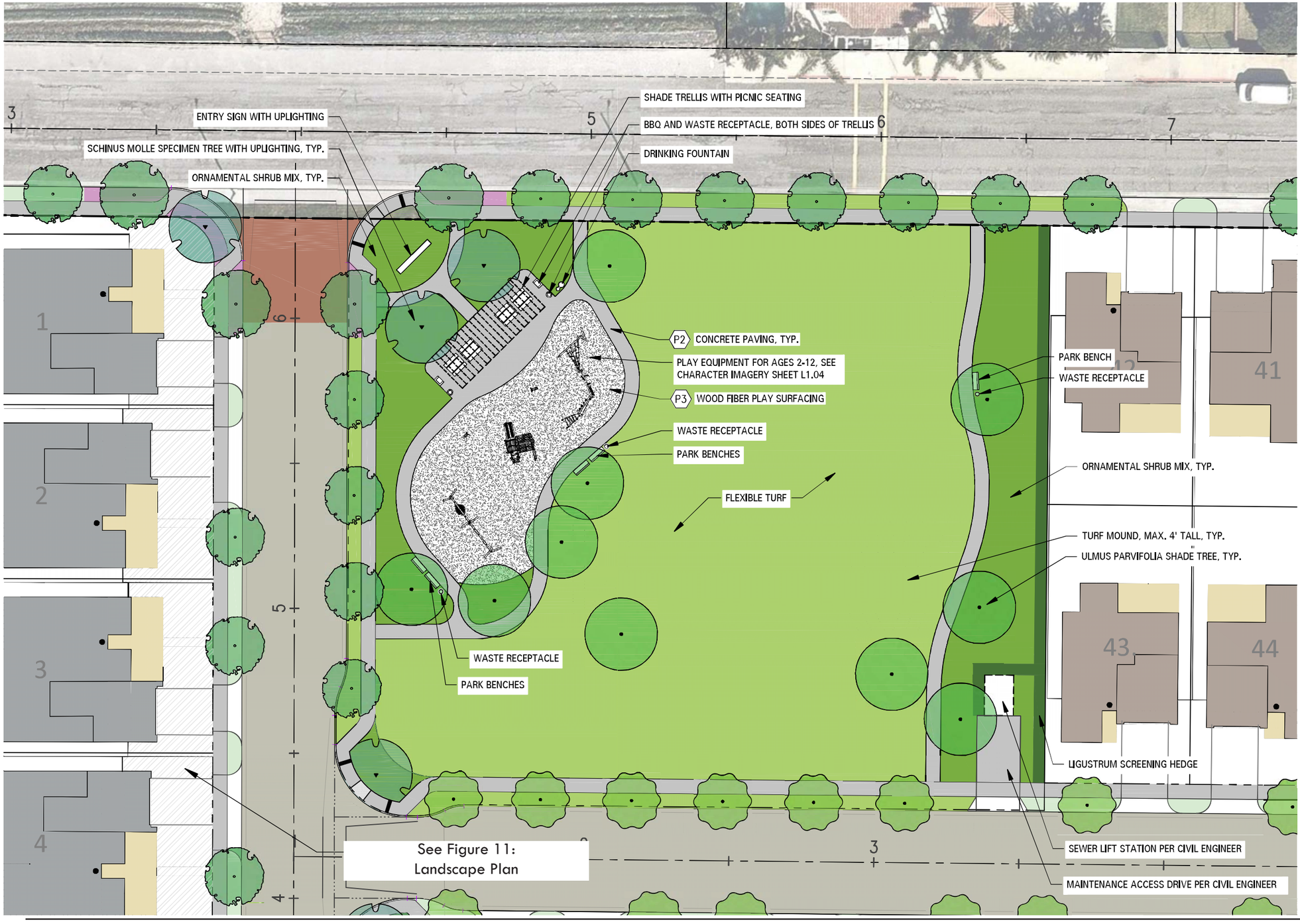
- Section 404 Water Quality Certification or Waste Discharge Requirements

U.S. ARMY CORPS OF ENGINEERS

- Nationwide Permit 7 Preconstruction Notification

ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

- Encroachment Permit



PAVING SCHEDULE

SYMBOL	KEY	DESCRIPTION
	P1	ENHANCED ENTRY PAVING
	P2	CONCRETE PAVING
	P3	PLAYGROUND SURFACING

PLANTING SCHEDULE PUBLIC AREAS

TREES	
SYMBOL	BOTANICAL NAME
	GEIJERA PARVIFOLIA
	RHUS LANCEA
	SCHINUS MOLLE
	ULMUS PARVIFOLIA
PARK UNDERSTORY	
	TALL FESCUE BLEND
	LIGUSTRUM JAPONICUM 'TEXANUM'
	ORNAMENTAL SHRUB MIX OF THE BELOW SPECIES

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Landscape Plan



PAVING SCHEDULE

SYMBOL	KEY	DESCRIPTION
	P1	ENHANCED ENTRY PAVING
	P2	CONCRETE PAVING
	P3	PLAYGROUND SURFACING

PLANTING SCHEDULE PUBLIC AREAS

TREES

SYMBOL	BOTANICAL NAME
	GEIJERA PARVIFOLIA
	RHUS LANCEA
	SCHINUS MOLLE
	ULMUS PARVIFOLIA

PARKWAY UNDERSTORY

	MYOPORUM PARVIFOLIUM 'PUTAH CREEK'
	WESTRINGIA FRUITCOSA 'MUNDI'
	FLOWERING SHRUB MIX OF THE BELOW SPECIES

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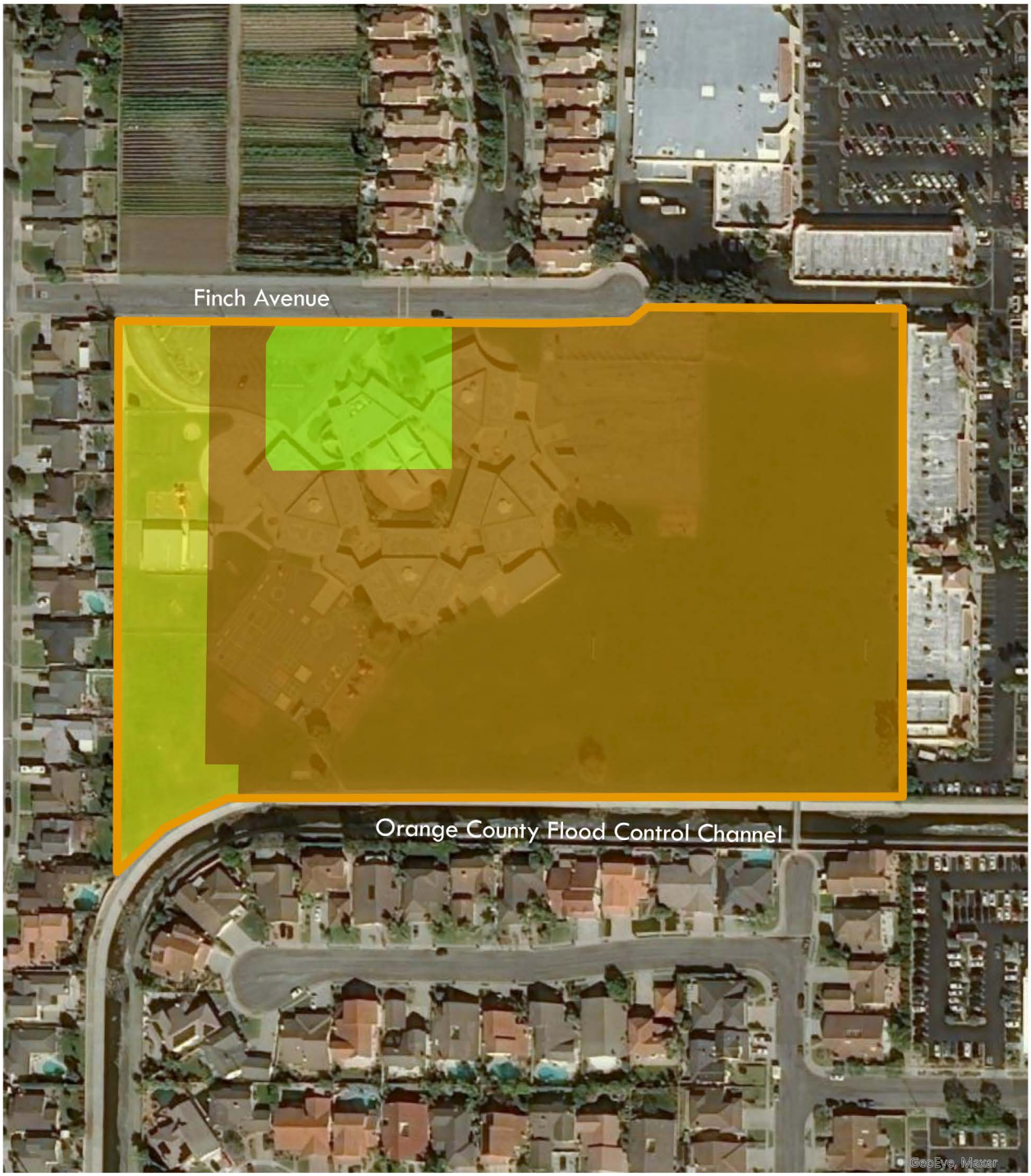
Proposed General Plan Land Uses



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Proposed Zoning Designations



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4 ENVIRONMENTAL CHECKLIST

This section includes the completed environmental checklist form. The checklist form is used to assist in evaluating the potential environmental impacts of the proposed project. The checklist form identifies potential project effects as follows: 1) Potentially Significant Impact; 2) Less Than Significant with Mitigation Incorporated; 3) Less Than Significant Impact; and, 4) No Impact. Substantiation and clarification for each checklist response is provided below in the evaluation of environmental impacts. Included in the discussion for each topic are standard condition/regulations and mitigation measures, if necessary, that are recommended for implementation as part of the proposed project.

4.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (☒) would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

Environmental Factors Potentially Affected

☐	Aesthetics	☐	Agriculture and Forest 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

4.2 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

Printed Name

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 will 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: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross-referenced).

5) Earlier analysis 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 Analysis Used. Identify and state where they are available for review.

   (b) Impacts 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 analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

4.3 ENVIRONMENTAL CHECKLIST QUESTIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Except as provided in Public Resources Code Section 21099 would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) In non-urbanized 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

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

No Impact. Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in 2 ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or "vista" of the scenic resource. Important factors in determining whether the proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors.

The City's General Plan does not designate any scenic vistas within the City. The project site is in an urbanized area and surrounded by one- and two-story development (residential and commercial land uses), roadways, lined with ornamental landscaping and power lines. The topography of the site and surrounding area is flat, and there are no scenic vistas or unique topographic features that are visible from Finch Avenue or from views across the project site. Thus, redevelopment of the project site with two-story single-family residences would not obstruct, interrupt, or diminish a scenic vista; and impacts would not occur.

b) Substantially damage scenic resources, including, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. There are no officially designated state scenic highways in the vicinity of the proposed project (Caltrans 2020). The only officially designated scenic highway within Orange County is a portion of State Route (SR) 91. Eligible State Scenic Highways within the County include: SR-1, SR-74, portions of SR-91, and a portion of SR-57, none of which are in the vicinity of the project site. Additionally, there are no County designated scenic highways in Fountain Valley. Therefore, impacts related to scenic resources within a state scenic highway would not occur

c) In non-urbanized 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. As described previously, the project site is located within an urbanized area that is directly adjacent to Finch Avenue, a concrete lined flood control channel, commercial uses, and single-family residential development. The project site is developed with typical one-story school buildings, parking lots, sports courts, and grass fields. The existing character of the site and surrounding area is neither unique nor of special aesthetic value or quality.

The project would redevelop the project site to provide 74 new single-family residences, which would be similar but with a slightly higher density and smaller lots than the single-family residential uses that are adjacent to the west of the site, to the south of the site beyond the flood control channel, and to the north of the site beyond Finch Avenue.

General Plan. As shown on Figure 4, *Existing General Plan Land Use*, the project site currently has a General Plan land use designation of Public Facilities. The proposed project includes a General Plan Amendment to change the designation of the site to Low Density Residential, Low Medium Density Residential, and Park. The proposed Low Density Residential area would align with the single-family development (zoned R1) along the west side of the site (See Figure 12, *Proposed General Plan Land Uses*). According to the General Plan Land Use Element, the Low Density Residential General Plan land use designation allows for development of residential uses to a maximum density of 5 dwelling units per acre and the Low Medium Density Residential General Plan land use designation allows for development of residential uses to a maximum density of 10.8 dwelling units per acre.

Zoning. The project site is currently zoned as Public Institution (PI). The project includes a zone change from PI-Public Institution to R1-Single Family Residential and GH-Garden Homes with a Planned Development (PD) Overlay to allow for the development of the 74 single family residential homes on lots that would range in size from 4,500 square foot lots for the GH zone to over 7,200 square foot lots for the R1 zone; and PI to P/OS-Parks and Open Space for the approximately 1.12-acre park (See Figure 13, *Proposed Zoning Designations*). As shown Tables AES-1 and in Figures 7 and 8, the proposed project meets the development standards for the proposed zoning.

Table AES-1: Consistency with Proposed Zoning Development Standards

Development Feature	Requirement by Zoning District		Proposed Project
	R1	GH	
Minimum Lot area	7,200 SF	1,800 SF	Proposed R1: 7,200 SF Proposed GH: 4,500 SF
Minimum Lot width	60 ft.	23 ft.	Proposed R1: 60 ft. Proposed GH: 50 ft.

Development Feature	Requirement by Zoning District		Proposed Project
	R1	GH	
Minimum Lot depth	90 ft.	--	Proposed R1: 120 ft.
Maximum density	5 du/ac	10.8 du/ac	Proposed R1: 4.72 du/ac Proposed GH: 6.69 du/ac
Minimum Front Setback	20 ft.	--	Proposed R1: 20 ft.
Minimum Side Setbacks	5 ft./10 ft. street side	--	Proposed R1: 5 ft./10 ft. street side
Minimum Rear Setback	25 ft.	320 SF minimum rear yard	Proposed R1: 35 ft. Proposed GH: 700 SF minimum rear yard
Height limit	27 ft./2 stories	30 ft./2 stories	Proposed R1: 27 ft./2 stories Proposed GH: 27 ft./2 stories

In addition, the project would be consistent with the General Plan Land Use Element goals and policies related to scenic quality, as shown in Table AES-2.

Table AES-2: Consistency with Land Use Element Goals and Policies Related to Scenic Quality

Goal or Policy	Project Consistency
Policy 2.6.1: Promote residential, commercial and industrial development which achieves harmony within monotony in the built environment.	**Consistent.** The proposed project would redevelop the school site with single-family residences and a park, which would achieve harmony with the existing single-family residences to the north, south, and west of the project site. In addition, the project would provide 4 different plans and 3 different architectural styles for the single-family residences, which would ensure that monotony of the built environment would not occur. Therefore, the project would be consistent with Policy 2.6.1.
Goal 2.7: Well designed new residential development.	**Consistent.** As described in the previous response, the proposed project would provide 4 different plans and 3 different architectural styles for the single-family residences and would be within the allowable density for Low Medium Density Residential land uses. As described previously and detailed in Table AES-1, the proposed development is consistent with the proposed zoning designations, including lot width, lot depth, and setbacks. In addition, the project would provide a park, sidewalks, and landscaping along the streets and within common areas, and decorative paving at the street entrances to the neighborhood. Therefore, the project would be consistent with Goal 2.7.
Goal 2.9: Attractive streetscapes throughout the City.	**Consistent.** The proposed project would install street trees along the streets of the project site and adjacent to the site along Finch Avenue. The street trees would consist of 24-inch ornamental box trees with 48-inch box trees at street corners. In addition, the roadway entrances to the project area would have decorative pavement to enhance the entrance to the residential neighborhood. Therefore, the project would generate attractive streetscapes within and adjacent to the site and the project would be consistent with Goal 2.9.
Policy 2.9.1: Encourage landscaping to enhance streetscapes.	**Consistent.** As described in the previous response the project would install new landscaping along the streets of the project site and adjacent to the site along Finch Avenue that would generate attractive streetscapes. Therefore, the project would be consistent with Policy 2.9.1.
Goal 2.10: Safe and attractive pedestrian facilities.	**Consistent.** The proposed project would install sidewalks

	along both sides of the onsite street system that would be constructed with the project, which would provide pedestrian facilities. As described in the previous response the project would install new landscaping along the streets that would generate attractive streetscapes. Therefore, the project would be consistent with Goal 2.10.

Overall, the proposed project would be consistent with development standards required by the R1 and GH zoning districts with a PD Overlay and P/OS zoning, the Low Density Residential, Low Medium Density Residential and Park General Plan land use designations, as well as the Land Use Element goals and policies related to scenic quality.

In addition, as described in Section 11, *Land Use and Planning* in Table LU-1, the project is consistent with a majority of the City's Infill Guidelines for Residential Development (Infill Guidelines), and would not conflict with the Guidelines in a manner that would result in a substantial environmental effect related to scenic quality. As described further in Table LU-1 (in Section 11 herein), the Infill Guidelines suggest including one and two-story units to provide architectural compatibility for the area. Although the project would develop two-story residences, the architectural design of the structures provides one-story elements (such as one-story roof lines and a split-level house design as shown in Figure 9D), a variety of elevations, reduced massing, and visual interest. The existing single-family residences on surrounding streets are both one-story and two-story residences, and in some areas such as the development across the street on Collins Circle, are all two-story residences. Thus, the project is visually compatible with the surrounding area and the two-story residences proposed by the project would not conflict with this Infill Guideline in a manner that would result in a significant effect related to scenic quality on the site or in the surrounding area.

Overall, the project is located within an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, impacts would be less than significant. In addition, as the project would remove the existing school facility and develop single-family housing, which is consistent with the land uses adjacent to the site, the project would increase the visual cohesion between the project site and the surrounding single-family residential area. Hence, the proposed project would not degrade the visual character of the project site and surrounding area; and impacts would be less than significant.

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. The project site is developed with an existing school and contains onsite nighttime security lighting. In addition, the project site is located within a developed urban area, adjacent to a retail center, residential development, and a roadway. Existing sources of light in the vicinity of the project site includes: streetlights, security lighting, landscape lighting, and lighting from building interiors that pass-through windows.

The proposed project would include the provision of street lighting and nighttime lighting for security purposes around all of the residences. Implementation of the proposed project would result in a higher intensity development on the project site than currently exists, which would contribute additional sources to the overall ambient nighttime lighting conditions. However, all outdoor lighting would be hooded, appropriately angled away from adjacent land uses, and would be in compliance with the Fountain Valley Municipal Code, Section 21.18.060 that provides specifications for shielding lighting away from adjacent uses and intensity of lighting. Because the project site is

within an urban area with various sources of existing nighttime lighting, and the project would be required to comply with the City's lighting regulations that would be verified by the City's Building and Safety Division during the permitting process, the lighting increase in light that would be generated by the project would not adversely affect day or nighttime views in the area. Overall, lighting impacts would be less than significant.

Reflective light (glare) can be caused by sunlight or artificial light reflecting from finished surfaces such as window glass or other reflective materials. Generally, darker or mirrored glass would have a higher visible light reflectance than clear glass. Buildings constructed of highly reflective materials from which the sun reflects at a low angle can cause adverse glare. The proposed project would not use highly reflective surfaces, or glass sided buildings. Although the residences would contain windows, the windows would be separated by stucco and architectural elements, which would limit the potential of glare. In addition, as described previously, onsite lighting would be angled down and shielded, which would avoid the potential on onsite lighting to generate glare. Therefore, the project would not generate substantial sources of glare, and impacts would be less than significant.

Existing Plans, Programs, or Policies

PPP AES-1: Exterior lighting on the project site shall conform to the regulations within Municipal Code Section 21.18.060. Light and glare sources from the site, shall be shielded or modified to prevent emission of light or glare beyond the property line.

Mitigation Measures

None.

Sources

California Department of Transportation (Caltrans). 2020. *List of eligible and officially designated State Scenic Highways*. Accessed: http: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

City of Fountain Valley General Plan. Accessed: https://www.fountainvalley.org/413/General-Plan

City of Fountain Valley Municipal Code. Accessed: http://qcode.us/codes/fountainvalley/

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☒	☐

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, 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 California Department of Conservation Important Farmland mapping identifies the project site and surrounding areas as Urban and Built-Up land (CDC 2020). No areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is located on or adjacent to the project site. Therefore, impacts related to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would not occur.

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

No Impact. The project site is currently zoned Public Institution (PI) and surrounded by areas zoned for residential and commercial development. No agricultural zoning is located in the vicinity of the project site and no parcels in the project vicinity have Williamson Act contracts. Therefore, implementation of the project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Thus, no impact would occur.

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. The project site is developed and located in an area that is void of forest land or timberland. In addition, the project site is zoned is zoned Public Institution (PI) and surrounded by areas zoned for residential and commercial uses. Therefore, the project would not conflict with existing forest land, timberland, or zoning for forest or timberland uses. Thus, no impact would occur.

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

No Impact. As described in the previous response, the project area is void of any forest land and is not zoned for forest uses. Thus, the project would not result in the loss of forest land or conversion of forest land to non-forest uses. No impact would occur.

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?

Less than Significant Impact. As described in the previous responses, the project area does not include and is not near any land zoned for farmland or forest land. However, Smith Farms, which is a commercially used agricultural parcel that grows produce is located to the north of the site, across Finch Avenue. The project would redevelop the vacant school site for residential uses. As the project site has been long developed with urban uses, the change of use from school to residential would not result in conversion of farmland to non-agricultural use. Thus, impacts would be less than significant.

Existing Plans, Programs, or Policies

None.

Mitigation Measure

None.

Sources

California Department of Conservation (DOC) Important Farmland Finder, 2020. Accessed: https://maps.conservation.ca.gov/dlrp/ciff/

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?	☐	☐	☐	☒

The discussion below is based on the CalEEMod Emission Summary, prepared by Vince Mirabella (AQ 2020), included as Appendix A.

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

Less Than Significant Impact. The project site is located in the South Coast Air Basin (SCAB), which is under the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. In preparation of the AQMP, SCAQMD and SCAG uses regional growth projections to forecast, inventory, and allocate regional emissions from land use and development-related sources.

As described in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993), for purposes of analyzing consistency with the AQMP, if a proposed project would result in growth that is substantially greater than what was anticipated, then the proposed project would conflict with the AQMP. On the other hand, if a project's density is within the anticipated growth of a jurisdiction, its emissions would be consistent with the assumptions in the AQMP, and the project would not conflict with SCAQMD's attainment plans. In addition, the SCAQMD considers projects consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation.

The site is located within a residential neighborhood and adjacent to retail services. The proposed

project would remove the vacant school and develop 74 single-family residences on the site. As further described in Section 14, *Population and Housing*, the 74 new residences would result in an 0.4 percent increase in residential units within the City. This limited level of growth would not exceed growth projections and would be consistent with the assumptions in the AQMP. In addition, the proposed land use designation would generate fewer vehicle trips than operation of the existing school; based on trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017, the 74 single family dwelling units (Land Use Code 210 – Single Family) would generate 329 fewer average daily trips compared to an elementary school with 544 students (Land Use Code 520 - Elementary School).

Also, emissions generated by construction and operation of the proposed project would not exceed thresholds. As described in the analysis below, the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation. Therefore, impacts related to conflict with the AQMP from the proposed project would be less than significant.

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?

Less Than Significant Impact. The SCAB has a non-attainment status for not meeting federal ozone standards, federal carbon monoxide standards, and state and federal particulate matter standards. Any development in the SCAB, including the proposed project, could cumulatively contribute to these pollutant violations. The methodologies from the SCAQMD CEQA Air Quality Handbook are used in evaluating project impacts. SCAQMD has established daily mass thresholds for regional pollutant emissions, which are listed in Table AQ-1. The SCAQMD's CEQA Air Quality Handbook methodology describes that any project that result in daily emissions that exceed any of these thresholds would have both an individually (project-level) and cumulatively significant air quality impact. If estimated emissions are less than the thresholds or reduced to below the thresholds with implementation of mitigation, impacts would be considered less than significant.

Table AQ-1: SCAQMD Regional Daily Emissions Thresholds[1]

Pollutant	Construction (lbs/day)	Operations (lbs/day)
NOx	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SOx	150	150
CO	550	550
Lead	3	3

Construction

Construction activities associated with the proposed project would generate pollutant emissions from the following: (1) demolition and removal of the existing onsite improvements, including recycling hardscape and reusing onsite and hauling building demolition debris offsite for recycling; (2) grading and excavation; (3) construction workers traveling to and from project site; (4) delivery and hauling of construction supplies to, and debris from, the project site; (5) fuel combustion by onsite construction equipment; (6) building construction; installation of the vapor barrier systems

[1] Regional thresholds are from the SCAQMD Air Quality Significance Thresholds, March 2015.

within Lots 36, 37, 38, 39, and 47, pursuant to DTSC regulations; application of architectural coatings; and paving. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring.

It is mandatory for all construction projects to comply with several SCAQMD Rules, including Rule 403 for controlling fugitive dust, PM_{10}, and $PM_{2.5}$ emissions from construction activities. Rule 403 requirements include, but are not limited to: applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site, covering all trucks hauling soil with a fabric cover and maintaining a freeboard height of 12-inches, and maintaining effective cover over exposed areas. Compliance with Rule 403 was accounted for in the construction emissions modeling for the project. In addition, implementation of SCAQMD Rule 1113 that governs the VOC content in architectural coating, paint, thinners, and solvents, was accounted for in the construction emissions modeling for the project. As shown in Table AQ-2, CalEEMod results indicate that construction emissions generated by the proposed project would not exceed SCAQMD regional thresholds. Therefore, emissions from construction activities would be less than significant.

Table AQ-2: Construction Emissions Summary

	Emissions (lbs/day)					
Year	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
2021 Maximum Daily Emissions	5.9	88.3	40.5	0.2	8.6	5.7
2022 Maximum Daily Emissions	41.9	16.4	16.5	<0.1	1.2	0.9
Overall Maximum Daily Emissions	**41.9**	**88.3**	**40.5**	**0.2**	**8.6**	**5.7**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: AQ 2020

Operation

Operation of the 74 single-family residences would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products. However, vehicular emissions would generate a majority of the operational emissions from the project.

Operational emissions associated with the proposed project were modeled using CalEEMod and are presented in Table AQ-3. As shown, the proposed project would result in long-term regional emissions of the criteria pollutants that would be below the SCAQMD's applicable thresholds. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant impacts, and operational impacts would be less than significant.

Table AQ-3: Summary of Peak Operational Emissions

	Emissions (lbs/day)				
Operational Activity	**VOC**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Area Source	3.0	0.1	6.1	<0.1	<0.1
Energy Source	0.1	0.5	0.2	<0.1	<0.1
Mobile Source	0.8	0.9	12.9	5.2	1.4
Total Maximum Daily Emissions	**3.9**	**1.5**	**19.3**	**5.3**	**1.5**
SCAQMD Regional Threshold	55	55	550	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**

Source: AQ 2020

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant with Mitigation. The SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2008) recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ construction-related impacts to sensitive receptors in the immediate vicinity of the project site. Such an evaluation is referred to as a localized significance threshold (LST) analysis. According to the SCAQMD's *Final Localized Significance Threshold Methodology*, "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2008). SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of NOx, CO, PM_{10}, and $PM_{2.5}$ pollutants for each of the 38 source receptor areas (SRAs) in the SCAB. The project site is located in SRA 17, Central Orange County.

Sensitive receptors can include residences, schools, playgrounds, childcare centers, athletic facilities. The nearest sensitive receptors are existing residences located adjacent to the project site. The distance between the project site boundary and the closest existing residential structure is approximately 24-feet. As such, the Air Quality Analysis utilizes a sensitive receptor distance of 25 meters, which is the closest distance provided by SCAQMD LST guidance.

Construction
The localized thresholds from the mass rate look-up tables in SCAQMD's Final Localized Significance Threshold Methodology document, were developed for use on projects that are less than or equal to 5-acres in size or have a disturbance of less than or equal to 5 acres daily. As the project site is 13 acres and grading would occur over a 30-day period, the Air Quality Impact Analysis (Appendix A) determined that the proposed project would disturb a maximum of 4 acres per day.

Table AQ-4 identifies the localized impacts at the nearest receptor location in the vicinity of the project. As shown, project construction-source emissions would not exceed the applicable SCAQMD LSTs for emissions of any criteria pollutant. Thus, implementation of the project would not result in a localized air quality impact.

Table AQ-4: Localized Significance Summary of Construction

	Emissions (lbs/day)			
Year	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
2021 Maximum Daily Emissions	60.8	31.2	8.4	5.6
2022 Maximum Daily Emissions	15.6	16.4	0.8	0.8
Overall Maximum Daily Emissions	**60.8**	**31.2**	**8.4**	**5.6**
SCAQMD Localized Threshold	160	1,074	11	6
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: AQ 2020

As described in Response 4.3(a), the proposed project would not significantly increase long-term emissions within the project area. Construction of the proposed project may expose nearby residential sensitive receptors to airborne particulates as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). As described in the Project Description, the concrete crushing activities for reuse of pavement as road base material would occur in the northeastern portion of the site, at a minimum of 400-feet from the closest residences, which would be verified through the City's permitting process. However, construction contractors

would be required to implement measures to reduce or eliminate emissions by following SCAQMD's standard construction practices (Rules 402 and 403, as included as PPP AQ-1 and PPP AQ-2). Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. 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 emission source. Mitigation measure AQ-1 is included to require the preparation of a demolition plan showing staging areas and crushing areas. With implementation of mitigation measures, sensitive receptors would not be exposed to substantial pollutant concentrations during construction, and impacts would be less than significant.

Toxic Air Pollutants. The construction equipment would emit diesel particulate matter (DPM), which is a carcinogen, However, the DPM emissions would be short-term in nature and occur intermittently throughout the 16-month construction process. Determination of risk from DPM is considered over a 70-year exposure time. As such, considering the short 16-month time frame for construction, exposure to DPM during construction would be less than significant.

Operation

For operational LSTs, onsite passenger car and truck travel emissions were modeled. The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state Ambient Air Quality Standards. As shown on Table AQ-5, operational emissions would not exceed the SCAQMD's localized significance thresholds for any criteria pollutant at the nearest sensitive receptor. Therefore, localized air quality impacts from operational activities would be less than significant.

Table AQ-5: Localized Significance Summary of Operations

Operational Activity	Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	0.1	0.1	<0.1	<0.1
Energy	0.5	0.2	<0.1	<0.1
Mobile	0.1	1.9	0.1	<0.1
Total Maximum Daily Emissions	0.7	2.2	0.1	0.1
SCAQMD Localized Thresholds	183	1,253	3	2
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: AQ 2020

CO Hotspots. Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 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. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

With the turnover of older vehicles and introduction of cleaner fuels, electric vehicles, and vehicles with stop-start systems (where the engine shuts down when the vehicle is stopped and restarts when the break petal is released), as well as implementation of control technology on industrial facilities, CO concentrations in the South Coast Air Basin and the state have steadily declined.

The analysis of CO hotspots compares the volume of traffic that has the potential to generate a CO hotspot (exceedance the state one-hour standard of 20 ppm or the eight-hour standard of 9

ppm) and the volume of traffic with implementation of the proposed project. In 2003, the SCAQMD estimated that a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to exceed state standards and generate a CO hot spot.

As detailed in Section 17, *Transportation*, shown on Table T-2, the proposed project would generate 55 new vehicle trips (14 inbound trips and 41 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the project would generate 73 new vehicle trips (46 inbound trips and 27 outbound trips). Over a 24-hour period, the project is forecast to generate approximately 699 new daily trips. Thus, the proposed project would not result in an increase in traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix, and would not generate a CO hotspot. Therefore, impacts related to CO hotspots from operation of the proposed project would be less than significant.

Friant Ranch Case. In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, California Supreme Court held that an EIR's air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided. As noted in the Brief of Amicus Curiae by the SCAQMD in the Friant Ranch case (April 6, 2015, Appendix 3.4) (*Brief*), SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes.

The SCAQMD discusses that it may be infeasible to quantify health risks caused by projects similar to the proposed project, due to many factors. It is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). The *Brief* states that a $PM_{2.5}$ methodology is not suited for small projects and may yield unreliable results. Similarly, SCAQMD staff does not currently know of a way to accurately quantify O_3 related health impacts caused by NO_X or VOC emissions from relatively small projects, due to photochemistry and regional model limitations. The *Brief* concludes, with respect to the Friant Ranch EIR, that although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.

On the other hand, for extremely large regional projects (unlike the proposed project), the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 lbs/day of NO_X and 89,180 lbs/day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3.

The proposed project does not generate anywhere near 6,620 lbs/day of NO_X or 89,190 lbs/day of VOC emissions. The proposed project would generate 88.3 lbs/day of NO_X during construction and 1.5 lbs/day of NO_X during operations (1.3% and 0.02% of 6,620 lbs/day, respectively). The project would also generate 41.9 lbs/day of VOC emissions during construction and 3.9 lbs/day of VOC emissions during operations (0.05% and 0.004% of 89,190 lbs/day, respectively). Therefore, the proposed project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level.

However, as provided in Table AQ-5, the proposed project's localized impact to air quality for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ have been analyzed by comparing the project's on-site emissions to the SCAQMD's applicable LST thresholds. As shown, the proposed project would not result in emissions that exceeded the SCAQMD's LSTs. Therefore, the proposed project would not exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$, and impacts would be less than significant.

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

No Impact. The proposed project would not emit other emissions, such as those generating objectionable odors, that would affect a substantial number of people. The threshold for odor is identified by SCAQMD 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 result in other emissions, such as 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 proposed project would implement residential development within the project area that does not involve the types of uses that would emit objectionable odors affecting a substantial number of people. In addition, odors generated by non-residential land uses are required to be in compliance with SCAQMD Rule 402, which would prevent nuisance odors.

During construction, emissions from construction equipment, architectural coatings, and paving activities may generate odors. However, these odors would be temporary, intermittent in nature, and would not affect a substantial number of people. The noxious odors would be confined to the immediate vicinity of the construction equipment. Also, the short-term construction-related odors would cease upon the drying or hardening of the odor-producing materials. Therefore, impacts associated with other emissions, such as odors, would not adversely affect a substantial number of people.

Existing Plans, Programs, or Policies

PPP AQ-1: Rule 402. The construction plans shall include a note that the project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 402. The project 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.

PPP AQ-2: Rule 403. The construction plans shall include a note that the project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 miles per hour or less.

PPP AQ-3: Rule 1113. The construction plans shall include a note that the project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.

Mitigation Measures

Mitigation Measure AQ-1: Demolition Plan. Prior to issuance of demolition permits, the project proponent shall submit a demolition plan for approval by the City Building Department demonstrating that construction equipment staging areas will be placed away from adjacent residential uses; that rock crushing activities will be located on the northeastern portion of the site, at a minimum of 400-feet from the closest residences; and demonstrating that the construction contract will comply with South Coast Air Quality Management District (SCAQMD) dust control rules as outlined in PPP AQ -1, AQ,2 and AQ-3.

Sources

Air Quality, Greenhouse Gas, and Energy Impact Analysis. Prepared by Vince Mirabella (AQ 2020).

South Coast Air Quality Management District Final Localized Significance Threshold Methodology (SCAQMD 2008). Accessed: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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 Game or US Fish and Wildlife Service?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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 Game or U.S. Fish and Wildlife Service?

No Impact. The project site is located within an urbanized area and currently developed with a school facility. Other than buildings, the site includes paved surfaces and ornamental landscaping that consists of grass groundcover and a few scattered ornamental trees. As determined by records searches, aerial imaging, and site visits, no endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service

(USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS) occur on the site.

The proposed project would redevelop the project site with single-family residences, which would include installation of new ornamental landscaping. As no sensitive species or habitats are located within the urban and developed site, implementation of the project would not result in a substantial adverse effect, either directly or through habitat modifications, on any sensitive species, significant impacts would not occur.

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

No Impact. Riparian habitats are those occurring along the banks of rivers and streams. Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies, known to provide habitat for sensitive animal or plant species, or known to be important wildlife corridors. As described above, the project site is developed and does not contain any natural habitats, including riparian. Additionally, the project is located within a developed urban area. The project site is adjacent to a concrete lined flood control channel that does not include any riparian habitat or other sensitive natural community. No riparian habitat or other sensitive natural communities occur adjacent to the project site. Additionally, the project site and adjacent areas are not included in any local or regional plans, policies, and regulations that identify riparian habitat or other sensitive natural community. Therefore, no impact would occur.

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 swamps, marshes, and bogs. As detailed previously, the project site is developed; and it does not contain any wetlands. In addition, the adjacent areas, including the concrete lined flood control channel do not contain wetlands. Therefore, the redevelopment of the project site would not result in impacts to wetlands.

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 with Mitigation Incorporated. As previously discussed, the project site is developed and surrounded by urban development. The adjacent concrete lined flood control channel does not contain habitat to support wildlife species; therefore, the area does not function as a wildlife movement corridor and is not adjacent to a wildlife movement corridor.

However, the project area contains scattered ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibits disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been

included to require that if commencement of demolition, construction, or vegetation clearing occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. If active nesting of birds is observed within 100 feet of the construction area prior to construction, the qualified biologist would establish an appropriate buffer around the active nests (e.g., as much as 500 ft for raptors and 300 ft for non-raptors), and the buffer areas would be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

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

No Impact. The project site is urban and developed. However, in its existing condition, the project area contains a limited number of ornamental trees and other landscaping, which would be removed and replaced with implementation of the proposed project. Public trees in Fountain Valley are protected under Chapter 12.04, *Trees, Shrubs, and Plants*, of the Municipal Code (PPP BIO-1), which regulates street trees or trees located in other public locations in the City; including the location and species of the proposed trees to be installed along Finch Avenue. The proposed project would be required to comply with the Municipal Code requirements as part of the City permitting process would ensure that the project does not conflict with local policies or ordinances related to public trees. As a result, no impact would occur.

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. As previously discussed, the project site is developed and within and urban and developed area. The site is not within the area of an adopted Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, implementation of the proposed project would not 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 would occur.

Existing Plans, Programs, or Policies

PPP BIO-1: The trees shrubs and plants installed on public property shall conform to the regulations within Municipal Code Chapter 12.04.

Mitigation Measures

Mitigation Measure BIO-1: Migratory Bird Treaty Act. Prior to issuance of grading or demolition permits that include vegetation and/or tree removal activities that will occur within the active breeding season for birds (February 1–September 15), the project applicant (or their Construction Contractor) shall retain a qualified biologist (meaning a professional biologist that is familiar with local birds and their nesting behaviors) to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities.

The nesting survey shall include the project site and areas immediately adjacent to the site that could potentially be affected by project-related construction activities, such as noise, human activity, and dust, etc. If active nesting of birds is observed within 100 feet (ft) of the designated construction

area prior to construction, the qualified biologist shall establish an appropriate buffer around the active nests (e.g., as much as 500 ft for raptors and 300 ft for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

Sources

United States Fish and Wildlife Service (USFWS). 2019. National Wetlands Inventory, 2020. Accessed: https://www.fws.gov/wetlands/data/mapper.html

California's Department of Fish and Wildlife (CDFW) Species Explorer, 2020. Accessed: https://nrm.dfg.ca.gov/taxaquery/Default.aspx

California's Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB), 2020. Accessed: https://wildlife.ca.gov/Data/CNDDB

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

The discussion below is based on the Department of Parks and Recreation Primary Record Forms, prepared by Urbana Preservation & Planning, LLC, 2020 (DPR 2020), included as Appendix B; and the Phase 1 Cultural and Paleontological Resources Assessment, prepared by Material Culture Consulting, 2020 (MCC 2020), included as Appendix C.

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less than Significant. According to the *State CEQA Guidelines*, a historical resource is defined as something that meets one or more of the following criteria:

1) Listed in, or determined eligible for listing in, the California Register of Historical Resources;
2) Listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k);
3) Identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or
4) Determined to be a historical resource by the project's Lead Agency.

PRC Section 5024.1 directs evaluation of historical resources to determine their eligibility for listing on the CRHR. The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing on the NRHP, enumerated above, and require similar protection to what NHPA Section 106 mandates for historic properties. According to PRC Section 5024.1(c)(1-4), a resource is considered historically significant if it meets at least one of the following criteria:

1) Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
2) Associated with the lives of persons important to local, California or national history;
3) Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or

4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

As described previously, the project site is currently developed with the vacant Fred Moiola Elementary School. The school was operational between 1971 and 2012. The Department of Parks and Recreation Primary Record (DPR) forms prepared for the project describe that the school is one of 19 original schools developed by the Fountain Valley School District and designed by Carmichael-Kemp Architects in the 1960s and 1970s, 10 of which still exist.

The Moiola School is an example of a modernistic open education classroom and open space school. It was not the first of its kind and does not appear to have been instrumental in inciting or pioneering the movement within the City of Fountain Valley or the Fountain Valley School District. As such, the Fred Moiola School has not been found eligible under CRHR Criterion 1 as the property has not been associated with significant events or patterns of events in state, regional, or local history (DPR 2020).

The school was named for Fred Moiola, a descendent of Italian immigrant farmers who was born in the Fountain Valley area in 1925 and later served as a City Councilman. He was affiliated with Moiola Brothers cattle feeding and ranching and was a member of the Fountain Valley City Council when he died in an airplane crash near Hemet, CA on April 17, 1963. Mr. Moiola's potential importance is not directly associated with the Moiola School. The school was named after Mr. Moiola to commemorate his death. It has not been found individually eligible under CRHR Criterion 2 as it has not been identified as having an association with an important person (DPR 2020).

Carmichael-Kemp Architects, a 31-year partnership between Daniel Claude Carmichael, Jr. and Richard Kemp, designed the Moiola School. Established in 1964, the Los Angeles-based firm designed over 305 school projects, with educational buildings cited as comprising approximately 95% of their business. Of the extant Carmichael-Kemp designed schools within the Fountain Valley School District, the Moiola School was the third of three identical buildings designed by the firm. The Moiola School features an identical footprint and similar materials as the Robert Gisler School, dedicated on April 9, 1969, and James H. Cox Elementary, dedicated in March 1970. Both the Robert Gisler School and Cox Elementary School are still in operation. The Moiola School, dedicated in 1971, is sited approximately 0.3-miles west of the Robert Gisler School and 1.3-miles southwest of Cox Elementary School. Thus while the school does embody the distinctive characteristics of modern school design, it is regarded as "off the shelf" design as the third identical school building constructed in the area and redundant work produced by the firm of Carmichael-Kemp Architects, who may be regarded as Masters in their field of educational architecture. For these reasons, the Moiola School does not appear to be individually eligible under CRHR Criterion 3 (DPR 2020).

The Moiola School was constructed in 1971 on previously undeveloped agricultural land. Without evidence to indicate otherwise, the school has not been found eligible under Criterion 4 as further study of the property would not appear to yield information which would be considered important in local, regional, state, or national history.

Therefore, the existing school facility does not meet any of the historic resource criteria and does not meet the definition of an historical resource pursuant to CEQA. Thus, impacts related to historic resources would be less than significant.

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

Less than Significant Impact with Mitigation Incorporated. The Phase 1 Cultural and Paleontological Resources Assessment prepared for the project included a search of the California Historical Resource Information System (CHRIS) at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton. The search identified any previously recorded cultural resources and prior cultural resources investigations within a 1-mile radius of the project site.

The records search identified five previously recorded cultural resources within the 1-mile radius. The resources include two prehistoric resources and three historic built environment resources. The closest resource, located less than 0.5-mile southeast of the project site, is a prehistoric human burial recovered in 1974 during a pool construction. Recent ground disturbing activities along a 16-mile span of Interstate 405 (I-405) have encountered human remains during a widening project for the highway, which is located less than 1-mile northeast of the project site. As part of Native American outreach, the Native America Heritage Commission (NAHC) provided contact information for twenty-two tribes/individuals to reach out to for additional information. Material Culture Consulting (MCC) sent letters to all twenty-two Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the project site, as discussed in detail in Section 18, *Tribal Cultural Resources*. As a result of this outreach effort, MCC received two responses from tribes/contacts, including Rincon Band of Luiseño Indians and Agua Caliente Band of Cahuilla Indians. Neither responses provided comments or concerns for the project.

An Archaeologist and Cross-Trained Paleontologist conducted the cultural and paleontological survey of the project area on February 4, 2020. Although the project site is developed with a school facility, a large portion of the site has not been fully developed beyond landscaping and installation of utilities. The Phase 1 Cultural and Paleontological Resources Assessment determined that the potential for archaeological resources to be located within the project site is moderate because of the unknown depth of previous ground disturbance that was required to construct the existing school, the date of the school construction pre-dates implementation of current laws and regulations regarding cultural resources, and the relative close proximity of previously identified prehistoric human burials to the project site. Thus, Mitigation Measures CUL-1 has been included to require archaeological monitoring during all initial ground-disturbance activities, including vegetation removal, site preparation, and grading up to three feet below the ground surface, to assess any potential for archeological resources to be uncovered at the project site. In the event a previously unrecorded archaeological deposit is encountered during construction, all activity within 50 feet of the area of discovery shall cease and the City shall be immediately notified. If the find is considered a "resource" the archaeologist in coordination with the Native American monitor shall pursue either protection in place or recovery, salvage and treatment of the deposits. Recovery, salvage and treatment protocols shall be developed in accordance with applicable provisions of Public Resource Code Section 21083.2 and State CEQA Guidelines 15064.5 and 15126.4 in consultation with the City. Thus, implementation of Mitigation Measure CUL-1 would reduce potential impacts to archaeological resources to a less than significant level.

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

No Impact. The project site has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during project construction. In addition, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are

discovered, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with existing law would ensure that significant impacts to human remains would not occur.

Existing Plans, Programs, or Policies

PPP CUL-1: Human Remains. In the event that human remains are encountered on the project site, work within 50 ft of the discovery shall cease and the County Coroner shall be notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. Prior to the issuance of grading permits, the City Community and Planning, Building, and Code Enforcement Department Director, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

Mitigation Measures

Mitigation Measure CUL-1: Archaeological Resources. Prior to the issuance of the first grading permit, the applicant shall provide a letter to the City Planning Department, or designee, from a qualified professional archeologist meeting the Secretary of Interior's Professional Qualifications for Archaeology as defined at 36 CFR Part 61, Appendix A stating that the archeologists have been retained to provide archeological resources spot-check monitoring of all ground disturbance activity. The archeologist shall be present at the pre-grading conference to establish procedures for archeological resource surveillance. In addition, the developer shall provide an executed pre-excavation agreement for a Native American monitor who has been approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government (Tribe) during grading, protocols for treatment of Native American human remains, and the repatriation of Native American sacred items and artifacts.

In the event a previously unrecorded archaeological deposit is encountered during construction, all activity within 50 feet of the area of discovery shall cease and the City shall be immediately notified. The archeologist shall flag the area in the field and shall determine if the archaeological deposits meet the CEQA definition of historical (State CEQA Guidelines 15064.5(a)) and/or unique archaeological resource (Public Resources Code 21083.2(g)).

If the find is considered a "resource" the archaeologist in coordination with the Native American monitor shall pursue either protection in place or recovery, salvage and treatment of the deposits. Recovery, salvage and treatment protocols shall be developed in accordance with applicable provisions of Public Resource Code Section 21083.2 and State CEQA Guidelines 15064.5 and 15126.4 in consultation with the City. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation by the archaeologist. Resources shall be identified and

curated into an established accredited professional repository. The archaeologist shall have a repository agreement in hand prior to initiating recovery of the resource. If unique archaeological resources cannot be preserved in place or left in an undisturbed state, recovery, salvage and treatment shall be required at the developer/applicant's expense.

Sources

Phase 1 Cultural and Paleontological Resources Assessment. Prepared by Material Culture Consulting. 2020. (MCC 2020).

Department of Parks and Recreation Primary Record. Prepared by Urbana Preservation & Planning, LLC. 2020 (DPR 2020)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

The discussion below is based on the CalEEMod Emission Summary prepared by Vince Mirabella (AQ 2020), included as Appendix A.

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. As the project site is developed with a vacant school, it is connected to the existing utility infrastructure, which includes electrical and natural gas services. The Southern California Gas Company provides natural gas to the project site and surrounding area. Additionally, Southern California Edison currently provides electricity services to the project site and surrounding area. The proposed project would install onsite electrical and natural gas infrastructure that would connect to the existing offsite lines.

Construction
During construction of the proposed project, energy would be consumed in three general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, as well as delivery truck trips;
2. Electricity associated with providing temporary power for lighting and electric equipment; and
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Based on these uses of energy during construction activities, the proposed buildings and the associated infrastructure would not be expected to result in demand for fuel greater on a per-unit-of-development basis than other development projects in Southern California. Construction does not involve any unusual or increased need for energy. In addition, the extent of construction activities that would occur is limited to a 16-month period, and the demand for construction-related electricity and fuels would be limited to that time frame.

Construction contractors are required to demonstrate compliance with applicable California Air Resources Board (CARB) regulations governing the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment as part of the City's construction

permitting process, which is included as PPP E-2[2]. In addition, compliance with existing CARB idling restrictions would reduce fuel combustion and energy consumption. The energy modeling shows that project construction electricity usage over the 16-month construction period is estimated to use 22,751 gallons of diesel fuel, as shown in Table E-1.

Table E-1: Estimated Construction Equipment Diesel Fuel Consumption

Activity	Equipment	Number	Hours per day	Horse-power	Load Factor	Days	Total horse-power hours	Fuel Rate (gal/hp-hr)	Diesel Fuel Use (gallons)
Demolition	Concrete/industrial saws	1	8	81	0.73	20	9,461	0.023965	227
	Excavator	3	8	158	0.36	20	27,302	0.019763	540
	Rubber Tired Dozer	2	8	247	0.4	20	31,616	0.020461	647
Site Preparation	Rubber Tired Dozer	3	8	247	0.4	10	23,712	0.020461	485
	Crawler Tractor	4	8	212	0.43	10	29,171	0.022173	647
Grading	Excavators	2	8	158	0.38	30	28,819	0.019763	570
	Graders	1	8	187	0.41	30	18,401	0.021143	389
	Rubber Tired Dozers	1	8	247	0.4	30	23,712	0.020461	485
	Crawler Tractor	2	8	212	0.43	30	43,757	0.022173	970
	Scrapers	2	8	367	0.48	30	84,557	0.024983	2,112
Building Construction	Crane	1	7	231	0.29	300	140,679	0.014896	2,096
	Forklifts	3	8	89	0.2	300	128,160	0.019105	2,449
	Tractors/Loaders/Backhoes	3	7	97	0.37	300	226,107	0.023965	5,419
	Welders	1	8	46	0.45	300	49,680	0.023965	1,191
	Generator Set	1	8	84	0.74	300	149,184	0.023965	3,575
Paving	Pavers	2	8	130	0.42	20	17,472	0.021525	376
	Paving Equipment	2	8	132	0.36	20	15,206	0.018334	279
	Rollers	2	8	80	0.38	20	9,728	0.019412	189
Architectural Coating	Air Compressor	1	6	78	0.48	20	4,493	0.023965	108
								Total	**22,751**

Source: AQ 2020

Table E-2 shows that construction workers would use approximately 4,994 gallons of fuel to travel to and from the project site, and haul trucks and vendor trucks would use approximately 15,980 gallons of diesel fuel.

Table E-2: Estimated Construction Vehicle Trip Related Fuel Consumption

Trips	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	14,039	0
Vendor Trucks	1,940	0
Worker Vehicles	0	4,994
Total	**15,980**	**4,994**

Source: AQ 2020

This is in addition to the construction equipment fuel listed in Table E-1, which would result in a total of 38,731 gallons of diesel fuel and 4,994 gallons of gasoline fuel that would be used during construction of the proposed project.

[2] https://ww3.arb.ca.gov/msprog/offroadzone/pdfs/offroad_booklet.pdf

Overall, construction activities would comply with all existing regulations, and would therefore not be expected to use fuel in a wasteful, inefficient, and unnecessary manner. Thus, no impacts related to construction energy usage would occur.

Operation

Once operational, the project would generate demand for electricity, natural gas, as well as gasoline for motor vehicle trips. Operational use of energy includes the heating, cooling, and lighting of the residences, water heating, operation of electrical systems and plug-in appliances, and outdoor lighting, and the transport of electricity, natural gas, and water to the residences where they would be consumed. This use of energy is typical for urban development, no additional energy infrastructure would be required to be built to operate the project, and no operational activities would occur that would result in extraordinary energy consumption.

The proposed project would be required to meet the current Title 24 energy efficiency standards, which is included as PPP E-1. The City's administration of the Title 24 requirements includes review of design components and energy conservation measures that occurs during the permitting process, which ensures that all requirements are met. Typical Title 24 measures include insulation; use of energy-efficient heating, ventilation and air conditioning equipment (HVAC); solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water; and incorporation of skylights, etc. In complying with the Title 24 standards, impacts to peak energy usage periods would be minimized, and impacts on statewide and regional energy needs would be reduced. Thus, operation of the project would not use large amounts of energy or fuel in a wasteful manner, and no operational energy impacts would occur. As detailed in Table E-3, operation of the proposed project is estimated to result in the annual use of approximately 66,363 gallons of fuel, approximately 593,372 kilowatt-hour (kWh) of electricity, and approximately 1.91 million thousand British thermal units (kBTU) of natural gas.

Table E-3: Estimated Annual Operational Energy Consumption

Mobile	Annual Vehicle Miles Traveled: 2,370,107 1,000 Gallons of Gasoline: 66,363
Electricity	593,372 kWh
Natural Gas	1.91 million kBTU

Source: AQ 2020

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

No Impact. The proposed project would be required to meet the Calgreen energy efficiency standards in effect during permitting of the project, as included as PPP E-1. The City's administration of the requirements includes review of design components and energy conservation measures during the permitting process, which ensures that all requirements are met. In addition, the project would not conflict with or obstruct opportunities to use renewable energy, such as solar energy. As discussed, the project proposes to use photovoltaic (PV) solar panels on each of the residences to offset their energy demand in accordance with the existing Title 24 requirements (included as PPP E-1). As such, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would not occur.

Existing Plans, Programs, or Policies

PPP E-1. CalGreen Compliance: The project is required to comply with the CalGreen Building Code as included in the City's Municipal Code Section 18.28.010 to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.

PPP E-2: Idling Regulations. The project is required to comply with California Air Resources Board (CARB) Rule 2485 (13 CCR, Chapter 10 Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.

Mitigation Measures

None.

Sources

Air Quality, Greenhouse Gas, and Energy Impact Analysis. Prepared by Vince Mirabella (AQ 2020).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. 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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

The discussion below is based on the Phase 1 Cultural and Paleontological Resources Assessment, prepared by Material Culture Consulting, 2020 (MCC 2020), included as Appendix C; and the Geotechnical Evaluation prepared by LLG Geotechnical, Inc. (Geo 2019), included as Appendix D. The Geotechnical Evaluation evaluates the onsite geotechnical conditions and provides recommendations related to development of the site to reduce impacts related to seismic and

soils conditions. This includes review of geologic maps and various onsite soils and infiltration testing. Based on the mapping and testing results, site specific construction engineering was provided.

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?

No Impact. The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone. As described by the Geotechnical Evaluation (Geo 2019) prepared for the proposed project, there are no known active faults traversing the site. The closest known active faults are associated with the San Joaquin Hills Blind Thrust Fault (no surface trace), located approximately 1.3 miles from the site, the Newport-Inglewood Fault Zone approximately 2.3 miles from the site, the Puente Hills Fault Zone approximately 12.6 miles from the site, and the Elsinore Fault Zone approximately 17.5 miles from the site (Geo 2019). Thus, the proposed project would not expose people or structures to potential substantial adverse effects from rupture of a known earthquake fault that is delineated on an Alquist-Priolo Earthquake Fault Zoning Map, and impacts would not occur.

ii. Strong seismic ground shaking?

Less Than Significant Impact. The project site is located within a seismically active region of Southern California. As mentioned previously, San Joaquin Hills Blind Thrust Fault is located approximately 1.3 miles from the site, the Newport-Inglewood Fault Zone is approximately 2.3 miles from the site, the Puente Hills Fault Zone is approximately 12.6 miles from the site, and the Elsinore Fault Zone is approximately 17.5 miles from the site (Geo 2019). Thus, moderate to strong ground shaking can be expected at the site. The amount of motion can vary depending upon the distance to the fault, the magnitude of the earthquake, and the local geology. Greater movement can be expected at sites located closer to an earthquake epicenter, that consists of poorly consolidated material such as alluvium, and in response to an earthquake of great magnitude.

Structures built in the City are required to be built in compliance with the California Building Code (CBC [California Code of Regulations, Title 24, Part 2]), included in the Municipal Code as Chapter 18.26. In addition, PPP GEO-1 has been included to provide provisions for earthquake safety based on factors including occupancy type, the types of soils onsite, and the probable strength of the ground motion. Compliance with the CBC would include the incorporation of: 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structures so that it would withstand the effects of strong ground shaking. Because the proposed project would be constructed in compliance with the CBC, the proposed project would result in a less than significant impact related to strong seismic ground shaking.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant With Mitigation Incorporated. Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires "mobility" sufficient to permit both horizontal and vertical movements. Soil properties and soil conditions such as type, age, texture, color, and consistency, along with historical depths to ground water are used to identify, characterize, and correlate liquefaction susceptible soils.

Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. Lateral spreading is a form of seismic ground failure due to liquefaction in a subsurface layer.

According to the Geotechnical Evaluation (Geo 2019) for the proposed project, the site is located within a liquefaction hazard zone. The site contains isolated sandy layers susceptible to liquefaction interfingered with fine-grained non-liquefiable soils and very dense sands. In addition, the Geotechnical Evaluation identified groundwater at 9 feet below existing grade and a historic high groundwater elevation of 3 feet below existing grade.

The Geotechnical Evaluation identified that the project site has a liquefaction related settlement potential of 1.5-inches or less, which can be reduced by use of post-tensioned slab foundation systems. In addition, as described previously, structures built in the City are required to be built in compliance with the CBC, as included in the City's Municipal Code as Chapter 18.26 (and herein as PPP GEO-1), which implements specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. Compliance with the CBC, as included as PPP GEO-1 and Mitigation Measure GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of seismic ground movement, including liquefaction and settlement. Compliance with the requirements of the CBC and City's municipal code for structural safety (included as PPP GEO-1) would reduce hazards from seismic-related ground failure, including liquefaction and settlement to a less than significant level.

iv. Landslides?

No Impact. Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquakes induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

As described above, the project site is located in a seismically active region subject to strong ground shaking. However, the project site is flat and does not contain any hills or any other areas that could be subject to landslides. In addition, the site is located in a flat and developed area. Therefore, the project would not cause potential substantial adverse effects related to slope instability or seismically induced landslides.

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

Less Than Significant Impact. Construction of the project has the potential to contribute to soil erosion and the loss of topsoil. Grading and excavation activities that would be required for the proposed project would expose and loosen topsoil, which could be eroded by wind or water.

The City's Municipal Code Chapter 21.18.120 implements the requirements of the Orange County Municipal NDPES Storm Water Permit and all projects in the City are required to conform to the permit requirements. This includes installation of Best Management Practices (BMPs) in compliance with the NPDES permit, which establishes minimum stormwater management requirements and controls that are required to be implemented for the proposed project. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the Regional Water Quality Control Board (RWQCB) regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP is required to identify potential sources of erosion and sedimentation loss of topsoil during construction, identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags, stabilized construction entrance/exit, hydroseeding. With compliance with the City's Municipal Code, RWQCB requirements, and the BMPs in the SWPPP that is required to be prepared to implement the project included as PPP WQ-1, construction impacts related to erosion and loss of topsoil would be less than significant.

In addition, the proposed project includes installation of landscaping, such that during operation of the project substantial areas of loose topsoil that could erode would not exist. In addition, as described in Section 10, *Hydrology and Water Quality*, the onsite drainage features that would be installed by the project have been designed to slow, filter, and slowly discharge stormwater into the offsite drainage system, which would also reduce the potential for stormwater to erode topsoil during project operations. Furthermore, implementation of the project requires City approval of a site specific Water Quality Management Plan (WQMP), which would ensure that the City's Municipal Code, RWQCB requirements, and appropriate operational BMPs would be implemented to minimize or eliminate the potential for soil erosion or loss of topsoil to occur. As a result, potential impacts related to substantial soil erosion or loss of topsoil would be less than significant.

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

Less Than Significant With Mitigation Incorporated. As described above, the project site is flat, and does not contain nor is adjacent to any slope or hillside area. The project would not create slopes. Thus, on or off-site landslides would not occur from implementation of the project.

Lateral spreading, a phenomenon associated with seismically induced soil liquefaction, is a display of lateral displacement of soils due to inertial motion and lack of lateral support during or post liquefaction. It is typically exemplified by the formation of vertical cracks on the surface of liquefied soils, and usually takes place on gently sloping ground or level ground with nearby free surface such as drainage or stream channel.

According to the Geotechnical Evaluation the site's soils have a low potential to be susceptible to lateral spreading due to the presence of generally clayey alluvial soils, the relatively thin non-continuous liquefiable layers, and the generally high residual strength of soils (GEO 2019). Also, as described previously, compliance with the CBC, as included as PPP GEO-1 and Mitigation

Measure GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects related to ground movement, including lateral spreading. Thus, impacts would be less than significant with mitigation incorporated.

Differential settlement or subsidence could occur if buildings or other improvements are built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause building damage over time. Soils susceptible to seismically induced settlement typically include dry loose sands. The Geotechnical Evaluation testing results indicate that the total seismic settlement of the site is 1.5 inches or less, which can be mitigated using a post-tensioned slab. Thus, compliance with the CBC, as included as PPP GEO-1, would reduce potential impacts to a less than significant level.

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 With Mitigation Incorporated. Expansive soils contain certain types of clay minerals that shrink or well as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experiences, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

The Geotechnical Evaluation performed an evaluation of the potential for expansive soils at the site, which determined that site soils are anticipated to have a "Medium" expansion potential (GEO 2019). However, as described previously, compliance with the CBC, as included as PPP GEO-1 and Mitigation Measure GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects related to ground movement, including expansive soils. As described in the Geotechnical Evaluation, results of expansion testing at finish grades would be utilized to confirm final foundation design pursuant to the CBC regulations, included as PPP GEO-1 and Mitigation Measure GEO-1. Thus, impacts would be less than significant with mitigation incorporated.

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

No Impact. The project would not use septic tanks or alternative methods for disposal of wastewater into subsurface soils. Furthermore, the proposed project would connect to existing public wastewater infrastructure. Therefore, the project would not result in any impacts related to septic tanks or alternative wastewater disposal methods.

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

Less than Significant Impact with Mitigation Incorporated. The geologic units underlying the project site are mapped as Young Quaternary fan alluvium (Qyfsa) dating from the late Holocene to Pleistocene. These deposits typically do not contain significant vertebrate fossils within the uppermost layers; however, there are exposures of marine Quaternary Terrace deposits in the

small hills and bluffs to the east and west of the project site, as well as potential older Quaternary deposits at unknown depth, which have the potential to yield fossils.

The Phase 1 Cultural and Paleontological Resources Assessment prepared for the project included a locality search through the Natural History Museum of Los Angeles County (LACM) to identify any previously identified paleontological resources near the project site. The closest vertebrate fossil localities from the marine Quaternary Terrace sediments is located less than two miles northwest of the project site. Due to the potential that project excavation may encroach into Quaternary Terrace deposits and older Quaternary deposits, the Phase 1 Cultural and Paleontological Resources Assessment determined that the project site has a moderate sensitivity to contain paleontological resources. Therefore, Mitigation Measure PAL-1 has been included to require paleontological resource monitoring during project excavation or grading activities. In the event that paleontological resources are encountered, Mitigation Measure PAL-1 would require ground-disturbing activity within 50 feet of the area of the discovery to cease so that the paleontologist can examine the materials encountered, assess the nature and extent of the find, and recommend a course of action to further investigate and protect or recover and salvage those resources that have been encountered. With implementation of Mitigation Measure PAL-1, impacts to paleontological resources would be less than significant.

Existing Plans, Programs, or Policies

PPP GEO-1: **California Building Code.** Prior to issuance of any construction permits, the project is required to demonstrate compliance with the California Building Code as included in the City's Municipal Code Chapter 18.26 to preclude significant adverse effects associated with seismic hazards. California Building Code related and geologist and/or civil engineer specifications for the project are required to be incorporated into grading plans and specifications as a condition of construction permit approval.

PPP WQ-1: **NPDES/SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building and Safety Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

Mitigation Measures

Mitigation Measure GEO-1: Geotechnical Evaluation. The project proponent shall implement all recommendations in the approved Geotechnical Evaluation prepared by LLG Geotechnical, Inc. July 19, 2019 (Geotechnical Evaluation) during site preparation, grading, and construction. Compliance with the approved Geotechnical Evaluation shall be verified in the field by a qualified representative. The project proponent shall demonstrate to Building Department and/or Public Works Department staff that all or equivalent recommendations in the Geotechnical Evaluation or any updates to that report have been incorporated into the proposed project's design and grading plans.

Mitigation Measure PAL-1: Paleontological Resources. A paleontologist selected from the roll of qualified paleontologists maintained by the City or the County shall be retained to provide spot-

check monitoring services for the project. The paleontologist shall develop a Paleontological Resources Impact Mitigation Plan (PRIMP) to mitigate the potential impacts to unknown buried paleontological resources that may exist onsite. The PRIMP shall require that the paleontologist be present at the pre-grading conference to establish procedures for paleontological resource surveillance. The PRIMP shall require paleontological spot-check monitoring of excavation that exceeds depths of 5 feet. The PRIMP shall state that the project paleontologist shall re-evaluate the necessity for paleontological monitoring after 50 percent or greater of the excavations deeper than 5 feet have been completed.

In the event that paleontological resources are encountered, ground-disturbing activity within 50 feet of the area of the discovery shall cease. The paleontologist shall examine the materials encountered, assess the nature and extent of the find, and recommend a course of action to further investigate and protect or recover and salvage those resources that have been encountered.

Criteria for discard of specific fossil specimens will be made explicit. If a qualified paleontologist determines that impacts to a sample containing significant paleontological resources cannot be avoided by project planning, then recovery may be applied. Actions may include recovering a sample of the fossiliferous material prior to construction, monitoring work and halting construction if an important fossil needs to be recovered, and/or cleaning, identifying, and cataloging specimens for curation and research purposes. Recovery, salvage and treatment shall be done at the applicant's expense. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation by the paleontologist. Resources shall be identified and curated into an established accredited professional repository. The paleontologist shall have a repository agreement in hand prior to initiating recovery of the resource.

Sources

Geotechnical Evaluation, July 2019. LLG Geotechnical, Inc. (Geo 2019).

Phase 1 Cultural and Paleontological Resources Assessment. Prepared by Material Culture Consulting. 2020. (MCC 2020).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

The discussion below is based on the CalEEMod Summary Sheet prepared by Vince Mirabella (AQ 2020), included as Appendix A.

GHG Thresholds

The City of Fountain Valley has not adopted a numerical significance threshold to evaluate greenhouse gas (GHG) impacts. SCAQMD does not have approved thresholds; however, it does have draft thresholds that provides a tiered approach to evaluate GHG impacts, which includes the following:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and Commercial land use: 3,000 metric tons of carbon dioxide equivalent (MTCO2e) per year
    - Industrial land use: 10,000 MTCO2e per year
    - Based on land use type: residential: 3,500 MTCO2e per year; commercial: 1,400 MTCO2e per year; or mixed use: 3,000 MTCO2e per year

The SCAQMD's draft threshold uses the Executive Order S-3-05 year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 parts per million (ppm), thus stabilizing global climate. Therefore, for purposes of examining potential GHG impacts from implementation of the proposed project, and to provide a conservative analysis of potential impacts, the Tier 3 screening level for all land use projects of 3,000 MTCO2e was selected as the significance threshold (AQ 2020).

In addition, SCAQMD methodology for project's construction are to average them over 30-years and then add them to the project's operational emissions to determine if the project would exceed the screening values listed above (Urban 2020).

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

Less Than Significant Impact. Construction activities produce GHG emissions from various sources, such as site excavation, grading, utility engines, heavy-duty construction vehicles onsite, equipment hauling materials to and from the site, asphalt paving, building construction with installation of vapor barrier systems within Lots 36, 37, 38, 39, and 47, and motor vehicles transporting the construction crew.

In addition, operation of the proposed residences would result in area and indirect sources of operational GHG emissions that would primarily result from vehicle trips, electricity and natural gas consumption, water transport (the energy used to pump water), and solid waste generation. GHG emissions from electricity consumed by the residences would be generated off-site by fuel combustion at the electricity provider. GHG emissions from water transport are also indirect emissions resulting from the energy required to transport water from its source.

The estimated operational GHG emissions that would be generated from implementation of the proposed project were determined using the California Emissions Estimator Model (CalEEMod Version 2016.3.2) as detailed in Appendix A and shown in Table GHG-1. Additionally, in accordance with SCAQMD recommendation, the project's amortized construction related GHG emissions are added to the operational emissions estimate in order to determine the project's total annual GHG emissions.

Table GHG-1: Greenhouse Gas Emissions

Activity	Annual GHG Emissions ($MTCO_{2e}$)
Annual construction-related emissions amortized over 30 years	26
Area Source	1
Energy Source	292
Mobile Source (Passenger Car)	744
Waste	44
Water Usage	37
Total Project GHG Emissions	**1,145**
Significance Threshold	3,000
Exceed Threshold?	**No**

Source: AQ 2020.

As shown on Table GHG-1, the project would result in approximately 1,145 $MTCO_2e$ per year, which would be below the screening threshold of 3,000 MTCO2e per year. Therefore, impacts related to greenhouse gas emissions would be less than significant.

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

No Impact. The proposed project would redevelop the site with single-family residences that would comply with state programs that are designed to be energy efficient. The proposed project would comply with all mandatory measures under the California Title 24, California Energy Code, and the CALGreen Code, which would provide efficient energy and water consumption. The City's administration of the requirements includes review of the energy conservation measures during the permitting process, which ensures that all requirements are met. In addition, the project includes photovoltaic (PV) solar panels to offset the energy demand.

Also, as described in Section 17, *Transportation*, the proposed project would result in a less than significant vehicle miles traveled (VMT) impact because the project related vehicle miles traveled per service population (VMT/SP) is less than the VMT/SP for the City in both the project level and cumulative conditions; and therefore, is consistent with the regional Sustainable Communities Strategy.

In addition, the California Air Resources Board (CARB) Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 to reduce GHG emissions levels. The CARB Scoping Plan also reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. The proposed project would be consistent with the applicable measures established in the Scoping Plan, as shown in Table GHG-2. Therefore, the proposed project would not conflict with existing plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gas.

Table GHG-2: Project Consistency with CARB Scoping Plan

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	**Consistent.** The project area uses energy from Southern California Edison (SCE). SCE has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. The project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		**Consistent.** The new development implemented by the project would be designed and constructed to implement the energy efficiency measures. The project would not interfere with or obstruct policies or strategies to establish annual targets for statewide energy efficiency savings and demand reduction.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		**Consistent.** The new development would be designed and constructed to implement the Title 24 (CalGreen) Standards.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		

Action	Responsible Parties	Consistency
At least 1.5 million zero emission and plug-in hybrid light-duty EV by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2025 targets.
At least 4.2 million zero emission and plug-in hybrid light-duty EV by 2030.		**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2030 targets.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.
Medium- and Heavy-Duty GHG Phase 2.		**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB efforts improve transit-source emissions.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB efforts to improve last mile delivery emissions.
Further reduce vehicle miles traveled (VMT) through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		**Consistent.** The project would not obstruct or interfere with implementation of SB 375 and; would therefore, not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	**Consistent.** This is a CARB Mobile Source Strategy. The project would not obstruct or interfere with CARB efforts to Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).

Action	Responsible Parties	Consistency
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO-Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	**Consistent.** The project would not obstruct or interfere with agency efforts to harmonize transportation facility project performance with emissions reductions and increase competitiveness of transit and active transportation modes.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	**Consistent.** The project would not obstruct or interfere with agency efforts to develop pricing policies to support low-GHG transportation.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	**Consistent.** This measure would apply to all trucks accessing the project area, this may include existing trucks or new trucks that are part of the statewide goods movement sector. The project would not obstruct or interfere with agency efforts to Improve freight system efficiency.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		**Consistent.** The project would not obstruct or interfere with agency efforts to deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	**Consistent.** The project would not obstruct or interfere with agency efforts to adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030		

Action	Responsible Parties	Consistency
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	**Consistent.** These are not emission related to the proposed project. Hence, the proposed project would not obstruct or interfere agency efforts to reduce SLPS emissions.
50% reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA SWRCB, Local Air Districts	**Consistent.** The new development would be required through City permitting to implement waste reduction and recycling measures consistent with state and City requirements. The project would not obstruct or interfere agency efforts to support organic waste landfill reduction goals in the SLCP and SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	**Consistent.** The project is not applicable to implementation of Cap-and-Trade Program provisions. Thus, the project would not obstruct or interfere implementation the post-2020 Cap-and-Trade Program.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	**Consistent.** The project site is in an urban area and does not include, or adjacent to, conservation easements. Thus, the project would not obstruct or interfere agency efforts to protect land from conversion through conservation easements and other incentives.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		**Consistent.** The project provides for redevelopment within an urban area. The project would not obstruct or interfere agency efforts to increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		**Consistent.** Where appropriate, new development would incorporate wood or wood products. The project would not obstruct or interfere agency efforts to encourage use of wood and agricultural products to increase the amount of carbon stored in the natural and built environments.
Establish scenario projections to serve as the foundation for the Implementation Plan		**Consistent.** The project would not obstruct or interfere agency efforts to establish scenario projections to serve as the foundation for the Implementation Plan.

Action	Responsible Parties	Consistency
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	**Consistent.** The project would not obstruct or interfere agency efforts to establish a carbon accounting framework for natural and working lands as described in SB 859.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	**Consistent.** The project would not obstruct or interfere agency efforts to implement the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	**Consistent.** The project would not obstruct or interfere agency efforts to identify and expand funding and financing mechanisms to support GHG reductions across all sectors.

Existing Plans, Programs, or Policies

PPP E-1: CalGreen Compliance. As listed previously in Section 6, *Energy*.

Mitigation Measures

No mitigation measures related to greenhouse gas emissions are required.

Sources

Air Quality, Greenhouse Gas, and Energy Impact Analysis. Prepared by Vince Mirabella (AQ 2020).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

The discussion below is based on the Phase I and Phase II Environmental Site Assessment, August 2019 (Appendix E), and the Supplemental Phase II Environmental Site Assessment, January 2020 (Appendix F), both prepared by Leighton and Associates, Inc. The purpose of the Phase I Environmental Site Assessment was to identify any recognized environmental conditions (RECs), historical RECs (HRECs), or controlled RECs (CRECs) within the project site. The purpose of the Phase II Environmental Site Assessment was to assess the project site for the RECs that were identified during preparation of the Phase I ESA. The purpose of the Supplemental Phase II ESA was to collect soil, soil vapor, and groundwater samples to identify the presence of contaminants of concern (VOCs) associated with the offsite drycleaners and to identify the requirements in accordance with the DTSC Vapor Intrusion Guidance.

Existing Condition

The Phase I and II Environmental Site Assessment identified that a drycleaner located approximately 140 feet north of the site at 18583 Brookhurst Street is listed in the Geotracker database as a cleanup program site for volatile organic compounds (VOCs) and that the VOCs from this facility have migrated onsite in soil gas and groundwater to the northeast portion of the project site. The Phase II Environmental Site Assessment and Supplemental Phase II Environmental Site Assessment conducted soil gas testing and soils testing through soil borings throughout the site. In addition, groundwater was encountered at depths between 8.80 and 11.40 feet below ground surface (bgs) and was tested for VOCs.

The results of the soils gas testing identified that an area of the northeastern portion of the site has tetrachloroethene (PCE) at concentrations that exceed the Department of Toxic Substances Control screening level (DTSC-SL) of 0.46 micrograms per liter (µg/L) and trichloroethene (TCE) at concentrations that exceed the DTSC-SL of 0.48 µg/L.

The results of the soil boring testing identified a small area of the site (at the proposed sidewalk location adjacent to lot 13) where toxaphene (a chemical associated with former agricultural use) was detected at 2.5 feet bgs at a concentration of 680 micrograms per kilogram (µg/kg), exceeding the DTSC-SL of 450 µg/kg (sample B7 shown on Figure 4a of the Phase I and Phase II Environmental Site Assessment). However, the area where toxaphene exceeded the screening criteria appears to be limited laterally and vertically. It was identified at 2.5 feet bgs, but not detected at 5-feet bgs in the same location, and not detected in soils located 5 and 10 feet away.

The results of the groundwater testing identified the following VOCs:

- Cis-1,2-dichloroethene (cis-1,2-DCE) at concentrations of 13 µg/L and 120 µg/L that exceed the California Maximum Concentration Limit (MCL) of 6 µg/L;
- TCE was detected at concentrations of 12 µg/L that exceed the MCL of 5 µg/L;
- Vinyl Chloride was detected at concentrations of 1.5 µg/L that exceed the MCL of 0.5 µg/L.
- Benzene was detected at concentrations of 1.7 µg/L and 2.7 µg/L, which exceed the MCL of 1.0 µg/L.

As described in the Supplemental Phase II Environmental Site Assessment, a Human Health Risk Assessment was conducted to determine if these detected soils, soils vapor, and groundwater chemicals would result in health risks related to human contact. A cancer risk of one in a million translates to a negligible risk of developing cancer and is widely considered as an acceptable risk level. A cancer risk exceeding one in a million indicates that additional assessment or mitigation may be warranted.

The risk assessment results for soil (using the 95% Upper Confidence Limit (UCL) dataset) determined that the risk related to the detected chemicals in soil is 1 in a million on the project site. The grading that would occur before residences are built warrants the use of the 95% UCL dataset. Therefore, the soil does not pose a significant health risk.

In addition, the maximum cancer risk associated with vapor intrusion from soil vapor and groundwater in the northeast portion of the site at lots 36, 37, 38, 39, and 47 was calculated to be 40 in a million, which indicates elevated health risks.

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 with Mitigation Incorporated. A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that regulatory agencies have a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the home, workplace, or environment. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment.

Construction
The proposed construction activities would involve the routine transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking during construction activities. In addition, hazardous materials would routinely be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state regulations that are implemented by the City during building permitting for construction activities. Construction of the project would not require the use of acutely hazardous materials. As such, impacts to surrounding residential neighborhoods through the routine transport, use, or disposal of hazardous materials is not expected. A detailed discussion of construction related traffic is included in Section 17, *Transportation*. Therefore, impacts related to use of these materials during construction would be less than significant.

Contaminated Soils. As described previously, the Phase I and Phase II Environmental Site Assessment detected toxaphene within a limited area at a concentration that results in an acceptable health risk of 1 in a million. The area where toxaphene exceeded the screening criteria is limited laterally (less than 5 feet in width) and vertically (less than 5 feet in depth), and is within an area that would be graded as part of project construction. As the soils that contain toxaphene are limited and would be graded as part of the project, and because risks related to contact with these soils are 1 in a million, potential impacts would be less than significant.

Also, in the case that currently unknown areas of contaminated soils are uncovered during excavation and grading activities, existing federal and state regulations related to hazardous materials and construction include procedures to follow. Excavated soil containing hazardous substances and hazardous building materials would be classified as a hazardous waste if they exhibit the characteristics of ignitability, corrosivity, reactivity, or toxicity (CCR, Title 22, Division 4.5, Chapter 11, Article 3). State and federal regulations related to hazardous materials include, but are not limited to, the federal Resource Conservation and Recovery Act, the Occupational Safety and Health Act that is implemented by California Division of Occupational Safety and Health (OSHA), and the Hazardous Materials Transportation Act. Additionally, the California Integrated Waste Management Board and the RWQCB specifically address management of hazardous materials and waste handling in their adopted regulations (CCR, Title 14 and CCR, Title 27). Thus, with implementation of existing regulations, impacts related to upset or accident conditions involving the release of contaminated soils into the environment would be less than significant.

Contaminated Groundwater. As described previously, the results of groundwater testing identified the following VOC at concentrations that exceed the MCL: Cis-1,2-DCE; Trichloroethene; Vinyl

Chloride; and Benzene in the northeast portion of the project site. However, groundwater is located at depths between 8.80 and 11.40 feet bgs. The proposed project would result in excavations and grading that are a minimum depth of 5 feet below existing grade or 3 feet below the base of the foundations, whichever is deeper. Because groundwater is between 8.80 and 11.40 feet bgs it is not anticipated that excavation and grading will encroach into groundwater that could be contaminated, except for, perhaps, utility installation in the vicinity of the northeast portion of the site. However, in the event that groundwater is encountered during excavation and grading activities in the northeast portion of the project site, Mitigation Measure HAZ-1 would require groundwater testing, DTSC notification, and appropriate treatment and/or disposal that would reduce potential impacts related to contaminated groundwater. With implementation of Mitigation Measure HAZ-1, potential impacts related to contaminated groundwater would be less than significant.

Operation
The project involves operation of 74 new single-family residences and a park facility, which involve routinely using hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the project. Therefore, operation of the project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

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.

Construction
Accidental Releases. While the routine use, storage, transport, and disposal of hazardous materials in accordance with applicable regulations during construction activities would not pose health risks or result in significant impacts; improper use, storage, transportation and disposal of hazardous materials and wastes could result in accidental spills or releases, posing health risks to workers, the public, and the environment. To avoid an impact related to an accidental release, the use of best management practices (BMPs) during construction are implemented as part of a Stormwater Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System General Construction Permit (and included as PPP WQ-1). Implementation of an SWPPP would minimize potential adverse effects to workers, the public, and the environment. Construction contract specifications would include strict on-site handling rules and BMPs that include, but are not limited to:

- Establishing a dedicated area for fuel storage and refueling and construction dewatering activities that includes secondary containment protection measures and spill control supplies;
- Following manufacturers' recommendations on the use, storage, and disposal of chemical products used in construction;
- Avoiding overtopping construction equipment fuel tanks;
- Properly containing and removing grease and oils during routine maintenance of equipment; and

- Properly disposing of discarded containers of fuels and other chemicals.

Contaminated Soils. As described previously, the Phase I and Phase II Environmental Site Assessment detected toxaphene within a limited area at a concentration that results in an acceptable health risk of 1 in a million. The soils that contain toxaphene would be graded as part of the project and because the risks related to contact with these soils are 1 in a million, impacts would be less than significant. Also, in the case that previously unknown hazardous materials are uncovered during construction activities. state and federal regulations related to hazardous materials would reduce impacts related to the release of soil contamination into the environment to a less than significant level.

Contaminated Groundwater. As described previously, in the event that groundwater is encountered in the northeast portion of the project site during excavation and grading activities, Mitigation Measure HAZ-1 would require groundwater testing, DTSC notification, and appropriate treatment and/or disposal that would reduce potential impacts related to contaminated groundwater. With implementation of Mitigation Measure HAZ-1, potential impacts related to release of contaminated groundwater into the environment would be less than significant.

Asbestos Containing Materials. The existing school was constructed before 1971 when many structures were constructed with what are now recognized as hazardous building materials, such as lead and asbestos. Demolition of these structures could result in the release of hazardous materials. However, asbestos abatement contractors must follow state regulations contained in California Code of Regulations Sections 1529, and 341.6 through 341.14 as implemented by SCAQMD Rule 1403 to ensure that asbestos removed during demolition or redevelopment of the existing buildings is transported and disposed of at an appropriate facility. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition permit until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. These requirements are included as PPP HAZ-2 to ensure that the project applicant submits verification to the City that the appropriate activities related to asbestos have occurred, which would reduce the potential of impacts related to asbestos to a less than significant level.

Lead Based Materials. Lead-based materials may also be located within the existing school structures. The lead exposure guidelines provided by the U.S. Department of Housing and Urban Development provide regulations related to the handling and disposal of lead-based products. Federal regulations to manage and control exposure to lead-based paint are described in Code of Federal Regulations Title 29, Section 1926.62, and state regulations related to lead are provided in the California Code of Regulations Title 8 Section 1532.1, as implemented by Cal-OSHA. These regulations cover the demolition, removal, cleanup, transportation, storage and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, monitoring and compliance to ensure the safety of construction workers exposed to lead-based materials. Cal/OSHA's Lead in Construction Standard requires project applicants to develop and implement a lead compliance plan when lead-based paint would be disturbed during construction or demolition activities. The plan must describe activities that could emit lead, methods for complying with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. In addition, Cal/OSHA requires 24-hour notification if more than 100 square feet of lead-based paint would be disturbed. These requirements are included as PPP HAZ-3 to ensure that the project applicant submits verification to

the City that the appropriate activities related to lead have occurred, which would reduce the potential of impacts related to lead-based materials to a less than significant level.

Operation

As described previously, the results of the soils gas testing identified that an area of the northeastern portion of the site (at proposed Lots 36, 37, 38, 39, and 47) has PCE and TCE at concentrations that exceed the DTSC screening level limits and result in a slightly elevated cancer risk. These VOC vapors in the site soils have the potential to migrate up through the ground surface and enter buildings through cracks in the foundation or utility pipes. The investigation results were documented in Report of Findings (ROF) dated January 14, 2020. DTSC reviewed the Phase I, Phase II and Supplemental Phase II and approved a Report of Findings (ROF) on January 31, 2020. Based on the ROF, DTSC determined that a response action (RA) is necessary at the site to reduce the potential subsurface vapor accumulation below the proposed residential structures. Therefore, the project includes installation of vapor barrier systems be installed within Lots 36, 37, 38, 39, and 47.

The vapor barrier system would include a physical barrier under the foundations and a passive venting system. Mitigation Measure HAZ-2 has been included to ensure that the proposed vapor barrier system be prepared by a registered hazardous waste professional and approved by DTSC. Mitigation Measure HAZ-2 also includes establishment of a long-term soil gas and groundwater monitoring program in the northeastern portion of the site pursuant to the DTSC Operation, Maintenance, and Monitoring (OM&M) Manual to ensure that the hazardous substances are not migrating toward the project site. Monitoring would be required to continue until it can be adequately demonstrated that natural attenuation of the substances is occurring. DTSC reviewed and concurred that the proposed RA would not have a significant effect on the environment and is adequate for public comment. The RA would undergo a separate formal 30-day public comment period as required by DTSC. After the formal public comment period ends, DTSC will consider all comments received prior to approving the RA. The Final RA would be implemented after it is approved by DTSC and would be verified by the City though Mitigation Measure HAZ-1 and HAZ-2. With implementation of these mitigation measures, impacts related to VOC vapors would be less than significant.

Other operational aspects of the proposed single-family residential project involve use and storage of common hazardous materials such as paints, solvents, cleaning products, fuels, lubricants, adhesives, sealers, and pesticides/herbicides. Normal routine use of typical residential products pursuant to existing regulations would not result in a significant hazard to the environment, residents, or workers in the vicinity of the project.

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

Less Than Significant Impact. The project site is an existing school facility. However, it is vacant, and no students or school faculty are onsite that could be impacted. The closest operational school is the Robert Gisler Elementary School, which is approximately 1.1 miles from the project site at 18720 Las Flores Street. Thus, the proposed project would not be within 0.25 mile of a school.

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?

Less than Significant Impact. According to the Phase I and Phase II Environmental Site Assessment, which included a database search of local, regional, state, and federal databases related to hazardous materials, which determined that the project site is not identified as a hazardous materials site. As described previously, a drycleaner located approximately 140 feet north of the site at 18583 Brookhurst Street is listed in the Geotracker database as a cleanup program site for VOCs and that the VOCs from this facility have migrated onsite in soil gas and groundwater to the northeast portion of the project site. As a result, the site is identified as a voluntary cleanup site and is under the regulatory oversight of the DTSC. In addition, mitigation has been included to reduce potential impacts from the VOCs to a less than significant impact. However, the project itself is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, impacts would be less than significant.

e) For a project 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?

No Impact. The proposed project is not within an airport land use plan and is not within 2 miles of an airport. The closest airport to the project site is John Wayne Airport, which is located 5 miles east of the project site. Therefore, the proposed 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.

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

Less Than Significant Impact. The proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan.

Construction
Short-term construction activities would occur within the project site and would not restrict access of emergency vehicles to the project site or adjacent areas. In addition, travel along surrounding roadways would remain open and would not interfere with emergency access in the site vicinity. Any temporary lane closures needed for utility connections to Finch Avenue or driveway access construction would be implemented consistent with the recommendations of the Work Area Traffic Control Handbook (Public Works Standards, Inc. 2019), as incorporated into the construction permits. In addition, Finch Avenue is a dead-end street that only provides access to the project site. Thus, impacts related to an emergency response or evacuation plan during construction would be less than significant.

Operation
Direct access to the project site would be provided from Finch Avenue by two driveways. The project is required to provide internal streets and fire suppression facilities (e.g., hydrants and sprinklers) that conform to the California Fire Code requirements, included as Municipal Code Chapter 17.12.020 and 17.02.020, as verified through the City's permitting process. As such, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant.

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

No Impact. The project site is within an urbanized residential area of the City of Fountain Valley. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas. According to the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. As a result, the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Existing Plans, Programs, or Policies

PPP WQ-1: NPDES/SWPPP. As listed below in Section 10, *Hydrology and Water Quality*.

PPP HAZ-1: Fire Code. The project shall conform to the California Fire Code, as included in the City's Municipal Code in Chapter 17.101.

PPP HAZ-2: SCAQMD Rule 1403. Prior to issuance of demolition permits, the project applicant shall submit verification to the City Building and Safety Division that an asbestos survey has been conducted on the structures proposed for demolition. If asbestos is found, the Project applicant shall follow all procedural requirements and regulations of South Coast Air Quality Management District Rule 1403. Rule 1403 regulations require that the following actions be taken: notification of SCAQMD prior to construction activity, asbestos removal in accordance with prescribed procedures, placement of collected asbestos in leak-tight containers or wrapping, and proper disposal.

PPP HAZ-3: Lead. Prior to issuance of demolition permits, the project applicant shall submit verification to the City Building and Safety Division that a lead-based paint survey has been conducted on the structures proposed for demolition. If lead-based paint is found, the project applicant shall follow all procedural requirements and regulations for proper removal and disposal of the lead-based paint. Cal-OSHA has established limits of exposure to lead contained in dusts and fumes. Specifically, CCR Title 8, Section 1532.1 provides for exposure limits, exposure monitoring, and respiratory protection, and mandates good working practices by workers exposed to lead.

Mitigation Measures

Mitigation Measure HAZ-1: Groundwater. The project construction specifications and grading permit for the proposed project shall specify that should groundwater be encountered during excavation, grading, or other construction activities in the northeast portion of the project site at Lots 36, 37, 38, 39, and 47, it shall be tested by a registered hazardous waste professional to determine if the groundwater contains contamination, and if so, the appropriate method of treatment and/or disposal pursuant to the DTSC requirements. The City and the DTSC shall be notified by the project contractor immediately if discolored or odorous groundwater is encountered. When not under active construction or related activities, any open trenches containing contaminated water shall be covered to prevent human contact with contamination. Appropriate notices shall be posted at the project site to warn construction personnel and public of the presence of contaminated groundwater.

Mitigation Measure HAZ-2: Vapor Barrier Systems. The project construction plans, specifications, and building permits shall require vapor barrier systems be installed within Lots 36, 37, 38, 39, and 47, pursuant to California Department of Toxic Substances Control (DTSC) regulations. The vapor barrier system shall include a physical barrier under the foundations and a passive venting system for each of the identified lots. The vapor intrusion mitigation plan, reports, and other documents shall be prepared by a registered hazardous waste professional and submitted to DTSC

for review and approval. Also, a long-term soils gas monitoring program shall be implemented by a registered hazardous waste professional pursuant to the DTSC Vapor Intrusion Mitigation Advisory, 2011. Additionally, regularly scheduled groundwater testing shall occur at a frequency determined by DTSC Vapor Intrusion Mitigation Advisory by a registered hazardous waste professional pursuant to DTSC regulations and be sent to DTSC for review and approval. The soils gas monitoring and groundwater testing shall continue until it can be adequately demonstrated that natural attenuation of the substances, and reduction of onsite contamination, is occurring, and pursuant to DTSC approval. All DTSC approvals, results of any monitoring/testing, and any final closures shall be provided to the City prior to receipt of applicable permits.

Sources

California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Map. Accessed: https://forestwatch.maps.arcgis.com/apps/Styler/index.html?appid=5e96315793d445419b6c96f89ce5d153

California Department of Toxic Substances Control (DTSC) Vapor Intrusion Mitigation Advisory, 2011. Accessed: https://dtsc.ca.gov/wp-content/uploads/sites/31/2016/01/VIMA_Final_Oct_20111.pdf

Phase I and Phase II Environmental Site Assessment, August 2019, prepared by Leighton and Associates, Inc.

Supplemental Phase II Environmental Site Assessment, January 2020, prepared by Leighton and Associates, Inc.

Work Area Traffic Control Handbook (Public Works Standards, Inc. 2019), prepared by Public Works Standards, Inc. Accessed: http://www.watchbook.org/

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
10. 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?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
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 substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
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	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

The discussion below is based on the Preliminary Hydrology Study and the Preliminary Water Quality Management Plan, prepared by Fuscoe Engineering, Inc., included as Appendix G and Appendix H.

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

Less Than Significant Impact.

Construction

Implementation of the proposed project includes demolition of the existing structures and crushing the existing pavement, site preparation, construction of new buildings, installation of vapor barrier systems within Lots 36, 37, 38, 39, and 47, and infrastructure improvements. Demolition of existing structures, crushing the existing pavement, grading, stockpiling of materials, excavation, construction of new structures, and landscaping activities would expose and loosen sediment and building materials, which would have the potential to mix with stormwater and urban runoff and degrade surface and receiving water quality. In addition, the project includes removal of existing drainage systems, filling storm drain connections and developing new connections in the Orange County flood control channel.

Additionally, construction generally requires the use of heavy equipment and construction-related materials and chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality.

Pollutants of concern during construction activities generally include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction, which would have the potential to be transported via storm runoff into nearby receiving waters and eventually may affect surface or groundwater quality. During construction activities, excavated soil would be exposed, thereby increasing the potential for soil erosion and sedimentation to occur compared to existing conditions. In addition, during construction, vehicles and equipment are prone to tracking soil and/or spoil from work areas to paved roadways, which is another form of erosion that could affect water quality.

However, the use of BMPs during construction implemented as part of a SWPPP as required by the NPDES General Construction Permit and included as PPP WQ-1 would serve to ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant. Furthermore, an Erosion and Sediment Transport Control Plan prepared by a qualified SWPPP developer (QSD) is required to be included in the SWPPP for the project, and typically includes the following types of erosion control methods that are designed to minimize potential pollutants entering stormwater during construction:

- Prompt revegetation of proposed landscaped areas;
- Perimeter gravel bags or silt fences to prevent off-site transport of sediment;
- Storm drain inlet protection (filter fabric gravel bags and straw wattles), with gravel bag check dams within paved roadways;
- Regular sprinkling of exposed soils to control dust during construction and soil binders for forecasted wind storms;
- Specifications for construction waste handling and disposal;
- Contained equipment wash-out and vehicle maintenance areas;
- Erosion control measures including soil binders, hydro mulch, geotextiles, and hydro seeding of disturbed areas ahead of forecasted storms;

- Construction of stabilized construction entry/exits to prevent trucks from tracking sediment on City roadways;
- Construction timing to minimize soil exposure to storm events; and
- Training of subcontractors on general site housekeeping.

Therefore, compliance with the Statewide General Construction Activity Stormwater Permit requirements, included as PPP WQ-1, which would be verified during the City's construction permitting process, would ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant.

Operation

The proposed project includes operation of single-family residential and park uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into surface waters, it could result in degradation of water quality.

However, operation of the proposed project would be required to comply with the requirements of the Santa Ana Regional MS4 Permit and County of Orange Drainage Area Management Plan (DAMP) to develop of a project-specific WQMP (included as PPP WQ-2) that would describe implementation of low-impact development (LID) infrastructure and non-structural, structural, and source control and treatment control BMPs to protect surface water quality.

The DAMP regulations are included in the City's Municipal Code in Section14.40.040 and are the implementation method for National Pollution Discharge Elimination System (NPDES) Stormwater Permit compliance (included in the Municipal Code as Section 21.18.120). The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects (or priority projects), such as the proposed project, develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. A Preliminary WQMP has been developed (included as Appendix H) per these requirements and recommends various BMPs to be incorporated into the project. The WQMP is required to be approved prior to the issuance of a building or grading permit.

The proposed project would install five modular wetland units and catch basins for water quality treatment, which have been sized to treat runoff from the Design Capture Storm (85th percentile, 24-hour) from the project site. The modular wetland units are devices that are manufactured to

mimic natural systems such as bioretention areas by incorporating plants, soil, and microbes engineered to provide treatment at higher flow rates or volumes and with smaller footprints than their natural counterparts. From the modular wetland units, treated flows would be conveyed to the new storm drains and then to the adjacent Orange County flood control channel. In addition, a portion of the treated flows would be conveyed to an underground cistern in the proposed park to be used for park irrigation.

As described previously, the WQMP is required to be approved prior to the issuance of a building or grading permit. The project's WQMP would be reviewed and approved by the City to ensure it complies with the Santa Ana RWQCB MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing regulations (included as PPP WQ-2) would ensure that operation of the proposed project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality; and impacts would be less than significant.

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 City's Urban Water Management Plan describes that the City relies on 63 percent groundwater, 24 percent imported water, and 13 percent recycled water. The groundwater is managed by the Orange County Water District (OCWD). The OCWD manages basin water supply through the Basin Production Percentage (BPP), which is set based on groundwater conditions, availability of imported supplies, and precipitation. As detailed on Table WQ-1, the City's Urban Water Management Plan (UWMP) shows that the anticipated production of groundwater would increase by 715 acre-feet between 2020 and 2040. In 2040, groundwater would provide 70 percent of the City's water supply.

Table WQ-1: City of Fountain Valley Projected Water Supply Projections (acre-feet)

Source	2020	2025	2030	2035	2040	2040 Percentage
OC Groundwater Basin	7,545	8,219	8,260	8,260	8,260	70.0%
Imported/Purchased	1,733	2,022	2,040	2,040	2,040	17.3%
Recycled	1,500	1,500	1,500	1,500	1,500	12.7%
Total	**10,778**	**11,741**	**11,800**	**11,800**	**11,800**	**100%**

Source: 2015 UWMP.

As detailed in Section 19, *Utilities and Service Systems*, the supply of water listed in Table WQ-1 would be sufficient during both normal years and multiple dry year conditions between 2020 and 2040 to meet all of the City's estimated needs, including the proposed project. Therefore, the project would not result in changes to the projected groundwater pumping that would decrease groundwater supplies. Thus, impacts related to groundwater supplies would be less than significant.

The project site currently consists of 38 percent impervious surfaces (62 percent pervious). After completion of project construction, the site would be 56 percent impervious and 44 percent pervious (WQMP 2020), which is an increase of 18 percent pervious surface area. The project would convey stormwater drainage into landscaping areas modular wetland units, which would infiltrate into soils and groundwater that occurs onsite. Also, as further described in the response below, a portion of treated stormwater would be conveyed to an underground cistern in the proposed park to be used

for irrigating the park area. This would assist in reduction of groundwater demand and provide infiltration of stormwater. As detailed below in Table WQ-2, the project related runoff conditions (flow rates and durations) would decrease by a total of 1.8 cfs from predevelopment conditions. Therefore, impacts related to interference with groundwater recharge would be less than significant.

Table WQ-2: Project Change in Hydrological Condition

Sub Area	Stormwater Flows Q10 (cfs)	Time of Concentration (Tc) Minutes
Existing Condition		
A	5.5 (onsite)	11.9
B	20.9 (total) 12.2 (onsite) 8.7 (offsite)	14.1
C	4.2 (onsite)	14.9
D	1.6 (offsite)	14.6
Total	**32.2 (total)** **23.5 (onsite)**	
Proposed Condition		
A	8.8 (onsite)	12.8
B	21.6 (total) 12.9 (onsite) 8.7 (offsite)	13.4
Total	**30.4 (total)** **21.7 (onsite)**	

Source: Preliminary Hydrology Report, Appendix G.

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 substantial erosion or siltation on- or off-site;

Less Than Significant Impact. The project site does not include, and is not adjacent to, a natural stream or river. However, the site is adjacent to a concrete lined flood control channel. Implementation of the project would not alter the course of a stream or river.

Construction.
Construction of the proposed project would require demolition of the existing building structures, including foundations and floor slabs, and crushing the existing pavement that would expose and loosen building materials and sediment, which has the potential to mix with storm water runoff and result in erosion or siltation off-site. However, the project site does not include any slopes, which reduces the erosion potential, and the large majority of soil disturbance would be related to excavation and backfill for installation of building foundations and underground utilities.

The NPDES Construction General Permit and Orange County DAMP require preparation and implementation of a SWPPP by a Qualified SWPPP Developer for the proposed construction activities (included as PPP WQ-1). The SWPPP is required to address site-specific conditions related to potential sources of sedimentation and erosion and would list the required BMPs that are necessary to reduce or eliminate the potential of erosion or alteration of a drainage pattern during construction activities.

In addition, a Qualified SWPPP Practitioner (QSP) is required to ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The SWPPP would be amended and BMPs revised, as determined necessary through field inspections, in order to protect against substantial soil erosion, the loss of topsoil, or alteration of the drainage pattern. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) would prevent construction-related impacts related to potential alteration of a drainage pattern or erosion from development activities. With implementation of the existing construction regulations that would be verified by the City during the permitting approval process, impacts related to alteration of an existing drainage pattern during construction that could result in substantial erosion, siltation, and increases in stormwater runoff would be less than significant.

Operation.
The project site currently consists of 38 percent impervious surfaces (62 percent pervious). After completion of project construction, the site would be 56 percent impervious and 44 percent pervious (WQMP 2020), which is an increase of 18 percent pervious surface area. The impervious areas would not be subject to erosion and the pervious areas would be landscaped with groundcovers that would inhibit erosion.

The proposed project would maintain the existing drainage pattern. The runoff from the project area would be collected by roof drains, surface flow designed pavement, curbs, and area drains and conveyed to either landscaping areas or one of five modular wetland units or catch basins (described previously) for treatment. From the modular wetland units and catch basins treated flows would be conveyed by new onsite drainage system to either to a new 36-inch storm drain that would connect to the County concrete lined flood control channel at the southeastern portion of the project site (between proposed Lots 22 and 23), or a new 18-inch storm drain connection to the flood control channel at the southwestern portion of the site (at proposed Lot 10). The new 36-inch drain would be realigned but would continue to collect drainage from Finch Avenue and the eastern portions of the project site. In addition, a portion of the treated flows would be conveyed to an underground cistern in the proposed park to be used for park irrigation.

As shown previously on Table WQ-2, the project related runoff conditions (flow rates and durations) would decrease by a total of 1.8 cfs from predevelopment conditions although the impervious surface area would increase by 18 percent because areas of landscaping, modular wetland units, and catch basins would be installed that have been designed to accommodate the increased volume.

The modular wetland units contain a settling chamber for separating out larger solids and a media filter cartridge for capturing fine silts, which would reduce onsite soils being eroded to offsite locations. Additionally, the MS4 permit and DAMP require new development projects to prepare a WQMP (included as PPP WQ-2) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. The Preliminary WQMP has been completed and is included as Appendix H. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for erosion and siltation. Overall, the proposed drainage system and adherence to the existing regulations would ensure that project impacts related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

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. The project site does not include, and is not adjacent to, a natural stream or river. However, the site is adjacent to a concrete lined flood control channel. Implementation of the project would not alter the course of a stream or river.

Construction

Construction of the proposed project would require demolition of the existing building structures, including foundations, floor slabs, and utilities systems, and crushing the existing pavement. These activities could temporarily alter the existing drainage pattern of the site and change runoff flow rates. However, as described previously, implementation of the project requires a SWPPP (included as PPP WQ-1) that would address site specific drainage issues related to construction of the project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to potential alteration of a drainage pattern or flooding on or off-site from development activities. Therefore, construction impacts would be less than significant.

Operation

As described previously, the proposed project would result in an increase of impervious surfaces. However, the project would maintain the existing drainage pattern and convey runoff to landscaped areas or to a modular wetland unit or catch basin for treatment and retention that have been designed to accommodate the stormwater volume pursuant to the MS4 permit and DAMP requirements. From the modular wetland units and catch basins treated flows would be conveyed by new onsite drainage system to either to a new 36-inch storm drain that would connect to the County concrete lined flood control channel at the southeastern portion of the project site (between proposed Lots 22 and 23), or a new 18-inch storm drain connection to the flood control channel at the southwestern portion of the site (at proposed Lot 10). In addition, a portion of the treated flows would be conveyed to an underground cistern in the proposed park to be used for park irrigation. As detailed previously in Table WQ-2 the project related runoff conditions (flow rates and durations) would decrease by a total of 1.8 cfs from predevelopment conditions. As stormwater flow conditions would be reduced with implementation of the project, an increase in the rate or amount of surface runoff in a manner which would result in flooding on- or offsite would not occur.

As part of the permitting approval process, the proposed drainage design and engineering plans would be reviewed by the City's Engineering Division to ensure that the proposed drainage would accommodate the appropriate design flows. Overall, the proposed drainage system and adherence to the existing MS4 permit and DAMP regulations would ensure that project impacts related to alteration of a drainage pattern or flooding from operational activities would be less than significant.

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

Less Than Significant Impact.
As described previously, the project site does not include, and is not adjacent to, a natural stream or river. However, the site is adjacent to concrete lined flood control channel. Implementation of the project would not alter the course of a stream or river.

Construction
As described in the previous response, construction of the proposed project would require demolition, concrete crushing, and excavation activities that could temporarily alter the existing drainage pattern of the site and could result in increased runoff and polluted runoff if drainage is not properly controlled. However, implementation of the project requires a SWPPP (included as PPP WQ-1) that would address site specific pollutant and drainage issues related to construction of the project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.

Operation
As described previously, the proposed project would result in an increase of impervious surfaces. However, the project would manage stormwater flows with landscaping, five modular wetland units, and catch basins that have been designed to accommodate the stormwater volume pursuant to the MS4 permit and DAMP requirements. The units would retain, filter, treat, and slowly discharge runoff into either a cistern for irrigating the park or into the existing off-site County flood control channel. The new 36-inch drain would be realigned but would continue to collect drainage from Finch Avenue and the eastern portions of the project site; and as detailed previously in Table WQ-2 the project related runoff conditions (flow rates and durations) would decrease by a total of 1.8 cfs from predevelopment conditions. As stormwater flow conditions would be reduced with implementation of the project, an increase in runoff that could exceed the capacity of storm drain systems and provide polluted runoff would not occur.

As part of the permitting approval process, the proposed drainage design and engineering plans would be reviewed by the City's Engineering Division to ensure that the proposed drainage would accommodate the appropriate design flows. Additionally, the City permitting process would ensure that the drainage system specifications adhere to the existing MS4 permit and DAMP regulations, which would ensure that pollutants are removed prior to discharge. Overall, with compliance to the existing regulations as verified by the City's permitting process, project impacts related to the capacity of the drainage system and polluted runoff would be less than significant.

iv. impede or redirect flood flows?

Less Than Significant Impact. According to the Federal Emergency Management Agency (FEMA) Map 06059C0254J, the project site not within a flood zone (FEMA 2020). As detailed in the previous responses, implementation of the project would result in an 18 percent increase of impermeable surfaces on the site. However, the project would maintain the existing drainage pattern; and drainage would be accommodated by onsite landscaping, modular wetland units, and catch basins (as detailed in Table WQ-2) that have been sized to accommodate the DAMP required design storm. Therefore, the project would not result in impeding or redirecting flood

flows by the addition of the impervious surfaces. As detailed previously, the City's permitting process would ensure that the drainage system specifications adhere to the existing MS4 permit and DAMP regulations, and compliance with existing regulations would ensure that impacts would be less than significant.

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

No Impact. According to the Federal Emergency Management Agency (FEMA) Map 06059C0254J, the project site not within a flood zone (FEMA 2020). Thus, the project site is not located within a flood hazard area that could be inundated with flood flows and result in release of pollutants. Impacts related to flood hazards and pollutants would not occur from the project.

Tsunamis are generated ocean wave trains generally caused by tectonic displacement of the sea floor associated with shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. The proposed project is approximately 3.6 miles from the ocean shoreline. Based on the distance of the project site to the Pacific Ocean, the project site is not at risk of inundation from tsunami. Therefore, the proposed project would not risk release of pollutants from inundation from a tsunami. No impact would occur, and no mitigation is required.

Seiching is a phenomenon that occurs when seismic ground shaking induces standing waves (seiches) inside water retention facilities (e.g., reservoirs and lakes). Such waves can cause retention structures to fail and flood downstream properties. The project site is not located adjacent to any water retention facilities. For this reason, the project site is not at risk of inundation from seiche waves. Therefore, the proposed project would not risk release of pollutants from inundation from seiche. No impact would occur, and no mitigation is required.

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

Less Than Significant Impact. As described previously, use of BMPs during construction implemented as part of a SWPPP as required by the NPDES Construction General Permit and PPP WQ-1 would serve to ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant. Thus, construction of the project would not conflict or obstruct implementation of a water quality control plan.

Also, as described previously, new development projects are required to implement a WQMP (per PP WQ-2) that would comply with the Orange County DAMP. The WQMP and applicable BMPs are verified as part of the City's permitting approval process, and construction plans would be required to demonstrate compliance with these regulations. Therefore, operation of the proposed project would not conflict with or obstruct implementation of a water quality control plan.

In addition, as detailed previously, the OCWD manages basin water supply through the Basin Production Percentage (BPP), such that, the anticipated production of groundwater would remain steady from 2025 through 2040 (as shown in Table WQ-1). As described previously and further detailed in Section19, *Utilities and Service Systems*, the City's supply of water listed in Table WQ-1 would be sufficient during both normal years and multiple dry year conditions between 2020 and 2040 to meet all of the City's estimated needs, including the proposed project. Therefore, the project would be consistent with the groundwater management plan and would not conflict with or

obstruct its implementation. Thus, impacts related to water quality control plan or sustainable groundwater management plan would be less than significant.

Existing Plans, Programs, or Policies

PPP WQ-1: NPDES/SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building and Safety Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP WQ-2: WQMP. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the project applicant and submitted to and approved by the City Building and Safety Division. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development project in order to minimize the adverse effects on receiving waters.

Mitigation Measures

None.

Sources

City of Fountain Valley 2015 Urban Water Management Plan. Accessed: https://www.fountainvalley.org/DocumentCenter/View/4184/DRAFT-Fountain-Valley-UWMP-May-2016_Rev1?bidId=

Preliminary Hydrology Report, January 2020. Prepared by Fuscoe Engineering.

Preliminary Water Quality Management Plan, January 2020. Prepared by Fuscoe Engineering.

Federal Emergency Management Agency (FEMA). 2019. Flood Insurance Rate Map (FIRM) Map No. 06059C0254J. Accessed: https://msc.fema.gov/portal/home

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
11. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☒	☐

a) Physically divide an established community?

No Impact. The project site is currently developed with a vacant school facility and is surrounded by a roadway to the north followed by single-family residential development, a flood control facility to the south followed by single-family residential development, commercial development to the east, and single-family residential development to the west. The proposed project would redevelop the site to provide 74 single-family residential units, which are consistent with the existing single-family residences to the north, west, and south of the site. Therefore, the change of the project site from a vacant school facility to single-family residential would not physically divide an established community. In addition, the project would not change roadways, pedestrian bridges, or install any infrastructure that would result in a physical division. Thus, the proposed project would not result in impacts related to physical division of an established community.

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?

Less Than Significant Impact. As described previously, the project site is located adjacent to Finch Avenue, a flood control channel, residential development, and commercial development. The project site is developed with typical one-story school buildings, parking lots, sports courts, and grass fields. The project would redevelop the project site to provide 74 new single-family residences, which would be similar to the single-family residential uses that are located adjacent to the west of the site, to the south of the site beyond the flood control channel, and to the north of the site beyond Finch Avenue.

General Plan

As the site is developed with a school, it currently has a General Plan land use designation of Public Facilities, which does not have the purpose of avoiding or mitigating an environmental effect. The proposed project includes a General Plan Amendment to change the land use designation of the site to Low Density Residential and Low Medium Density Residential to align with the single-family development (zoned R1) along the west side. The General Plan Land Use Element states that the Low Density Residential designation allows for the development of single-family residences up to a density of 5 dwelling units per acre and the Low Medium Density Residential designation allows for the development of single-family residences, two-family residences, and multi-family residences up to a density of 10.8 units per acre.

As the project would develop residences in the Low Density Residential designation at a density of 4.72 dwelling units per acre and in the Low Medium Density Residential designation at a density of 6.69 units per gross acre, it would be consistent with the proposed land use designations, and the proposed change in land uses would be less than significant.

Zoning

The project site is currently zoned as Public Institution (PI), and the project would change the site's zoning from PI-Public and Institutional to R1-Single Family Homes and GH-Garden Homes with a Planned Development (PD) Overlay to allow for the development of the 74 single family residential homes; and PI to P/OS-Parks and Open Space for the approximately 1.12-acre park. As detailed previously in Tables AES-1 and shown in Figures 7 and 8, the proposed project meets the development standards for the R1 and GH with a PD Overlay zones.

Section 21.08.020 of the City's Municipal Code states that the GH zoning district is for detached, single-family dwellings with a maximum density of 10.8 dwelling units per acre. Section 21.08.040 of the City's Municipal Code states that the R1 zoning district is for detached, single-family dwellings with a maximum density of 5 dwelling units per acre. While the project would result in a gross density of 5.69 du/ac, the proposed density in the proposed R1 zone would be 4.72 du/ac and the proposed density in the proposed GH zone would be 6.69 du/ac. Thus, the proposed project would not conflict with any applicable zoning regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Infill Guidelines for Residential Development

The City Council adopted the Infill Guidelines for Residential Development on November 14, 1989. Since then, the City has used the guidelines as a guidance document, and not as mandated standards. For example, the existing residential community to the north of the project site on Callens Circle and the Villa Serena project that was approved in 2019 were deemed consistent with the Infill Guidelines for Residential Development because they met a majority (but not all) of the guidelines. Likewise, the proposed project is consistent with a majority of the Guidelines, as described in Table LU-1. Furthermore, the proposed project would not conflict with the Guidelines in a manner that would result in an environmental effect. Thus, impacts would be less than significant.

Table LU-1: Project Comparison with City Council Infill Guidelines for Residential Development

Infill Guideline	Project Consistency
Architectural Compatibility	
A. Architectural design of the new housing structure shall be architecturally compatible with the surrounding neighborhood.	**Consistent.** The proposed residences would be a maximum of two stories and approximately 27.4 (Plan 3 Spanish elevation) feet in height. Residences on the west side of the site (Lots 1-10) in the proposed R1 zone would have one-story elements (such as one-story roof lines and a split-level house design as shown in Figure 9D), similar to the existing residences in the area. Residences to the north and west of the site are located on Redwood Street which includes a mixture of single- and two-story homes. Residences to the north along Callens Circle consists of two-story residences. Residences to the south along Red River Circle and at the end of the Mt Cimarron Street are mostly two-story homes with some one-story residences. Similar exterior materials, such as stucco with wood, rock and/or brick accent treatments, and roofing are proposed in the project as can be found in the adjacent residences. Elements of the proposed Prairie, Craftsman

Infill Guideline	Project Consistency
	and Spanish architectural styles also can be found in many of the nearby existing homes.
B. Variety of elevations and floor plans, including one- and two-story units.	**Not Consistent.** The residences would range in size from approximately 2,790 square feet (SF) to 3,419 SF and include four different two-story floor plan options. The residences have single-story elements which provide architectural interest, varied elevations and reduce massing; however only two-story residences are proposed. Therefore, the project is not completely consistent with this guideline at the project site level. However, when viewed at the areawide level, the project is visually compatible with homes on surrounding streets. The existing residences to the north and west of the site along Redwood Street include a mixture of single- and two-story homes. The residences to the north along Callens Circle (that are also subject to these Infill Guidelines) consists only of two-story residences. Residences to the south along Red River Circle and at the end of the Mt. Cimarron Street are mostly two-story homes with some one-story residences. In addition, the recently approved Villa Serena (that is subject to the infill guidelines) consists of all two-story residences. Because the proposed residences have one-story elements and are located within an area of both one-story and two-story residences, including tracts of new two-story homes, the project would not conflict with this architectural compatibility guideline in a manner that would result in an environmental effect.
C. Abutting units may not utilize the same exterior elevation.	**Consistent.** The residences would include four different two-story floor plan options and adjacent residences would not have the same exterior elevation. The proposed residences on the west side of the site (Lots 1-10) would be Plan 4 residences with three different architectural styles (Spanish, Craftsman, and Prairie). Throughout the entire site, abutting units would not utilize the same exterior elevation. Therefore, these residences would not have the same exterior elevations.
D. Staggered front yard setbacks shall be incorporated into the design of the subdivisions so no abutting units have similar front yard setbacks. If a curved street condition exists, similar setbacks may be considered.	**Consistent.** Front yard setbacks in the project vary from 10 feet (Plan 3) to over 20 feet, which results in a staggered appearance. Therefore, no abutting homes share the same setbacks. Several planting schemes are also proposed (correlated to building style/type) that would ensure variety in aesthetics. Since no identical elevations would be plotted adjacent one another, no front yard landscape would be identical to the neighboring ones either.
Lot Coverage Permitted	
A. Total lot coverage for the main structure including garage, patio and room addition shall not exceed 45% (forty five percent) of the total lot area.	**Consistent.** The project coverage is 32.6% for the GH zone and 32% in the R1 zone.
Two-Story Units	
A. When new two-story units are constructed abutting existing single-story units, the new units shall modify the window structure and location of windows to ensure compatibility. Methods which may be considered include:	**Consistent.** Lots 1-10 are adjacent to both two-story and single-story structures along Redwood Street. The window placement and frosted glazing treatment of the proposed residences on these lots is consistent with these requirements.

Infill Guideline	Project Consistency
1. Location of window. 2. Spandel or opaque glass. 3. Architectural relief of the rear of the unit. 4. Installation of mature landscaping to the rear of the lot.	
B. The floor area of the second story shall not be larger and/or equal to the area of the ground floor.	**Consistent.** The floor area of the second story of the residences would be smaller than the area of the ground floor.
Perimeter Block Wall	
Perimeter Block Wall – 6-foot block for perimeter of tract.	**Consistent.** The project proposes to use existing walls where they are in place along the eastern boundary, to construct a new perimeter wall abutting the existing walls along the western boundary, and to build a 6-foot high block wall along the southerly boundary. Consistent with this requirement, the existing walls are generally 6 feet or taller within the project site; however, if the proposed grading would result in the wall height being less than 6 feet within the project site, the wall height would be increased to 6 feet or replaced with a new 6-foot wall. The proposed residences facing Finch Avenue would not have a front yard wall.
A. Block wall(s) shall be a minimum of 6 feet from highest grade elevation.	**Consistent.** The 6-foot high block wall around the perimeter of the site would be a minimum of 6-feet from the highest elevation.
B. Existing non-masonry wall and/or fence (chain link or wooden) shall be removed and construct new 6 ft. solid masonry wall.	**Consistent.** The project includes development of a 6-foot high block wall around the perimeter of the site.
C. Fence detail shown on preliminary grading.	**Consistent.** The detail of the 6-foot high block wall would be shown on preliminary grading plans.
D. Type of material shall be either split face or slump-stone block.	**Consistent.** The 6-foot high block wall would be constructed of split-face or slump- stone block.
E. Lateral walls interior--solid masonry walls shall be provided on all side and rear property lines.	**Consistent.** Solid masonry walls would be provided on all side and rear property lines.
Driveway Approach and Recreational Vehicle Access	
A. All driveway approaches shall be constructed of concrete.	**Consistent.** All driveway approaches would be constructed of concrete
B. All R-1 units shall incorporate a minimum side yard of 10 ft. on the garage side.	**Not Consistent.** The lots proposed for R1 zoning (Lots 1-10) include side yard setbacks on the garage side of only 5 feet, which is less than the 10-foot minimum. However, adequate room for circulation to and from the drive isles and garages would be verified by the City's traffic engineering review of project plans. Therefore, although inconsistent, the project would not conflict with this driveway approach and recreational vehicle access guidelines in a manner that would result in an environmental effect.
C. Garages with setbacks of 20 feet or less shall utilize roll up doors for all doors, with an automatic garage door opener. Garages with setbacks greater than 20 feet may utilize swing-up garage doors.	**Consistent.** All garages would have roll up doors with an automatic garage door opener.
D. In the event a three-car garage is adjacent to a three-car garage, the developer shall submit landscape plans as part of the application package.	**Not Applicable.** The project does not include three car garages.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources

City of Fountain Valley General Plan Land Use Element. Accessed: https://www.fountainvalley.org/DocumentCenter/View/507/Chapter-2-Land-Use-Element-March-21-1995

City of Fountain Valley Municipal Code. Accessed: http://qcode.us/codes/fountainvalley/

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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

No Impact. The project site is designated Mineral Resource Zone 3 by the California Geological Survey, meaning that the site is in an area containing mineral deposits whose significance cannot be evaluated from available data. As described previously, the project site is developed and surrounded by developed areas, which do not include mining. Thus, implementation of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the state, and impacts would not occur.

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

No Impact. The City of Fountain Valley General Plan Conservation Element does not identify any mining or mineral resource sites within the City. As described in the previous response, the project site and surrounding areas do not contain known mineral resources. Therefore, no impacts related to the loss of availability of a locally important mineral resource recovery site, as delineated on a local general plan, specific plan, or other land use plan, would occur as a result of the project.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources

City of Fountain Valley General Plan Conservation Element. Accessed: https://www.fountainvalley.org/DocumentCenter/View/515/Chapter-5-Conservation-Element-March-21-1995

California Geological Survey (CGS). 1994. Open File Report 94-15: Generalized Mineral Land Classification of Orange County, California. Plate 1. Accessed: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-15/OFR_94-15_Plate_1.pdf

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. 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?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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?	☐	☐	☐	☒

The discussion below is based on the Technical Noise Analysis, 2020. Prepared by Vista Environmental, included as Appendix I.

Noise Element of the General Plan
The City's General Plan Noise Element includes a compatibility matrix (Table 7-8) to determine if new land uses are compatible with the existing noise environment. The table identifies noise environments that are less than 65 dBA CNEL to be normally compatible with single-family residential uses. Regarding land use compatibility, areas with existing ambient noise levels between 65 and 75 dBA CNEL are considered normally incompatible with single-family residential uses. Additionally, areas that have existing ambient noise levels above 75 dBA CNEL are considered clearly incompatible with single-family residential uses.

The General Plan Noise Element also includes exterior and interior noise standards for different types of land uses (Noise Element Figure 7-9). The noise standards for single-family residential uses require a maximum exterior noise level of 60 dBA CNEL and a maximum interior noise level of 45 dBA with windows closed.

Municipal Code
Section 6.28.070, Special Provisions. Construction activities shall be exempted from noise regulations as long as it occurs between 7:00 a.m. and 8:00 p.m., Monday through Friday; or between 9:00 a.m. to 8:00 p.m. on Saturday; and at no time on Sunday or any legal holiday.

Section 6.28.050, Exterior Noise Standards. Exterior noise level regulations for residential property are a maximum of 55 dBA between 7:00 a.m. and 10:00 p.m., and a maximum of 50 dBA between 10:00 p.m. and 7:00 a.m. for the following periods of time:

1. The noise standard for a cumulative period of more than 30 minutes in any hour.

2. The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
3. The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
4. The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour.
5. The noise standard plus 20 dBA for any period of time.

Federal Transit Administration
The construction noise threshold from *Transit Noise and Vibration Impact Assessment* (2018), identifies a significant construction noise impact if construction noise exceeds 80 dBA Leq over an eight-hour period during the daytime at the nearby sensitive receivers (e.g. residential, etc.).

The *Transit Noise and Vibration Impact Assessment* (2018) provide thresholds for increases in ambient noise from vehicular traffic based on increases to ambient noise. An impact would occur if existing noise levels at noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the project creates an increase of 3 dBA CNEL or greater project-related noise level increase; or if existing noise levels range from 60 to 65 dBA CNEL and the project creates 2 dBA CNEL or greater noise level increase.

Caltrans Transportation and Construction Vibration Guidance Manual
The City does not have vibration standards that are applicable to the proposed project, hence, California Department of Transportation's (Caltrans) Transportation and Construction Vibration Guidance Manual guidelines are used as a screening tool for assessing the potential for adverse vibration effects related to structural damage and human perception.

Caltrans identifies a building damage vibration level threshold for older residential structures of 0.3 in/sec PPV; and a distinctly perceptible human annoyance vibration level threshold of 0.04 in/sec PPV at nearby sensitive receiver locations.

Existing Noise Levels
As detailed in the Technical Noise Analysis (Appendix I), to identify the existing ambient noise level environment, 24-hour noise level measurements were taken at the project site between 12:36 p.m. on Wednesday, February 12, 2020 and 12:41 p.m. on Thursday, February 13, 2020. The noise measurements were taken using two Larson Davis Model LXT1 Type 1 sound level meters that were mounted on fences, approximately six feet above the ground and were equipped with windscreens. A description of the locations and the existing noise levels are provided in Table N-1.

Table N-1: Summary of 24-Hour Ambient Noise Level Measurements

Site	Site Description	Average (dBA L_{eq})	Maximum (dBA L_{max})	(dBA $L_{eq\ 1\text{-}hour}$/Time) Minimum	(dBA $L_{eq\ 1\text{-}hour}$/Time) Maximum	Average (dBA CNEL)
A	Located approximately 10 feet south of commercial center on northeast area of project site.	57.1	81.3	40.4 2:20 a.m.	66.2 5:58 p.m.	59.4
B	Located on a fence at the northwest corner of the project site.	52.7	77.3	43.7 1:53 a.m.	62.6 3:43 p.m.	56.9

Source: Vista Environmental 2020.

Table N-1 shows that the existing ambient noise is within the City's exterior residential noise standard of 60 dBA CNEL that is detailed in General Plan Policy 7.1.1(a).

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 With Mitigation Incorporated

Construction

Noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. Construction activity is expected to include: demolition of the existing structures, pavement (including concrete crushing), removal of the existing utility infrastructure; grubbing, excavation, grading, building construction, installation of the vapor barrier systems within Lots 36, 37, 38, 39, and 47, architectural coating, and paving. As described in the Project Description, the concrete crushing activities for reuse of pavement as road base material would occur in the northeastern portion of the site, at a minimum of 400-feet from the closest residences, which would be verified through the City's permitting process as implemented by Mitigation Measure AQ-1 which requires submittal of a demolition plan prior to issuance of demolition permits. The demolition plan would demonstrate that construction equipment is staged away from sensitive uses and that the concrete crusher is located a minimum of 400-feet from the closest residences.

Per Section 6.28.070, Special Provisions, of the City's Municipal Code, noise from construction activities are exempt from the City's established noise standards as long as the activities occur between the hours of 7:00 a.m. and 8:00 p.m., Monday through Friday; or between 9:00 a.m. to 8:00 p.m. on Saturday; and at no time on Sunday or any legal holiday. The proposed project's construction activities would occur pursuant to these regulations.

Neither the City's General Plan nor Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary or periodic noise increase. Thus, the construction noise thresholds from the FTA T*ransit Noise and Vibration Impact Assessment* (2018), have been utilized, which identifies a significant construction noise impact if construction noise exceeds 80 dBA Leq over an eight-hour period at sensitive receptors.

The construction noise from the proposed project would occur over a 16-month period and be temporary in nature as the operation of each piece of construction equipment would not be constant throughout the construction day, and equipment would be turned off when not in use. The typical operating cycle for a piece of construction equipment involves one or two minutes of full power operation followed by three or four minutes at lower power settings. The construction equipment would include a combination of trucks, power tools, concrete mixers, portable generators, and mounted impact hammers (excavator with impact hammer attachment).

The noise generated from construction of the project have been estimated by using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) and the construction equipment anticipated to be used for each phase of project construction, which is listed in Table N-2. For each phase of construction, the nearest piece of equipment was analyzed at the closest distance of the proposed activity to the nearest sensitive receptor. Also, 5 dB of estimated shielding was added to the RCNM model in order to account for the existing 6-foot-high walls located between the project site and nearest sensitive receptors.

Table N-2: Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor[1] (percent)	Spec 721.560 Lmax at 50 feet[2] (dBA, slow[3])	Actual Measured Lmax at 50 feet (dBA, slow[3])
Demolition				
Concrete Saw	1	20	90	90
Excavator	3	40	85	81
Rubber Tired Dozer	2	40	85	82
Mounted Impact Hammer	2	20	90	90
Site Preparation				
Rubber Tired Dozer	3	40	85	82
Crawler Tractor	4	40	84	N/A
Grading				
Excavator	2	40	85	81
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Crawler Tractor	3	40	84	N/A
Scraper	2	40	85	84
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	3	40	85	83
Generator	1	50	82	81
Tractor, Loader or Backhoe[4]	3	40	84	N/A
Welder	1	40	73	74
Paving				
Paver	2	50	85	77
Paving Equipment	2	50	85	77
Roller	2	20	85	80
Architectural Coating				
Air Compressor	1	40	80	78

Source: Appendix I

[1] Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

[2] Spec 721.560 is the equipment noise level utilized by the RCNM program.

[3] The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.

[4] For the tractor/loader/backhoe, the tractor noise level was utilized because it is the loudest of the three types of equipment.

The noise volumes in Table N-2 were applied to the locations of the closest sensitive receptors. As shown on Table N-3, construction noise at the nearby single-family residences would range from 63 to 76 dBA Leq, which would not exceed the 80 dba Leq construction noise level threshold at sensitive receivers. Therefore, construction impacts would be less than significant.

Table N-3: Construction Noise Levels at the Nearest Sensitive Receptors

	Construction Noise Level (dBA Leq) at:		
Construction Phase	**Residences to the North**	**Residences to the South**	**Residences to the West**
Demolition	74	76	71
Site Preparation	73	73	76
Grading	72	72	76
Building Construction	70	70	71
Paving	69	63	64
Painting	64	64	65
Threshold	**80**	**80**	**80**
Exceed Thresholds?	**No**	**No**	**No**

Source: Noise Impact Analysis, 2020

Operation

Development of the proposed project would result in 74 single-family residences, which would generate approximately 699 daily vehicular trips; of which 55 would occur in the a.m. peak hour and 73 would occur in the p.m. peak hour. The noise generated from these vehicular trips has been identified through utilization of the FHWA Roadway Noise Model, and a comparison of noise generated by traffic volumes with and without the project is provided in Table N-4.

Policy 7.1.2 from the City's General Plan Noise Element requires measures to be established to reduce noise impacts from traffic noise sources. However, neither the General Plan or Municipal Code quantifies what constitutes a significant degradation of the future acoustic environment. Therefore, thresholds from the FTA T*ransit Noise and Vibration Impact Assessment* (2018) have been utilized, which identifies noise impacts by comparing the existing noise levels and the future noise levels with the proposed project. Based on the FTA guidance, a substantial increase in ambient noise from vehicular traffic could occur when the noise levels at noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the project creates an increase of 3 dBA CNEL or greater noise level increase; or when noise levels range from 60 to 65 dBA CNEL and the project creates 2 dBA CNEL or greater noise level increase. As shown in Table N-4, the project traffic would result in a maximum increase of 0.7 dBA, which is below the noise increase thresholds. Therefore, impacts related to operational noise would be less than significant.

Table N-4: Project Generated Traffic Noise

		dBA CNEL at Nearest Receptor			
Roadway	**Segment**	**Existing No Project**	**Existing Plus Project**	**Project Contribution**	**Increase Threshold**
Bushard Street	North of Ellis Avenue	64.4	64.5	0.1	+2 dBA
Bushard Street	South of Ellis Avenue	63.9	64.1	0.2	+2 dBA
Redwood Street	North of Finch Avenue	57.6	57.9	0.3	+3 dBA
Redwood Street	South of Finch Avenue	57.6	57.6	0.0	+3 dBA
Redwood Street	South of Robin Avenue	55.2	55.3	0.1	+3 dBA
Ellis Avenue	West of Bushard Street	61.9	61.9	0.0	+2 dBA
Ellis Avenue	East of Bushard Street	61.9	62.0	0.1	+2 dBA
Starling Avenue	West of Redwood Avenue	57.4	57.4	0.0	+3 dBA
Finch Avenue	East of Redwood Avenue	55.4	56.1	0.7	+3 dBA
Robin Avenue	West of Redwood Avenue	54.8	55.3	0.5	+3 dBA

Source: Noise Impact Analysis, 2020

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

Less Than Significant Impact.

Construction

Construction activities associated with the proposed project would require the operation of off-road equipment and trucks that are known sources of vibration. Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. As described previously, concrete crushing activities would occur in the northeastern portion of the site, at a minimum of 400-feet from the closest residences, which would be verified through the City's permitting process and Mitigation Measure AQ-1 which requires submittal of a demolition plan prior to issuance of demolition permits. The demolition plan would demonstrate that construction equipment is staged away from sensitive uses and that the concrete crusher is located a minimum of 400-feet from the closest residences

Vibrations at buildings could produce results that range from no perceptible effects at the low levels to damage at the highest levels. It should be noted that vibration is much more discernible in a siting or laying down position, which typically only occur inside a residence. As such, this analysis is based on the vibration levels at the nearest homes, instead of the nearest residential property lines. Table N-5 provides estimated vibration levels for anticipated construction activities.

Since neither the Municipal Code nor the General Plan provide a quantifiable vibration threshold, guidance from the *Transportation- and Construction-Induced Vibration Guidance Manual*, prepared by Caltrans in 2004, has been utilized for this analysis, which defines the threshold of perception from transient sources such as off-road construction equipment at 0.25 inch per second peak particle velocity (PPV). Table N-4 shows the typical PPV and average vibration levels shown in vibration velocity in decibels (VdB) that are produced from some common construction equipment that would likely be utilized during construction of the proposed project.

Table N-5: Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity at 25 feet (inches/second)	Average Vibration Level (VdB or Lv) at 25 feet
Vibratory Roller	0.210	94
Hoe Ram (Mounted Impact Hammer)	0.089	87
Large Bulldozer	0.089	87
Caisson Drill	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Noise Impact Analysis, 2020

From the list of equipment shown in Table N-5, a vibratory roller with a vibration level of 0.21 inch-per-second PPV at 25 feet would be the source of the highest vibration levels of all equipment utilized during construction activities for the proposed project. This would remain below the 0.25 inch-per-second PPV threshold, as detailed above. Thus, impacts would be less than significant.

Operation

Operation of the proposed single-family uses would include heavy trucks for residents moving in and out of the residences, large deliveries, and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions.

However, typical vibration levels for the heavy truck activity at normal traffic speeds would be approximately 0.006 in/sec PPV, based on the FTA Transit Noise Impact and Vibration Assessment. Truck movements on site would be travelling at very low speed, so it is expected that truck vibration at nearby sensitive receivers would be less than the vibration threshold of 0.08 in/sec PPV for fragile historic buildings and 0.04 in/sec PPV for human annoyance, and therefore, would be less than significant.

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 proposed project is not within an airport land use plan and is not within 2 miles of an airport. The closest airport to the project site is John Wayne Airport, which is located 5 miles east of the project site. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels related to an airport or airstrip, and no impact would occur.

Existing Plans, Programs, or Policies

PPP N-1: Construction Noise. Project construction activities shall occur in compliance with Municipal Code Section 6.28.070, Special Provisions Construction activities, which states that construction shall occur between 7:00 a.m. and 8:00 p.m., Monday through Friday; or between 9:00 a.m. to 8:00 p.m. on Saturday; and at no time on Sunday or any legal holiday.

Mitigation Measures

Mitigation Measure AQ-1: Demolition Plan. See text above in Section 2, *Air Quality*.

Sources

City of Fountain Valley General Plan Noise Element, 1995. Accessed: https://www.fountainvalley.org/DocumentCenter/View/517/Chapter-7-Noise-Element-March-21-1995

City of Fountain Valley Municipal Code. Accessed: http://qcode.us/codes/fountainvalley/

Federal Transit Administration. Transit Noise and Vibration Impact Assessment, 2006. Accessed: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf

Technical Noise Analysis, 2020. Prepared by Vista Environmental.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial unplanned population growth in an area, either directly or indirectly?

Less Than Significant Impact. The project would remove vacant school facilities and construct 74 single-family residences and a park facility. The California Department of Finance (CDF) data details that the City of Fountain Valley had a residential population of 56,652 and 19,337 residential units in 2019. Of these, 12,693 (65.6 percent) are single-family detached units. In addition, it is estimated that the City has an average of 2.99 persons per household.

Based on this information, the proposed 74 single-family dwelling units would result in a net increase of approximately 221 new residents. The addition of 221 new residents would represent a population increase of 0.4 percent and the new housing units would result in an 0.4 percent increase in residential units within the City.

Additionally, as described in the Project Description, although the development of ADUs in single-family designated areas is allowable, the large majority of single-family residential parcels in the City and County do not include ADUs. The City currently has a total of 44 ADUs built, 78 ADUs with permits issued, and 115 ADUs submitted for plan check. The number of existing or planned ADUs are small in comparison to the number of single-family parcels in the City. Hence, it would be speculative and not reasonably foreseeable, and therefore, not allowed by CEQA Guidelines Section 15378, to assume that the proposed single-family residential lots would include future ADUs. Thus, the proposed project as evaluated herein, is limited to the development of 74 single-family dwelling units, which would not constitute substantial growth within the City.

Furthermore, the proposed project is located in an urbanized residential area of the City and is surrounded by residential and commercial uses and is already served by the existing roadways and infrastructure systems. No infrastructure would be extended or constructed to serve areas beyond the project site, and indirect impacts related to growth would not occur from implementation of the proposed project. Therefore, potential impacts related to inducement of unplanned population growth, either directly or indirectly, would be less than significant.

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

No Impact. The project site is developed with a vacant school facility. The site does not include housing and no people are located onsite. Therefore, the project would not displace any people or housing, and no impacts would occur.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources

California Department of Finance. May 2019. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2010 Census Benchmark*. Accessed: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

Cal State Fullerton Center for Demographic Research, 2019 Orange County Jurisdiction Demographics. Accessed: http://www.fullerton.edu/cdr/_resources/pdf/progressreport/Fountain%20Valley.pdf

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. PUBLIC SERVICES.				
a) 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:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

a) Result in substantial adverse physical impacts associated with the provision of 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:

Fire protection?
Police protection?
Schools?
Parks?
Other public facilities?

***Fire Protection* – Less Than Significant Impact.** The City of Fountain Valley Fire Department provides fire protection services throughout the City. The Fire Department has two fire stations, as described below:

- Station 1 is closest to the project site. It is located at 17737 Bushard Street, which is 1.2 miles from the project site. This station is staffed with one battalion command unit, one paramedic engine company, and one paramedic ladder truck company.
- Station 2 is located 3.9 miles from the project site at 16767 Newhope Street. Station 2 is staffed with one California Office Of Emergency Services (OES) engine, one paramedic engine company, and one reserve engine (FVFD 2020).

The proposed project would remove the existing school facilities and develop 74 single-family residences. Implementation of the project would be required to adhere to the California Fire Code,

as included in the City's Municipal Code Chapter 17.02, as part of the permitting process the project plans would be reviewed by the City's Building and Safety Division to ensure that the project plans meet the fire protection requirements.

Due to the small increase in onsite people that would occur from implementation of the project, an incremental increase in demand for fire protection and emergency medical services would occur. However, the increase in residents onsite is limited (221 residents) and would not increase demands such that the existing two fire stations would not be able to accommodate servicing the project in addition to its existing commitments. Provision of a new or physically altered fire station would not be required that could cause environmental impacts. Therefore, impacts related to fire protection services from the proposed project would be less than significant.

***Police Protection* – Less Than Significant Impact.** The City of Fountain Valley Police Department is located at 10200 Slater Avenue, which is 1.8 miles from the project site. The Police Department staffing consists of 58 sworn officers and 30 professional staff, augmented by over 50 volunteers. Based on the CDF population data for the City in 2019 of 56,652, the City has approximately1.02 sworn officers per 1,000 residents.

Because the project site is currently vacant, development of the proposed 74 single-family residences would result in an incremental increase in demands on law enforcement services. However, the increase would not be significant when compared to the current demand levels. As described previously, the residential population of the project site at full occupancy would be approximately 221 residents and based on the Police Department's staffing of 1.02 officers per thousand population, the proposed project would require 0.23 percent of an additional officer.

Since the need by the project is less than one full-time officer, the project would not require the construction or expansion of the City's existing policing facilities. Thus, substantial adverse physical impacts associated with the provision of new or expanded facilities would not occur. Thus, impacts related to police services would be less than significant.

***Schools* – Less Than Significant Impact.** The project site is located within the Fountain Valley School District that is comprised of 10 (7 elementary and 3 middle) schools and the Huntington Beach Union High School District that has 9 high schools. The schools that serve the site are listed below:

- Gisler Elementary located at 18720 Las Flores Street, which is 1.1 miles from the project site, and has an approximate total capacity of 578 students (FV 2018).
- Talbert Middle School located at 9101 Brabham Drive in Huntington Beach, which is 1.9 miles from the project site, and has an approximate total capacity of 739 students (FV 2018).
- Fountain Valley High School located at 17816 Bushard Street, which is 1.5 miles north of the project site, and has an approximate total capacity of 3,558 students (FV 2018).

The project would develop 74 single-family residences. The Fountain Valley School District student generation rate is 0.33 students per residence for grades K-5; 0.09 students per residence for grades 6-8 and Huntington Beach Union High School District student generation rate is 0.02 students per residence for grades 9-12. Based on the existing capacity of the schools serving the project area and the number of students that would be generated by the project, the existing elementary and high schools would be able to serve the project. However, the middle school is currently over capacity and the project would add 7 students, as shown in Table PS-1.

Table PS-1: School Capacity and Project Generated Students

School	School Capacity	2018-2019 Enrollment[1]	Existing Remaining Capacity	Students Generated by Project	Remaining Capacity with Project
Gisler Elementary	578	535	43	24	19
Talbert Middle	739	744	-5	7	-12
Fountain Valley High	3,558	3,531	27	2	25

[1] Source: https://dq.cde.ca.gov/dataquest/

However, pursuant to Government Code Section 65995 et seq., the need for additional school facilities is addressed through compliance with school impact fee assessment. SB 50 (Chapter 407 of Statutes of 1998) sets forth a state school facilities construction program that includes restrictions on a local jurisdiction's ability to condition a project on mitigation of a project's impacts on school facilities in excess of fees set forth in the Government Code. These fees are collected by school districts at the time of issuance of building permits for development projects. Pursuant to Government Code Section 65995 applicants shall pay developer fees to the appropriate school districts at the time building permits are issued; and payment of the adopted fees provides full and complete mitigation of school impacts. As a result, impacts related to school facilities would be less than significant with the Government Code required fee payments.

***Parks* – Less Than Significant Impact.** The City of Fountain Valley has over 150 acres of parks, activity buildings, and athletic facilities. The parks closest to the project site include the following:

- Cordata Park located at 18761 Cordata Street, which is 0.6 mile from the project site. This park is 4.53 acres and contains the following facilities: basketball court, climbing unit, drinking fountain, picnic tables, sandpit, and swings.
- Ellis Park located at 10301 Ellis Avenue, which is 0.9 mile from the project site. This park is 3 acres and contains the following facilities: basketball court, benches, climbing unit, drinking fountain, picnic tables, sandpit, swings, tennis court, volleyball.
- Helm Park located at 9170 Helm Avenue, which is 1.3 mile from the project site. This park is 3.1 acres and contains the following facilities: basketball court, benches, climbing unit, drinking fountain, grill, picnic tables, sandpit, and swings.

The project would develop 74 single-family residences and a 1.12-acre park on the northwestern portion of the site, adjacent to Finch Avenue. The City's Municipal Code Section 21.78.070 provides park requirements that are based on the number and type of dwelling units that are proposed. Based on the Code's formula, the project would result in a demand for 1.26 acres of parkland. Therefore, a large majority of the project's park demand would be met by the provision of the onsite park. In addition, the project would be required to pay parkland fees pursuant to Municipal Code 21.78.070, as a condition of the approval of a tentative map (included as PPP PS-2), which would be used by the City for the purpose of acquiring, developing, improving and expanding open space and park lands. In addition, as described previously, the City currently has over 150 acres of parkland, with 10.63 acres of parkland within 1.3 miles of the site. Therefore, impacts related to the need to provide new or altered park and recreation facilities in order to maintain acceptable service ratios would be less than significant.

In addition, the impacts of development of the proposed 1.12-acre park are considered part of the impacts of the proposed project as a whole and are analyzed throughout the various sections of this MND. For example, activities such as excavation, grading, and construction as required for

the park are analyzed in the Air Quality, Greenhouse Gas Emissions, Noise, and Transportation Sections.

***Other Services* – Less Than Significant Impact.** The proposed project would redevelop the project site with 74 single-family residential units within an area that already contains single-family residential. The additional residences would result in a limited incremental increase in the need for additional services, such as public libraries and post offices, etc. Because the project area is already served by other services and the project would result in a limited increase in residences, the project would not result in the need for new or physically altered facilities to provide other services, the construction of which could cause significant environmental impacts. Therefore, impacts would be less than significant.

Existing Plans, Programs, or Policies

PPP HAZ-1: Fire Code. As listed previously in Section 9, *Hazards and Hazardous Materials*.

PPP PS-1: Schools Development Impact Fees. Prior to issuance of building permit, the project shall pay applicable development fees levied by the Fountain Valley School District and the Huntington Beach Union High School District pursuant to the School Facilities Act (Senate Bill [SB] 50, Stats. 1998, c.407).

PPP PS-2: Park Fees. As a condition of the approval of a tentative map, the project shall pay applicable park related fees pursuant to Municipal Code 21.78.070.

Mitigation Measures

None.

Sources

City of Fountain Valley Facilities Website. Accessed: https://www.fountainvalley.org/Facilities?clear=False

City of Fountain Valley Fire Department Website (FVFD 2020). Accessed: https://www.fountainvalley.org/240/Fire-Department

City of Fountain Valley Municipal Code. Accessed: http://qcode.us/codes/fountainvalley/

City of Fountain Valley Police Department Website. Accessed: https://www.fountainvalley.org/1307/Police-Department

Fountain Valley Crossings Specific Plan Project Revised Final EIR, 2018 (FV 2018).

Fountain Valley School District Website. Accessed: https://www.fvsd.us/

Huntington Beach Union High School District Website. Accessed: https://www.hbuhsd.edu/

Villa Serena Residential Project Mitigated Negative Declaration, 2019 (FV 2019). Accessed: https://www.fountainvalley.org/1294/Villa-Serena

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would be accelerated?

Less Than Significant Impact. As described previously, the project would develop 74 single-family residences and a 1.12-acre park on the northwestern portion of the site, adjacent to Finch Avenue. The City's Municipal Code Section 21.78.070 provides park requirements that are based on the number and type of dwelling units that are proposed. Based on the Code's formula, the project would result in a demand for 1.26 acres of parkland. Therefore, a large majority of the project's park demand would be met by the provision of the onsite park. In addition, the project would be required to pay parkland fees pursuant to Municipal Code 21.78.070, as a condition of the approval of a tentative map (included as PPP PS-2), which would be used by the City for the purpose of acquiring, developing, improving and expanding open space and park lands. In addition, the City currently has over 150 acres of parkland, with 10.63 acres of parkland within 1.3 miles of the site. Therefore, impacts related to the increase in the use of existing parks and recreational facilities, such that physical deterioration of the facility would be accelerated would be less than significant.

b) Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. As described above, the project includes a 1.12-acre park. The impacts of development of the park are considered part of the impacts of the proposed project as a whole and are analyzed throughout the various sections of this MND. For example, activities such as excavation, grading, and construction as required for the park are analyzed in the Air Quality, Greenhouse Gas Emissions, Noise, and Transportation Sections.

In addition, while the project would contribute park development fees pursuant to Municipal Code 21.78.070 (included as PPP PS-2) to be used towards the future expansion or maintenance parks and recreational facilities, these fees are standard with every residential development, and the proposed project would not require the construction or expansion of other recreational facilities that might have an adverse physical effect on the environment. As a result, impacts would be less than significant.

Existing Plans, Programs, or Policies

PPP PS-2: Park Fees. Listed previously in Section 15, *Public Services.*

Mitigation Measures

None.

Sources

City of Fountain Valley Municipal Code. Accessed: http://qcode.us/codes/fountainvalley/

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
17. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

The discussion below is based on the Traffic Impact Analysis prepared by EPD Solutions, 2020 (EPD 2020) included as Appendix J.

Traffic Threshold

As described in the City of Fountain Valley General Plan Circulation Element, LOS D is the lowest acceptable Level of Service (LOS) for peak hour intersection volumes in the City. However, automobile delay, as described solely by LOS or similar measure of traffic congestion, is no longer considered a significant impact under CEQA, except in locations specifically identified in the Guidelines. (Pub. Resources Code, § 21099(b)(2).) CEQA Guidelines Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT.

Thus, the LOS analysis using a threshold of LOS D is provided to describe the project effect on local intersections and project consistency with the General Plan Circulation Element LOS D requirement.

Traffic Study Area and Existing Conditions

The following seven intersections are proposed to be included in the study area:

1. Bushard Street/Ellis Avenue
2. Redwood Street/Starling Avenue
3. Redwood Street/Finch Avenue
4. Redwood Street/Robin Avenue
5. Brookhurst Street/Ellis Avenue
6. Bushard Street/Starling Avenue
7. Hawthorn Street/Ellis Avenue

As described previously, the existing school on the project site closed at the end of the 2018 school year. As shown in Table T-1, all of the study intersections currently operate (in the closed school condition) at satisfactory a LOS C or better during the weekday a.m. and p.m. peak hours.

Table T-1: Existing Peak Hour Levels of Service

	Intersection	Signal Control	AM Peak		PM Peak	
			ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS
1.	Bushard St/Ellis Ave	Signal	0.619	B	0.625	B
2.	Redwood St/Starling Ave	TWSC	8.6	A	8.7	A
3.	Redwood St/Finch Ave	TWSC	8.5	A	8.9	A
4.	Redwood St/Robin Ave	AWSC	6.9	A	7.2	A
5.	Brookhurst St/Ellis Ave	Signal	0.708	C	0.769	C
6.	Bushard St/Starling Ave	TWSC	12.2	B	20.1	C
7.	Hawthorn St/Ellis Ave	TWSC	19.8	C	15.5	C

Source: EPD 2020.
TWSC = Two-Way Stop Controlled, AWSC = All-Way Stop Controlled
[1] ICU in Volume/Capacity Ratio, Delay in Seconds

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

Operation

Less Than Significant Impact. The proposed project would redevelop the project site with 74 single-family residences and a park. As described in the Project Description, although the development of ADUs in single-family designated areas is allowable, the large majority of single-family residential parcels in the City and County do not include ADUs. Hence, it would be speculative and not reasonably foreseeable, and therefore, not allowed by CEQA Guidelines Section 15378, to assume that the proposed single-family residential lots would include future ADUs. Thus, the proposed project as evaluated herein, is limited to the development of 74 single-family dwelling units.

The project trip generation was calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation 10th Edition*, 2017. As shown in Table T-2, the project would generate approximately 699 daily trips including 55 trips during the AM peak hour and 73 trips during the PM peak hour.

Table T-2: Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Rates								
Single Family Detached Housing[1]		9.440	0.185	0.555	0.740	0.624	0.366	0.990
Project Trip Generation								
Dwelling Units	74	699	14	41	55	46	27	73
Total Trip Generation		**699**	**14**	**41**	**55**	**46**	**27**	**73**

[1] Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition,* 2017. Land Use Code 210 Single-Family Detached Housing.
Source: EPD 2020.

Existing Plus Project. An intersection operations analysis was conducted for the study area to evaluate the existing plus project weekday a.m. and p.m. peak hour conditions with operation of the proposed project. As shown in Table T-3, all study intersections are forecast to continue to

operate at a satisfactory LOS C or better during the weekday a.m. and p.m. peak hours with the addition of project traffic, and the project would not result in an inconsistency with the General Plan Circulation Element LOS D requirement in the existing plus project condition. Impacts would be less than significant.

Table T-3: Existing Plus Project Conditions

Intersection	Existing				Existing plus Project				Impact?	
	AM Peak		PM Peak		AM Peak		PM Peak			
	ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS	AM	PM
1. Bushard St/Ellis Ave	0.619	B	0.625	B	0.623	B	0.628	B	No	No
2. Redwood St/Starling Ave	8.6	A	8.7	A	8.7	A	8.8	A	No	No
3. Redwood St/Finch Ave	8.5	A	8.9	A	8.9	A	9.3	A	No	No
4. Redwood St/Robin Ave	6.9	A	7.2	A	6.9	A	7.3	A	No	No
5. Brookhurst St/Ellis Ave	0.708	C	0.769	C	0.712	C	0.775	C	No	No
6. Bushard St/Starling Ave	12.2	B	20.1	C	12.4	B	20.8	C	No	No
7. Hawthorn St/Ellis Ave	19.8	C	15.5	C	20.2	C	15.5	C	No	No

Source: EPD 2020.
TWSC = Two-Way Stop Controlled, AWSC = All-Way Stop Controlled
[1] ICU in Volume/Capacity Ratio, Delay in Seconds

Opening Year 2023 Plus Project. Opening Year Baseline (2023) traffic volumes were developed by applying a growth rate of two percent per year to the existing traffic volumes and adding traffic generated from four other approved and pending development projects in the vicinity of the proposed project. As shown in Table T-4, in the existing vacant school condition, the intersection of Brookhurst Street and Ellis Avenue is forecast to operate at a satisfactory LOS D in the opening year 2023 in the a.m. and p.m. peak hours. With the addition, of traffic from the proposed 74 single-family residences the intersection would continue to operate at LOS D a.m. in the a.m. and p.m. peak hours, which is an acceptable LOS for peak hour intersection volumes in the City. Therefore, the project would not result in an inconsistency with the General Plan Circulation Element LOS D requirement in the opening year 2023 plus project condition, and impacts would be less than significant.

Table T-4: Opening Year (2023) Plus Project Conditions

Intersection	Opening Year				Opening Year plus Project				Impact?	
	AM Peak		PM Peak		AM Peak		PM Peak			
	ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS	ICU/ Delay[1]	LOS	AM	PM
1. Bushard St/Ellis Ave	0.704	C	0.697	B	0.707	C	0.700	C	No	No
2. Redwood St/Starling Ave	8.6	A	8.7	A	8.7	A	8.9	A	No	No
3. Redwood St/Finch Ave	8.6	A	9.0	A	8.9	A	9.4	A	No	No
4. Redwood St/Robin Ave	6.9	A	7.2	A	6.9	A	7.3	A	No	No
5. Brookhurst St/Ellis Ave	0.810	D	0.848	D	0.813	D	0.854	D	No	No
6. Bushard St/Starling Ave	12.9	B	24.7	C	13.2	B	26.1	D	No	No
7. Hawthorn St/Ellis Ave	26.1	D	17.6	C	26.1	D	17.7	C	No	No

Source: EPD 2020.
TWSC = Two-Way Stop Controlled, AWSC = All-Way Stop Controlled
[1] ICU in Volume/Capacity Ratio, Delay in Seconds

General Plan Buildout. For informational purposes, Table T-5 provides a comparison of the traffic volume that would be generated by the proposed project in comparison to what previously occurred from operation the school facility. As shown, the proposed project would generate 84 fewer daily trips than the previously operating school when analyzing the trip generation based on school's square footage and 330 fewer daily trips when analyzing the trip generation based on school's prior student population. In the peak hours, the proposed project would generate 225 fewer AM

peak hour trips and increases the PM peak hour trips by 18 compared to the school when analyzing the trip generation based on school's square footage. The proposed project would generate 310 fewer AM peak hour trips and 19 fewer PM peak hour trips when analyzing the trip generation based on school's prior student population.

Table T-5: Comparison of Proposed Project and Existing School Facility Trip Generation[1]

Land Use	Units	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Trip Rates								
Elementary School[1]	per TSF	19.520	3.834	3.137	6.970	0.617	0.754	1.370
Elementary School[2]	per Student	1.890	0.362	0.308	0.670	0.082	0.088	0.170
Single Family Detached Housing[3]	per DU	9.440	0.185	0.555	0.740	0.624	0.366	0.990
Existing Trip Generation								
Elementary School[2]	per TSF	19.52	3.834	3.137	6.97	0.617	0.754	1.37
Elementary School[2]	544 Students	1028	197	168	364	44	48	92
Project Trip Generation								
Single Family Detached Housing	74 DU	699	14	41	55	46	27	73
Total Trip Generation		**699**	**14**	**41**	**55**	**46**	**27**	**73**
Net New Trips With Project (Square Footage Based)		**-84**	**-140**	**-85**	**-225**	**21**	**-3**	**18**
Net New Trips With Project (Student Based)		**-330**	**-183**	**-127**	**-310**	**2**	**-21**	**-19**

Source: EPD 2020. DU = Dwelling Unit. Shading indicates lowest existing trip generation of the two methods utilized.
1 Based on a Total Year Average Project Trip Generation (2000-2011); the table provides trip generation estimates based on two methods: per student and per thousand square feet (TSF).
2 Trip rates from the Institute of Transportation Engineers (ITE), Trip Generation, 10th Edition, 2017. Land Use Code 520 - Elementary School.
3 Trip rates from the ITE, Trip Generation, 10th Edition, 2017. Land Use Code 210 - Single-Family Detached Housing.

As shown, the project would result in fewer vehicle trips than that of the previous school facility and land use assumed in the City's General Plan for the project site; thus, the project would not result in greater traffic than previously assumed in the City's General Plan. As described in the Project Description, although the development of ADUs in single-family designated areas is allowable, the large majority of single-family residential parcels in the City and County do not include ADUs. Hence, it would be speculative and not reasonably foreseeable, and therefore, not allowed by CEQA Guidelines Section 15378, to assume that the proposed single-family residential lots would include future ADUs for general plan buildout purposes. Thus, the proposed project as evaluated herein, is limited to the development of 74 single-family dwelling units. Therefore, a traffic related General Plan buildout analysis is not required by the City's traffic study guidelines.

Construction

Construction activities of the project would generate vehicular trips from construction workers traveling to and from project site, delivery of construction supplies and import materials to, and export of debris from the project site. However, these activities would only occur for a period of 16 months. The recycling of existing pavement would reduce vehicular trips during the demolition and roadway construction activities, as the existing pavement would be crushed and reused onsite. The grading phase of construction would be the most intensive and would occur over a 30-day period, as shown in Table 4, *Construction Schedule*. The Air Quality, Greenhouse Gas, and Energy Impact Analysis (Appendix A) describes that grading would require 3,750 haul trips for the grading activity, which equates to an average of 125 haul trips per day. In addition, approximately 20

workers would be onsite daily during the grading activities. Thus, approximately 145 trips per day would occur from the most intensive construction activity.

As shown in Table T-3, all study intersections are forecast to continue to operate at satisfactory LOS C or better in the Existing Plus Project condition during the weekday a.m. and p.m. peak hours with the addition of the project's operational trips of 699 new daily trips, with 55 a.m. peak hour trips, and 73 p.m. peak hour trips. The increase of trips during construction activities would involve temporary truck trips through the residential neighborhood but would involve far fewer trips than what would occur during operation (i.e., occupancy) of the proposed residences, which would not result in an inconsistency with the General Plan Circulation Element LOS D requirement. Therefore, the fewer trips during construction would also not result in an inconsistency with the General Plan Circulation Element LOS D requirement, and impacts would be less than significant.

Transit Services. The vicinity of the project area receives bus service via Orange County Transportation Authority (OCTA) bus route 35 that runs north-south on Brookhurst Street through Fountain Valley, Westminster, Garden Grove, Anaheim, and Fullerton. Route 35 connects to east west bus routes and train service by Metrolink. Route 35 operates with 15-minute headway during the AM and PM peak periods.

The Metrolink Santa Ana Station is located approximately 7.16 miles to the northeast of the project site at 1000 E. Santa Ana Boulevard and the Metrolink Tustin Station is located approximately 8.78 miles east of the project site at 2975 Edinger Avenue. Both Metrolink stations connect to the OCTA bus system. The Metrolink provides direct access to Downtown Los Angeles (to the north) and Riverside or San Bernardino (to the east).

These existing transit services would serve project residents. The proposed 74 single-family residential units would not alter or conflict with existing transit stops and schedules, and impacts related to transit services would not occur.

Bicycle Circulation. Class II bicycle lanes are on-street bicycle lanes that are designated by roadway striping to provide separation between bicyclists and parked or moving vehicles. Class II bicycle lanes exist along Ellis Avenue to the north of the site and Garfield Avenue to the south of the site. The proposed project does not involve any off-site improvements that would remove the existing bicycle lanes. The existing bicycle lanes would provide bicycle transportation opportunities for residents of the project. In addition, the existing pedestrian bridge over the OCFD channel to the southeastern portion of the site would remain to continue to provide bicycle access to and from the project site via Mt. Cimarron Street to the bicycle lanes on Garfield Avenue. Therefore, the proposed project would not conflict with any bicycle facilities.

Pedestrian Facilities. Sidewalks currently exist adjacent to the site along Finch Avenue, and along nearby roadways that include Redwood Street, Starling Avenue, Callens Circle, Ellis Avenue, Brookhurst Street, in addition to other residential streets near the project site. The proposed project would provide a new 5-foot wide sidewalk within the Finch Avenue right-of-way that is adjacent to the site, which would connect to the existing sidewalks on Redwood Street. In addition, the project would develop onsite sidewalks along the proposed roadways, and the existing pedestrian bridge over the Orange County flood control channel to the southeastern portion of the site would remain to provide non-vehicular access to and through the project site. This would facilitate pedestrian use and walking to nearby locations. Therefore, the proposed project would not conflict with pedestrian facilities.

Overall, impacts related to transit, bicycle, and pedestrian facilities would be less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. SB743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. The bill also specified that delay-based level of service could no longer be considered an indicator of a significant impact on the environment. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

CEQA Guidelines Section 15064.3 - Determining the Significance of Transportation Impacts states that VMT is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. The City of Fountain Valley has prepared Draft Transportation Impact Assessment Guidelines for Land Use Projects in CEQA and for General Plan Consistency, which include VMT analysis methodology and thresholds. The City's document provides the following screening thresholds to assess whether further VMT analysis is required based on project location, size, or type:

1. Transit Priority Area (TPA) Screening: Projects which are located within a TPA are presumed to have a less than significant impact on VMT and therefore would not need to prepare a full VMT analysis. The project is not located in a TPA and therefore this threshold does not apply.
2. Low VMT Area Screening: This screening threshold applies to residential or office projects that are located within a low VMT-generating area. According to Appendix B in the TIA Guidelines the project is in an area where VMT is higher than the City Average and therefore this threshold does not apply.
3. Project Type Screening: Local serving projects listed in the TIA Guidelines and projects that generate fewer than 110 net new daily vehicle trips are presumed to have a less than significant impact on VMT. This threshold does not apply to the project as it is not considered local serving and is forecast to generate 699 daily trips.

Based on the City's screening thresholds, the proposed project is required to prepare a VMT analysis as the project is not located within a Transit Priority Area or a High-Quality Transit Area, is not located in a low VMT-generating area, generates more than 110 daily trips, or is not considered to be locally-serving.

VMT is calculated by multiplying the daily project trip generation by the average trip length to determine the total vehicle miles traveled by trips generated by the project. The project VMT analysis was prepared using the Orange County Traffic Analysis Model (OCTAM). Two types of VMT are forecast: (1) VMT per service population (VMT/SP), and (2) the total Citywide VMT within the City. Service population is defined as the sum of all employees and residents (population). The service population used for the project is residents (project population) since the project proposes only residential land uses. The VMT/SP is the average daily VMT per project resident. The City's draft guidelines propose the following thresholds for determining VMT impacts:

- A significant project impact would occur if the project VMT/SP exceeds the City's General Plan Buildout average VMT/SP (28.6 VMT/SP).
- A significant cumulative impact would occur if the project VMT/SP exceeds the City's General Plan Buildout average VMT/SP (28.6 VMT/SP).
- The project's effect on VMT would be considered significant if it results in an increase in the Citywide VMT under cumulative conditions. The cumulative Citywide VMT baseline is 1,915,849 VMT or 21.21 VMT/SP.

Forecasts from the 2016 and 2045 OCTAM model were used to calculate the baseline citywide VMT/SP. For evaluation of direct and cumulative project impacts, the project was evaluated by examining the traffic analysis zone (TAZ) for the project. A TAZ is a geographical subarea within the transportation model. A select zone assignment was run using the 2016 and 2045 models, and the resulting data for the project was used to calculate project VMT/SP. 2020 VMT data was calculated by using data from the base year 2016 and future year 2045 models. Linear growth between 2016 and 2045 was assumed to calculate the 2020 conditions.

The project is in OCTAM TAZ 1048. This zone is bounded by Ellis Avenue, Garfield Avenue, Brookhurst Street and Bushard Street. The zone includes commercial land uses along the west side of Brookhurst Street and residential land uses throughout the remainder of the zone. In the baseline 2016 and 2045 model runs, the average trip length for TAZ 1048 is 6.0 and 6.3 miles. This is reasonably consistent with the average trip length for the City of 6.6 miles in 2016 and 6.8 miles in 2045. The baseline data for Zone 1048 is shown in Table T-6.

Table T-6: Baseline Data for TAZ 1048 (Project Zone)

	2016	2045
VMT/SP	92,412	95,545
Employment	1,428	1,491
Population	1,464	1,518
VMT/SP	31.95	31.75
Average Trip Length	6.0 miles	6.3 miles
Citywide Average Trip Length	6.6 miles	6.8 miles

Source: EPD 2020.

When the project (74 single family homes) is evaluated using OCTAM 5, the average trip length is over 11 miles in both 2016 and 2045. It is unreasonable to expect that 74 homes would have a trip length that is almost double the City average and the average for the project zone, because the project land uses are consistent with the existing land uses in TAZ 1048. Therefore, the project VMT was calculated using the trip length for Zone 1048 in both 2016 and 2045.

Table T-7 shows the Baseline VMT calculations for the City and the project. As seen in Table T-7, the project related VMT/SP is less than the VMT/SP for the City. Therefore, the project would not have an impact on the Year 2020 VMT/SP.

Table T-7: Baseline Vehicle Miles Traveled/Service Population

2020	Daily Total VMT	Total Service Population	VMT/Service Population
Proposed Project	3,955	230	17.2
Threshold (City of Fountain Valley GP Buildout)	2,564,479	89,688	28.6

Source: EPD 2020.

Table T-8 shows the Cumulative VMT calculations for the City and the project. As seen in Table T-8, the project related VMT/SP is less than the VMT/SP for the City. Therefore, the project would not have an impact on the Cumulative (Year 2045) VMT/SP.

Table T-8: Cumulative Vehicle Miles Traveled/Service Population

Cumulative (2045)	Daily Total VMT	Total Service Population	VMT/Service Population
Proposed Project	4,022	230	17.5
Threshold (City of Fountain Valley GP Buildout)	2,564,479	89,688	28.6

Source: EPD 2020.

Table T-9 shows the Citywide VMT/SP without and with the project. The VMT shown is calculated using the "boundary method", which captures only VMT within the City limits. As seen in Table T-9, in the baseline condition the Citywide VMT/SP would decrease by 0.06 with the project. In the future cumulative condition, the Citywide VMT/SP would decrease by 0.15.

Table T-9: Project Effect on VMT

Scenario	2020	2045
Fountain Valley VMT (No Project)	1,792,708	1,915,849
Population	85,679	89,688
Fountain Valley (No Project) VMT/SP	20.92	21.36
Fountain Valley VMT with Project	1,792,387	1,907,086
Fountain Valley VMT/SP with Project	20.86	21.21
Change in VMT/SP	**-0.06**	**-0.15**

Source: EPD 2020.

Based on the data in Tables T-7 through T-9, the project would result in a less than significant impact related to VMT.

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

Less Than Significant Impact. The project includes development of single-family residences and a park facility. The project includes community type uses and does not include any incompatible uses, such as farm equipment. The proposed project area would be accessed from two locations on Finch Avenue through the onsite streets to each residence.

The project would also not increase any hazards related to a design feature. All of the onsite streets would be developed in conformance with City design standards. The City's construction permitting process includes review of project plans to ensure that no potentially hazardous transportation design features would be introduced by the project. For example, the design of the project streets would be reviewed to ensure fire engine accessibility and turn around area is provided to the fire code standards. As a result, impacts related to vehicular circulation design features would be less than significant.

d) Result in inadequate emergency access?

Less than Significant Impact.

Construction
The proposed construction activities, including equipment and supply staging and storage, would occur within and adjacent to the project area on Finch Avenue, which is a dead-end, and would not restrict access of emergency vehicles to the project site or adjacent areas. The installation of driveways and connections to existing infrastructure systems that would be implemented during construction of the proposed project could require the temporary closure of the end of Finch Avenue. As the road is a dead-end and does not provide access past the project site, traffic detours are not expected to be necessary. In addition, the construction activities would be required to ensure emergency access in accordance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), which would be ensured through the City's permitting process. Thus, implementation of the project through the City's permitting process would ensure existing regulations are adhered to and would reduce potential construction related emergency access impacts to a less than significant level.

Operation
As described previously, the proposed project area would be accessed from two locations on Finch Avenue through the onsite streets to each residence. Permitting of these roadways would provide adequate and safe circulation to, from, and through the project are and would provide two routes for emergency responders to access different portions of the project area. Because the project is required to comply with all applicable City codes, as verified by the City potential impacts related to inadequate emergency access would be less than significant.

Existing Plans, Programs, or Policies

PPP HAZ-1: Fire Code. As listed previously in Section 9, *Hazards and Hazardous Materials*.

Mitigation Measures

None.

Sources

Traffic Impact Analysis prepared by EPD Solutions, 2020.

City of Fountain Valley Circulation Element, 2008. Accessed: https://www.fountainvalley.org/DocumentCenter/View/513/Chapter-3-Circulation-Element-June-2-2008

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. TRIBAL CULTURAL RESOURCES.				
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:				
a) 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)?	☐	☐	☒	☐
b) 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?	☐	☒	☐	☐

The discussion below is based on the Department of Parks and Recreation Primary Record Forms, prepared by Urbana Preservation & Planning, LLC, 2020 (DPR 2020), included as Appendix B; and the Phase 1 Cultural and Paleontological Resources Assessment, prepared by Material Culture Consulting, 2020 (MCC 2020), included as Appendix C.

AB 52 and SB 18 Requirements

The project would be required to comply with AB 52 and SB 18 regarding tribal consultation. Chapter 532, Statutes of 2014 (i.e., AB 52), requires that Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register or included in a local register of historical resources (PRC Section 21074). AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource falling outside the definition stated above nonetheless qualifies as a "tribal cultural resource."

SB 18 requires cities and counties acting as Lead Agency to contact and consult with California Native American tribes before adopting or amending a General Plan. The intent of SB 18 is to establish meaningful consultation between tribal governments and local governments at the earliest possible point in the planning process and to enable tribes to manage "cultural places." Cultural places are defined as a Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9), or a Native American historic, cultural, or

sacred site, that is listed or may be eligible for listing in the California Register, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC Section 5097.993).

In compliance with these requirements, on April 16, 2020, the City sent letters to the following Native American tribes that may have knowledge regarding tribal cultural resources in the project vicinity.

- Gabrieliño-Tongva Tribe
- Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Gabrieleño Band of Mission Indians – Kizh Nation
- Gabrieleño/Tongva Indians of California Tribal Council
- Juaneno Band of Mission Indians
- Juaneno Band of Mission Indians Acjachemen Nation
- Juaneno Band of Mission Indians Acjachemen Nation – Romero
- Soboba Band of Luiseno Indians

Two responses were received: Mr. Andrew Salas, Chairman of the Gabrieleño Band of Mission Indians – Kizh Nation and Ms. Joyce Stanfield Perry, Payomkawichum Kaamalam - President Juaneño Band of Mission Indians, Acjachemen Nation Tribal Manager, Cultural Resource Director. A conference call between the City and Mr. Salas occurred on July 1, 2020 during which the history of the area was discussed; the project location area was within Rancho Las Bolsas and trade routes were known to exist around the project area. Mr. Salas emailed suggested mitigation measures and additional information, including historic maps and aerials of the project site, documents from historic books, and explanatory text substantiating cultural significance of the area based on the information verbally explained during the phone consultation. An email response was received from Ms. Stanfield Perry on June 4, 2020 stating acceptance with the draft mitigation measures presented by the City. Ms. Stanfield asked that all culturally affiliated tribes be given equal consideration when it comes to monitoring.

In addition, as part of the Phase 1 Cultural and Paleontological Resources Assessment (MCC 2020) a Sacred Lands File search was requested from the NAHC on January 9, 2020. The NAHC responded on January 15, 2020, stating that there are no known sacred lands within a 1 mile radius of the project site, and requested that 22 Native American individuals be contacted for further information regarding the general area vicinity.

In compliance with the NAHC request, on January 15, 2020, letters were sent to all of the 22 Native American tribes that may have knowledge regarding tribal cultural resources in the project area. Additional attempts at contact by letter, email, or phone call were made on February 3, 2020 and February 12, 2020. Three responses were received.

- A representative for the Agua Caliente Band of Cahuilla Indians (ACBCI) provided an email stating that a records check of the ACBCI's cultural registry revealed that the project site is not located within the Tribe's Traditional Use Area, and deferred to other tribes in the area.
- A representative for the Rincon Band of Luiseño Indians provided a letter stating that the project site is not within Luiseño Aboriginal Territory.
- A representative for the Gabrieleno Band of Mission Indians – Kizh Nation provided a letter stating the proposed project is within their Ancestral Tribal Territory and requested to schedule consultation with the City; refer to the discussion above.

a) 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)?

Less Than Significant Impact. As detailed previously in Section 5, *Cultural Resources*, the project site was used for agricultural purposes prior to its development for an elementary school, which was in operation between 1971 and 2012. The Department of Parks and Recreation Primary Record form prepared for the project details that the site does not meet any of the historic resource criteria and does not meet the definition of an historical resource pursuant to CEQA (DPR 2020).

In addition, the Phase 1 Cultural and Paleontological Resources Assessment prepared for the project included a search of the California Historical Resource Information System (CHRIS) at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton, and did not identify any historical resources as defined in Public Resources Code section 5020.1(k) on the project site. Furthermore, the Sacred Lands File search completed by the NAHC stated that there are no known sacred lands within a 1-mile radius of the project site. Therefore, no substantial evidence exists that tribal cultural resources are present in the project site, and potential impacts would be less than significant.

b) 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. The project site is developed with a school facility, and as discussed in Impact TCR-1 above, no substantial evidence exists that tribal cultural resources are present in the project site.

However, the search of the CHRIS at the SCCIC at California State University, Fullerton identified that a prehistoric human burial was recovered less than 0.5-mile southeast of the project site and that ground disturbing activities along the I-405 have encountered human remains during a widening project for the highway, which is located less than 1-mile northeast of the project site. Although Native American tribal cultural resources are not known to occur on the project site, through the consultation process, the parties agreed to impose mitigation measures to mitigate potential impacts to previously unidentified TCRs. Therefore, to avoid potential adverse effects to tribal cultural resources, Mitigation Measure TCR-1 has been included to provide for Native American monitoring of excavation and grading activities to avoid potential impacts to inadvertent discovery of tribal cultural resources, human remains, and funerary object that may be unearthed by project construction activities.

Additionally, as described previously and included as PPP CUL-1, California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation. If the coroner determines that the remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Therefore, with implementation of Mitigation Measure TCR-1 and the existing regulations, impacts to TCRs would be less than significant.

Existing Plans, Programs, or Policies

PPP CUL-1: Human Remains. Listed previously in Section 5, Cultural Resources.

Mitigation Measures

Mitigation Measure TCR-1: Native American Monitoring. Prior to the issuance of a permit for initial site clearing (such as pavement removal, grubbing, tree removals) or issuance of the first grading permit allowing ground-disturbing activities (including boring, grading, excavation, drilling, potholing or auguring, and trenching) the applicant shall provide a letter to the City Planning Department, or designee, from a qualified Native American Monitor(s) who has been approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government (Tribe) indicating that they have been retained to be present on-site during site clearing, excavation, and grading activities. The monitor shall be present at the pre-grading conference to conduct a Native American Indian Sensitivity Training for construction personnel. The training session shall include a handout and focus on how to identify Native American resources encountered during earthmoving activities and the procedures followed if resources are discovered. The Native American monitor(s) shall complete monitoring logs on a daily basis, providing descriptions of the daily activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when grading and excavation activities of native soil (i.e., previously undisturbed) are completed, or when the tribal representatives and monitor have indicated that the site has a low potential for tribal cultural resources, whichever occurs first.

Inadvertent discovery: In the event that tribal cultural resources are inadvertently discovered during ground-disturbing activities, work shall be halted within 50 feet of the find until it can also be evaluated by a qualified archaeologist in cooperation with a Native American monitor to determine if the potential resource meets the CEQA definition of historical (State CEQA Guidelines 15064.5(a)) and/or resource (Public Resources Code 21083.2(g)). Construction activities could continue in other areas. If the find is considered an "archeological resource" the archaeologist, in cooperation with a Native American monitor shall pursue either protection in place or recovery, salvage and treatment of the deposits. Recovery, salvage and treatment protocols shall be developed in accordance with applicable provisions of Public Resource Code Section 21083.2 and State CEQA Guidelines 15064.5 and 15126.4. If unique a tribal cultural resource cannot be preserved in place or left in an undisturbed state, recovery, salvage and treatment shall be required at the project applicant's expense. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation in an established accredited professional repository.

Human remains and funerary remains: Upon discovery of human remains, the tribal and/or archaeological monitor/consultant shall immediately divert work at a minimum of 150 feet from the discovery and place an exclusion zone around the discovery location. The monitor/consultant(s) shall then notify the Tribe, the qualified lead archaeologist, and the construction manager who shall call the coroner. Work shall continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner shall notify the NAHC as mandated by state law who shall then appoint a Most Likely Descendent (MLD). Funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be

considered as associated funerary objects. Cremation soils are to be treated in the same manner as bone fragments that remain intact.

Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or funerary remains and ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains shall be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a guard should be posted outside of working hours. The Tribe shall make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials shall be removed. The Tribe shall work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations shall either be removed in bulk or by means as necessary to ensure complete recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects shall be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony shall be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

Sources

Phase 1 Cultural and Paleontological Resources Assessment. Prepared by Material Culture Consulting. 2020. (MCC 2020).

Department of Parks and Recreation Primary Record. Prepared by Urbana Preservation & Planning, LLC. 2020 (DPR 2020)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
19. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

a) Require or result in the relocation or construction of new or expanded water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact.

Water Infrastructure

The proposed project would redevelop the project site, which is currently served by the City's water infrastructure. An existing 8-inch water pipeline in Finch Avenue currently provides water supplies to the project site. The proposed project would install new 8-inch water lines on the project site that would connect to the existing 8-inch water pipeline in Finch Avenue and would install an 8-inch water line along the pedestrian bridge to connect to an existing 8-inch line in Mt. Cimarron Street. The new onsite water system would convey water supplies to the proposed residences and landscaping through plumbing/landscaping fixtures that are compliant with the CalGreen Plumbing Code for efficient use of water.

The proposed project would continue to receive water supplies through the existing 8-inch water lines located within the Finch Avenue and Mt. Cimarron Street rights-of-ways that have the capacity

to provide the increased water supplies needed to serve the proposed project, and no expansions of the water pipelines that convey water to the project site would be required. Installation of the new water distribution lines, including under the pedestrian bridge, would only serve the proposed project and would not provide new water supplies to any off-site areas.

The construction activities related to the onsite water infrastructure that would be needed to serve the proposed single-family residences and park is included as part of the proposed project and would not result in any physical environmental effects beyond those identified throughout this MND. For example, construction emissions for excavation and installation of the water infrastructure is included in Sections 3, *Air Quality* and 8, *Greenhouse Gas Emissions*. Therefore, the proposed project would not result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and impacts would be less than significant.

Wastewater Infrastructure
The project site is currently served by the existing 8-inch sewer line within Finch Avenue. The project includes installation of onsite 8-inch sewer lines that would connect to the existing 8-inch sewer line in Finch Avenue. The project also includes installation of a sewer lift station at the northern end of the project site to convey wastewater flows to the existing sewer line in Finch Avenue.

The construction activities related to installation of the onsite sewer infrastructure that would serve the proposed project, is included as part of the proposed project and would not result in any physical environmental effects beyond those identified throughout this MND. For example, construction emissions for excavation and installation of the sewer infrastructure is included in Section 3, *Air Quality* and 8, *Greenhouse Gas Emissions*, and noise volumes from these activities are evaluated in Section 13, *Noise*. As the proposed project includes facilities to serve the proposed development, it would not result in the need for construction of other new wastewater facilities or expansions, the construction of which could cause significant environmental effects. Therefore, impacts would be less than significant.

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 proposed project would result in an increased demand for water supplies from the 74 single-family residential units. The City's 2015 Urban Water Management Plan details that in 2015 the water demand in the City for residential uses was 122 gallons per day per capita, which was lower than the City's 2020 water use target of 142 gallons per capita per day. To provide a conservative estimate of project water use, a generation rate of 142 gallons per capita per day was used to estimate water demand from the proposed project. As described in Section 14, *Population and Housing*, the proposed project would result in 221 additional residents at full occupancy. Based on the City's 2020 water use target of 142 gallons per capita per day, the 221 additional residents would generate a water demand of 31,382 gallons per day (35.15 acre-feet per year). The project would limit water demand by inclusion of low-flow plumbing and irrigation fixtures, pursuant to the California Title 24 requirements, and by reusing treated rainwater to irrigate the park area, as detailed in the Project Description.

As listed previously in Table WQ-1 in Section 10, *Hydrology and Water Quality*, the City's 2015 UWMP anticipates an increase in water demand and supply of 963 acre-feet between 2020 and

2025. The project's demand of 35.15 acre-feet equates to 3.7 percent of the anticipated increase in the five years. Therefore, the City would have water supplies available to serve the project.

In addition, the City's 2015 UWMP details the available supply, including groundwater, imported water, and recycled water would meet the projected demand during normal, single dry and multiple dry years. Therefore, impacts related to water supplies from the proposed project would be less than significant.

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

Less than Significant Impact. The City operates and maintains the local sewer collection pipes that feed into the Orange County Sanitation District's (OCSD) trunk sewer system to convey wastewater to OCSD's wastewater treatment plant No. 1 in Fountain Valley that has a capacity of 320 million gallons per day (MGD). In 2019, the estimated average daily flow received at the wastewater treatment plant No. 1 was 120 MGD. Thus, the plant has additional capacity of 200 MGD.

Based on OCSD's wastewater generation rate of 1,488 gallons per day per acre of low density residential, the proposed project would generate approximately 17,856 gallons per day, which would be within the capacity of wastewater treatment plant No. 1. In addition, the flows generated by the project would replace the pre-existing flows that were generated by the school, which would be accommodated by the existing offsite sewer system. Therefore, impacts related to wastewater system capacity would be less than significant.

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. In 2018, a large majority (over 98 percent) of the solid waste from the City of Fountain Valley, which was disposed of in landfills, went to the Frank Bowerman Sanitary Landfill (Calrecycle 2020). The Frank Bowerman Sanitary Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In September 2019, the maximum tonnage received was 9,967 tons. Thus, the facility had additional capacity of approximately 1,533 tons per day (Calrecycle 2020).

Construction

Project construction would generate solid waste for landfill disposal in the form of demolition debris from the existing buildings and infrastructure that would be removed from the site. Demolition waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Construction waste in the form of packaging and discarded materials would also be generated by the proposed project. Utilizing a construction waste factor of 4.34 pounds per square foot (EPA 2003), demolition of the 40,073 square feet of school buildings would generate approximately 87 tons of waste during demolition and additional waste during construction, which would occur over a 16-month period. However, Section 5.408.1 of the 2016 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Thus, the demolition and construction solid waste that would be disposed of at the landfill would be approximately 35 percent of the waste generated. Therefore, demolition activities, which would generate the most solid waste would generate approximately 30.45 tons of solid waste. As shown in Table 4 of the Project Description section, demolition activities would occur over 20 working days (4 week) period. This equates to approximately 1.5 tons of debris per day.

As described above, the Frank Bowerman Sanitary Landfill had additional capacity of approximately 1,533 tons per day. Therefore, the facility would be able to accommodate the addition of 1.5 tons of waste per day during demolition of the proposed project.

Operation
The CalEEMod solid waste generation rate for single-family residential land use is 0.41 tons per resident per year. As described previously, full occupancy of the proposed project would generate approximately 221 residents. Thus, operation of the project would generate approximately 90.61 tons per solid waste per year; or 1.74 tons per week. However, at least 75 percent of the solid waste is required by AB 341 to be recycled, which would reduce the volume of landfilled solid waste to approximately 870 pounds per week. As the Frank Bowerman Sanitary Landfill has additional capacity of approximately 1,533 tons per day, the solid waste generated by the project would be within the capacity of the landfill. Thus, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and the project would not impair the attainment of solid waste reduction goals. Impacts related to landfill capacity would be less than significant.

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

No Impact. The proposed project would result in new development that would generate an increased amount of solid waste. All solid waste-generating activities within the City is subject to the requirements set forth in Section 5.408.1 of the 2016 California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, and AB 341 that requires diversion of a minimum of 75 percent of operational solid waste. Implementation of the proposed project would be consistent with all state regulations, as ensured through the City's development project permitting process. Therefore, the proposed project would comply with all solid waste statute and regulations; and impacts would not occur.

Existing Plans, Programs, or Policies

PPP E-1: CalGreen Compliance. As listed previously in Section 6, *Energy*.

PPP UT-1: AB 341. Implementation of the project shall comply with AB 341 that would divert a minimum of 75 percent of operational solid waste from landfill facilities.

Mitigation Measures

None.

Sources

California Emissions Estimator Model Appendix D Default Data Tables. Table 10.1 Solid Waste Disposal Rates. Accessed: http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2

CalReycyle Solid Waste Information System. Accessed at:
http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx

CalReycyle Disposal Reporting System: Jurisdiction Tons by Facility. Accessed at: https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility

City of Fountain Valley 2015 Urban Water Management Plan. Accessed: https://www.fountainvalley.org/DocumentCenter/View/4184/DRAFT-Fountain-Valley-UWMP-May-2016_Rev1?bidId=

Orange County Sanitation District Design and Construction Requirements For Sanitary Sewers. Accessed: https://www.ocsd.com/Home/ShowDocument?id=28159

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
20. WILDFIRES. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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

No Impact. The project site is developed and within an urbanized residential area of the City of Fountain Valley. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas. According to the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. Also, as described previously, the proposed project area would be accessed from two locations on Finch Avenue through the onsite streets to each residence. Permitting of these roadways would provide adequate and safe circulation to, from, and through the project area and would provide two routes for emergency responders to access different portions of the project area. Because the project is required to comply with all applicable City codes, as verified by the City, potential impacts related to an emergency response or evacuation would be less than significant.

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. The project site is developed and within an urbanized residential area of the City of Fountain Valley. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas, and as determined by the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. In addition, the project site is flat and within

a flat area. The site is adjacent to a roadway, a concrete flood control channel, commercial and residential development. There are no factors on or adjacent to the project site that would exacerbate wildfire risks. Thus, no impact related to other factors that would expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would occur from the project.

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 described previously, the project site is developed and within a developed and urban area that is not within a wildfire hazard zone. The project does not include any infrastructure that would exacerbate fire risks. In addition, the project would provide internal streets and fire suppression facilities (e.g., hydrants and sprinklers) that conform to the California Fire Code requirements, included as Municipal Code Chapter 17.02.20, as verified through the City's permitting process. Therefore, impacts related to infrastructure that could exacerbate fire risks would not occur with the proposed project.

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 described previously, the project site is developed and within a developed and urban area that is not within a wildfire hazard zone. In addition, the project site is flat and surrounded by flat areas. There are no slope or hillsides that would become unstable. In addition, the project would install onsite drainage that would be conveyed to the existing flood control channel, which is consistent with the existing condition. Therefore, impacts related to flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would not occur from the proposed project.

Existing Plans, Programs, or Policies

PPP HAZ-1: Fire Code. As listed previously in Section 9, *Hazards and Hazardous Materials*.

Mitigation Measures

None.

Sources

California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Map. Accessed: https://forestwatch.maps.arcgis.com/apps/Styler/index.html?appid=5e96315793d445419b6c96f89ce5d153

21. MANDATORY FINDINGS OF SIGNIFICANCE.	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☒	☐
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)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

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 described in Section 4, *Biological Resources*, the project site is located within an urban area and currently developed with a school facility and contains paved surfaces and ornamental landscaping. No endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS) occur on the site. The proposed project would redevelop the project site with single-family residences, which would include installation of new ornamental landscaping. As no sensitive species or habitats are located within the urban and developed site, implementation of the project would not reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or impact a plant or animal community.

As described in Section 5, *Cultural Resources*, the project site does not contain any buildings or structures that meet any of the California Register of Historical Resources (California Register) criteria or qualify as "historical resources" as defined by CEQA. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource. However, the Phase 1 Cultural and Paleontological Resources Assessment determined that the potential for archaeological resources to be located within the project site is moderate. Thus, Mitigation Measure

CUL-1 has been included to require archaeological monitoring during all initial ground-disturbance activities up to three feet below the ground surface. Implementation of Mitigation Measure CUL-1 would reduce potential impacts to important examples of California prehistory to a less than significant level.

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 with Mitigation Incorporated. The project would redevelop the project site for single-family residences within a developed area. The project would provide land uses that are consistent with the adjacent single-family residential and retail commercial uses. As described above, all of the potential impacts related to implementation of the project would be less than significant or reduced to a less than significant level with implementation of mitigation measures that are imposed by the City that effectively reduce environmental impacts.

The City has identified 4 cumulative projects, which include the following:

1. Fountain Valley Retail Project (18050 Brookhurst Street)
2. Arco Hydrogen Station (18480 Brookhurst Street)
3. 7 Leaves Restaurant (10065 Garfield Avenue)
4. Plant Power Fast Food (18976 Brookhurst Street)

Like the proposed project, the 4 cumulative projects involve redevelopment of parcels within the existing urban environment. The cumulative projects are located on arterial roadways, and as detailed in Section 17, *Transportation*, the cumulative projects would not generate a cumulative traffic impact with implementation of the proposed project. Additionally, the cumulative projects consist of retail, gas station, and restaurant uses, which would complement the proposed single-family residential uses.

The other cumulative effects of the proposed project taken into consideration with these other projects would be limited, because the project site and cumulative project sites have already been developed and disturbed and the new uses onsite would not result in substantial change in the urban use of the area. As the project was previously used as a school facility, the existing public services and utility infrastructure are in place to serve the project and would not result in cumulatively considerable increases in service and utility needs to serve the project. Similarly, the project would provide an onsite park that would provide for recreational needs that would reduce the cumulative need for park facilities to a less than significant level. In addition, the project would not result in substantial effects to any environmental resource topic, as described throughout this document.

Overall, the proposed project would develop an area that has been subject to previous urban uses, is disturbed, and is surrounded by consistent development, a roadway, and a flood control channel. Impacts to environmental resources or issue areas would not be cumulatively considerable; and cumulative impacts would be less than significant with implementation of the previously identified mitigation measures related to cultural resources, paleontological resources, hazardous materials, and tribal cultural resources.

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

Less than Significant with Mitigation Incorporated. The project proposes redevelopment of the project site for single-family residential uses. As described previously, the project site is within an urban area and surrounded by consistent land uses. The project would not consist of any use or any activities that would result in a substantial negative affect on persons in the vicinity. This includes potential impacts related to construction, concrete crushing, demolition, and the proposed residential activities. All resource topics associated with the proposed project have been analyzed in accordance with CEQA and the State CEQA Guidelines and were found to pose no impacts or less-than-significant impacts with implementation of mitigation measures related to cultural resources, paleontological resources, hazardous materials, and tribal cultural resources; and existing plans, programs, or policies that are required by the City. Consequently, the proposed project would not result in environmental effects that would cause substantial adverse effects on human beings directly or indirectly, and impacts would be less than significant with mitigation.

Existing Plans, Programs, or Policies

As listed in previous responses.

Mitigation Measures

As listed in previous responses.

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