January 2016 | Negative Declaration

ESENCIA K–8 SCHOOL

Capistrano Unified School District

Prepared for:

Capistrano Unified School District
Contact: John Stocks
Construction Manager
33122 Valle Road
San Juan Capistrano, California 92675
949.234.9543

Prepared by:

PlaceWorks
Contact: Alice Houseworth, AICP, LEED AP
Senior Associate
3 MacArthur Place, Suite 1100
Santa Ana, California 92707
714.966.9220
info@placeworks.com
www.placeworks.com

PLACEWORKS

CAPISTRANO UNIFIED SCHOOL DISTRICT

CAPISTRANO UNIFIED SCHOOL DISTRICT

33122 VALLE ROAD, SAN JUAN CAPISTRANO CA 92675
TELEPHONE: (949) 234-9200/FAX: 496-7681 www.capousd.org

NEGATIVE DECLARATION

The Capistrano Unified School District (CUSD or District) has completed an Initial Study for the Esencia K–8 School. The Initial Study was completed in accordance with the California Environmental Quality Act (CEQA, California Public Resources Code §§ 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations §§ 15000 et seq.).

The Initial Study concluded that the project would not have a significant effect on the environment. Accordingly, this Negative Declaration (ND) has been prepared for the proposed project.

LEAD AGENCY and PROJECT PROPONENT: Capistrano Unified School District

PROJECT TITLE: Esencia K–8 School

PROJECT LOCATION: The school site is in Subarea 2.1 of the Ranch Plan. The Ranch Plan is an approximately 22,815-acre Rancho Mission Viejo planned community in southeastern Orange County and is currently under construction by the Rancho Mission Viejo Company (RMV). The Ranch Plan is bordered by the planned community of Ladera Ranch and the cities of San Juan Capistrano and San Clemente on the west; the planned community of Coto de Caza and the City of Rancho Santa Margarita on the north; the United States Marine Corps Base Camp Pendleton in San Diego County on the south; and Caspers Wilderness Park, the Cleveland National Forest, and several private properties in Riverside and San Diego counties on the east. The property is not currently listed with the County Assessor's Office; the coordinates for center of site are: latitude N33°31'59", longitude W117°35'56".

PROJECT DESCRIPTION: The project consists of the construction and operation of a 16-acre K–8 school and 4-acre shared/joint use facilities. The school campus would have 50 classrooms for 1,236 Kindergarten through 8th grade students, along with an administration/kitchen/multipurpose building, lunch shelters, hardcourts and playgrounds, a soccer field, and two parking lots. The shared/joint-use facilities would include sports fields (soccer and baseball), a multipurpose building and play area, and a parking lot. Temporary portable classrooms would be installed on the Esencia K–8 campus to accommodate a maximum of approximately 400 students until a new school is constructed in Planning Area 3 of the Ranch Plan. The portables would be removed after the PA 3 school is open.

EXISTING CONDITIONS: RMV is currently constructing Planning Subarea 2.1; paved roads, utilities, street landscaping, and model homes, and other community facilities are complete. The project site has been rough graded and is a flat dirt lot surrounded by chain-link fence.

SUMMARY OF IMPACTS: The attached Initial Study was prepared to identify the potential effects on the environment from the construction and operation of the Esencia K–8 School and shared/joint-use facilities. Based on the environmental analysis, the proposed project would have no impacts or less-than-significant environmental impacts associated with all CEQA checklist environmental topics:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soil
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

January 2016 | Initial Study

ESENCIA K–8 SCHOOL

Capistrano Unified School District

Prepared for:

Capistrano Unified School District
Contact: John Stocks,
Construction Manager
33122 Valle Road
San Juan Capistrano, California 92675
949.234.9543

Prepared by:

PlaceWorks
Contact: Alice Houseworth, AICP, LEED AP, Senior Associate
3 MacArthur Place, Suite 1100
Santa Ana, California 92707
714.966.9220
info@placeworks.com
www.placeworks.com

PLACEWORKS

Table of Contents

Table of Contents

Table of Contents

List of Figures

List of Tables

Abbreviations and Acronyms

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

Abbreviations and Acronyms

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

Abbreviations and Acronyms

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

Abbreviations and Acronyms

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

Abbreviations and Acronyms

This page intentionally left blank.

1. Introduction

1.1 OVERVIEW

The Capistrano Unified School District (CUSD or District) proposes to construct a new school to provide a neighborhood facility for the 14,000 residential units currently being constructed in Planning Area 2 of "The Ranch Plan" planned community. The school would provide seats for 1,236 kindergarten through 8th grade students.

The proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA). This initial study has a detailed evaluation of the potential environmental consequences associated with this proposed project.

1.2 ENVIRONMENTAL PROCESS

A "project," which is an activity that may cause a direct or indirect physical change in the environment, is required to undergo environmental review. The completion of the environmental compliance process is governed by two principal regulations: California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] §§ 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] §§ 15000 et seq.). CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of proposed activities and to identify ways to avoid or reduce the environmental effects through feasible alternatives or mitigation measures. Compliance with CEQA applies to California government agencies at all levels: local, regional, and state agencies, boards, commissions, and special districts (such as school districts and water districts). The CUSD is the lead agency for this project and is therefore required to conduct an environmental review to analyze the potential environmental effects associated with the proposed project.

PRC Section 21080(a) states that analysis of a project's environmental impact is required for any "discretionary projects proposed to be carried out or approved by public agencies…." In this case, CUSD would approve and carry out the proposed project and has, therefore, prepared this initial study to determine whether there is substantial evidence that implementation of the project would result in significant environmental impacts. An initial study is a preliminary environmental analysis to determine whether an environmental impact report (EIR), a mitigated negative declaration (MND), or a negative declaration (ND) is required for a project (CEQA Guidelines § 15063). An initial study is required to contain a project description; a description of the environmental setting; an identification of environmental effects by checklist or other similar form; an explanation of environmental effects; a discussion of mitigation for significant environmental effects; an evaluation of the project's consistency with existing, applicable land use controls; the names of persons who prepared the study; and identification of data sources.

When an initial study identifies the potential for significant environmental impacts, the lead agency must prepare an EIR (CEQA Guidelines § 15064); however, if all impacts can be mitigated to a less-than-significant level, the lead agency can prepare an MND that incorporates mitigation measures into the project (CEQA Guidelines § 15070).

1.3 NEGATIVE DECLARATION AND SUPPORTING INITIAL STUDY

This initial study was prepared to determine if the proposed project would have a significant impact on the environment. The purposes of the initial study is to 1) provide the lead agency with information to use as the basis for deciding the proper type of CEQA document to prepare; 2) enable the lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration; 3) assist the preparation of an EIR, if one is required; 4) facilitate environmental assessment early in the design of a project; 5) provide documentation of the factual basis for the findings in an MND or ND; 6) eliminate unnecessary EIRs; and 7) determine if the project is covered under a previously prepared EIR (CEQA Guidelines § 15063).

The conclusions in this initial study are that the proposed project would have no significant environmental impacts. Based on this conclusion the District has determined that a ND is the appropriate level of environmental documentation for the proposed project.

1.4 IMPACT TERMINOLOGY

The following terminology is used to describe the level of significance of impacts.

- A finding of ***no impact*** is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.

- An impact is considered ***less than significant*** if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.

- An impact is considered ***less than significant with mitigation incorporated*** if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments or other enforceable mitigation measures.

- An impact is considered ***potentially significant*** if the analysis concludes that it could have a substantial adverse effect on the environment. If any impact is identified as potentially significant, an EIR would need to be prepared.

1.5 ORGANIZATION OF THE IS/ND

- The contents and format of this report are designed to meet the requirements of CEQA. All references and individuals cited in this CEQA Initial Study are shown in footnotes.

1. Introduction

This report contains the following sections:

- **Section 1, Introduction,** identifies the purpose and scope of the ND and supporting Initial Study and the terminology used.
- **Section 2, Environmental Setting,** describes the existing conditions, surrounding land uses, general plan designations, and existing zoning at the proposed project site and surrounding area.
- **Section 3, Project Description,** identifies the location, background, and describes the proposed project in detail.
- **Section 4, Environmental Checklist,** presents the CEQA checklist and the impact significance finding for each environmental topic.
- **Section 5, Environmental Analysis,** provides an evaluation of the environmental topics and a response to questions contained in the CEQA checklist.
- **Section 6, List of Preparers,** identifies the individuals who prepared the ND and supporting Initial Study and technical studies and their areas of technical specialty.
- **Appendices** present data supporting the analysis or contents of this CEQA Initial Study.

  A Air Quality and Greenhouse Gas Emission Background and Modeling
  B 2015 Geotechnical Investigation and Conceptual Plan Review
  C 2015 Report of Geotechnical Observation and Testing of Rough Grading
  D 2013 Report of Geotechnical Studies and Review of Preliminary Grading Plans
  E 2015 Noise Modeling and 2013 Noise Study
  F 2015 and 2013 Traffic Impact Analysis

1. Introduction

This page intentionally left blank.

2. Environmental Setting

2.1 PROJECT LOCATION

The school site is in Subarea 2.1 of the Ranch Plan. The Ranch Plan is an approximately 22,815-acre Rancho Mission Viejo planned community in southeastern Orange County (see Figure 1, *Regional Location*). All figures are found at the end of this chapter.

The Ranch Plan is bordered by the planned community of Ladera Ranch and the cities of San Juan Capistrano and San Clemente on the west; the planned community of Coto de Caza and the City of Rancho Santa Margarita on the north; the United States Marine Corps Base (MCB) Camp Pendleton in San Diego County on the south; and Caspers Wilderness Park, the Cleveland National Forest, and several private properties in Riverside and San Diego counties on the east (see Figure 2, *Local Vicinity)*. The property is not currently listed with the County Assessor's Office; the coordinates for center of site are: latitude N33°31'59", longitude W117°35'56".

2.2 SITE HISTORY

Rancho Mission Viejo has been a working cattle ranch for 130 years. Portions of the 22,815-acre Ranch Plan are still used for ranching and agriculture. Commercial nursery operations, research and development uses, and natural resources extraction are ongoing activities through lease agreements. Previous extractions of mineral resources from the RMV Planning Area included rock aggregate, silica sand, clay, and expanded aggregate. The Northrop Grumman TRW Capistrano Test Site is on a 2,700-acre leased site in the southern portion of the Ranch Plan adjacent to the City of San Clemente, the Talega Planned Community, and MCB Camp Pendleton.

On November 8, 2004, the Orange County Board of Supervisors approved a general plan amendment (Resolution No. 04-291), zone change (Resolution No. 04-292 and Ordinance No. 04-014), and development agreement (Resolution No. 04-293 and Ordinance No. 04-015) for the 22,815-acre Ranch Plan Planned Community. The board of supervisors selected "Alternative B-10 Modified," a blueprint for the long-term conservation, management, and development of the last large-scale, integrated landholding in south Orange County. This alternative allowed for the construction of 14,000 dwelling units, 3,480,000 square feet of urban activity center uses on 251 acres, 500,000 square feet of neighborhood center uses on 50 acres, and 1,220,000 square feet of business park uses on 80 acres, all of which were proposed to occur on approximately 7,683 acres of the Ranch Plan Planned Community. The balance of the Ranch Plan Planned Community, approximately 15,132 gross acres (or approximately 66.32 percent), was identified for open space uses. The board of supervisors also adopted Resolution No. 04-290, certifying the Ranch Plan Final Program Environmental Impact Report No. 589 (FEIR 589).

The project was subsequently revised based on individual settlement agreements and input from the general public and other agencies. The result was "Alternative B-12," a plan that is consistent with the settlement agreements. Alternative B-12 would retain 16,942 gross acres of the Ranch Plan Planned Community in protected open space and would allow for development activities on 5,873 acres. At the same time, Alternative B-12 provides the same level of housing and nonresidential development as was approved for the B-10 Modified Alternative.

Several other environmental documents have covered various aspects of the project revisions. Most importantly, the "Addendum to FEIR 589: The Ranch Plan – Master Plan and Subarea Plans for Planning Area 2" was approved in 2013. The proposed school site is in Planning Area 2, Subarea 2.1.

Rancho Mission Viejo Company—which developed the communities of Mission Viejo, Rancho Santa Margarita, and Ladera Ranch out of its 312-square-mile ranch holdings—is currently developing the Ranch Plan. The Ranch Plan Planned Community has 13 planning areas, and within each are land use designations for either urban activity center, neighborhood center, business park, golf resort, open space, or residential. Planning Area 1 (Village of Sendero)[1] has three subareas and opened in summer 2013. Planning Area 2 (Village of Esencia)[2] has five subareas and opened model homes in October 2015 (see Figure 3, *Rancho Mission Viejo – Esencia (PA 2).*

Esencia is expected to have approximately 2,800 houses and apartments along the hills east of San Juan Capistrano when completed. Esencia is on some of the highest hills of the Rancho Mission Viejo land

Planning Area 2, Subarea 2.1, has 12 residential neighborhoods; the school site is bordered by neighborhoods 1, 2, and 3 and the future Los Patrones Parkway (see Figure 4, *Land Use – Esencia (PA 2, Subarea 2.1),* and Figure 5, *Conceptual Illustration – Esencia (PA 2, Subarea 2.1)*).[3]

2.3 EXISTING CONDITIONS

RMV Co. is currently constructing Planning Area 2.1; paved roads, utilities, street landscaping, and model homes, and other community facilities are complete. The project site has been rough graded and is a flat dirt lot surrounded by chain-link fence (see Figure 6, *Existing Land Use* and Figures 7a, 7b and 7c, *Site Photographs*).

2.4 SURROUNDING LAND USE

The project site is surrounded by residential home construction associated with development of Subarea 2.1. The site is bordered by paved roads: Aprender Street to the north and east, Andaza Street to the west, and Tierro Road to the south. There are roundabouts at the northwest corner (Aprender Street/Andaza Street) and the southwest corner (Tierro Road/Andaza Street). Farther east at the bottom of a steep hill is the future

[1] Residential, community hall, clubhouse and recreational core, 15-acre community park, neighborhood parks, hiking/biking trails, a 10-acre retail plaza, and fire station.

[2] Residential, school, clubhouse, medical and wellness center, shopping, sports park, trails, indoor/outdoor retreats, Esencia Farm, Oak Canyon, The Canyon House and Canyon Coffee, and community garden.

[3] A new road called Las Patrones Parkway will run north-south on the east side of Esencia, connecting Cow Camp Road and the 241 toll road at Oso Parkway. No date has been set for completion of this road; however the extension of the 241 toll road will not run adjacent to Esencia.

4-lane Los Patrones Parkway, and native habitat is farther east about 400 feet from the site. General vegetation types in that area are grassland and riparian.[4] Riparian habitats are in the Cañada Gobernadora, a 8.5-mile-long tributary to San Juan Creek, and the grassland area is outside the creek. The nearest occupied residential land uses to the project site are about one mile to the southwest near the intersection of Antonio Parkway and Sendero Way, in the Village of Sendero (Ranch Plan PA 1).

2.5 GENERAL PLAN AND EXISTING ZONING

The zoning designation for the site is PC (Planned Community). The site is in Planning Area 2, Subarea 2.1, of the Ranch Plan, which is planned for residential development. Uses permitted include public parkland, a public school site, private recreational areas, and a small amount of neighborhood retail space.[5] The General Plan designation for the site is 1B, Suburban Residential, permitted 0.5 to 18 residential units per acre. Schools are permitted in this designation.

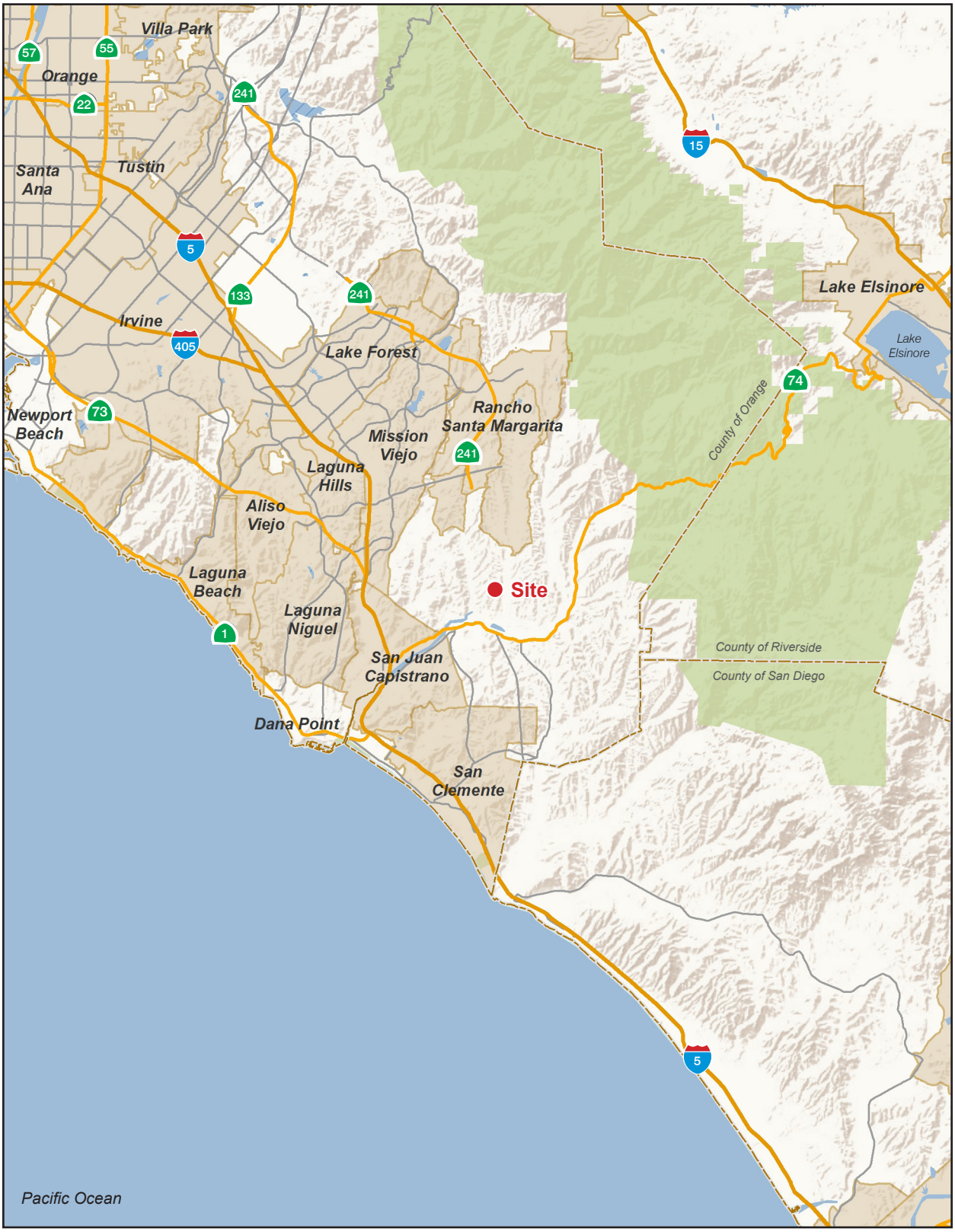
[4] Dudek. 2006, April 17. Southern Orange County Subregion Habitat Conservation Plan Maps: Figure 4-M: Southern NCCP/MSAA/HCP General Vegetation Map.

[5] RMV Community Development, LLC. 2013, March 27. *The Ranch Plan. Planning Area 2. Master Area Plan. Subarea Plans 2.1, 2.2, 2.3 and 2.4*. http://pcpw.ocpublicworks.com/civica/filebank/blobdload.asp?BlobID=45689.

2. Environmental Setting

This page intentionally left blank.

Figure 1 - Regional Location
2. Environmental Setting

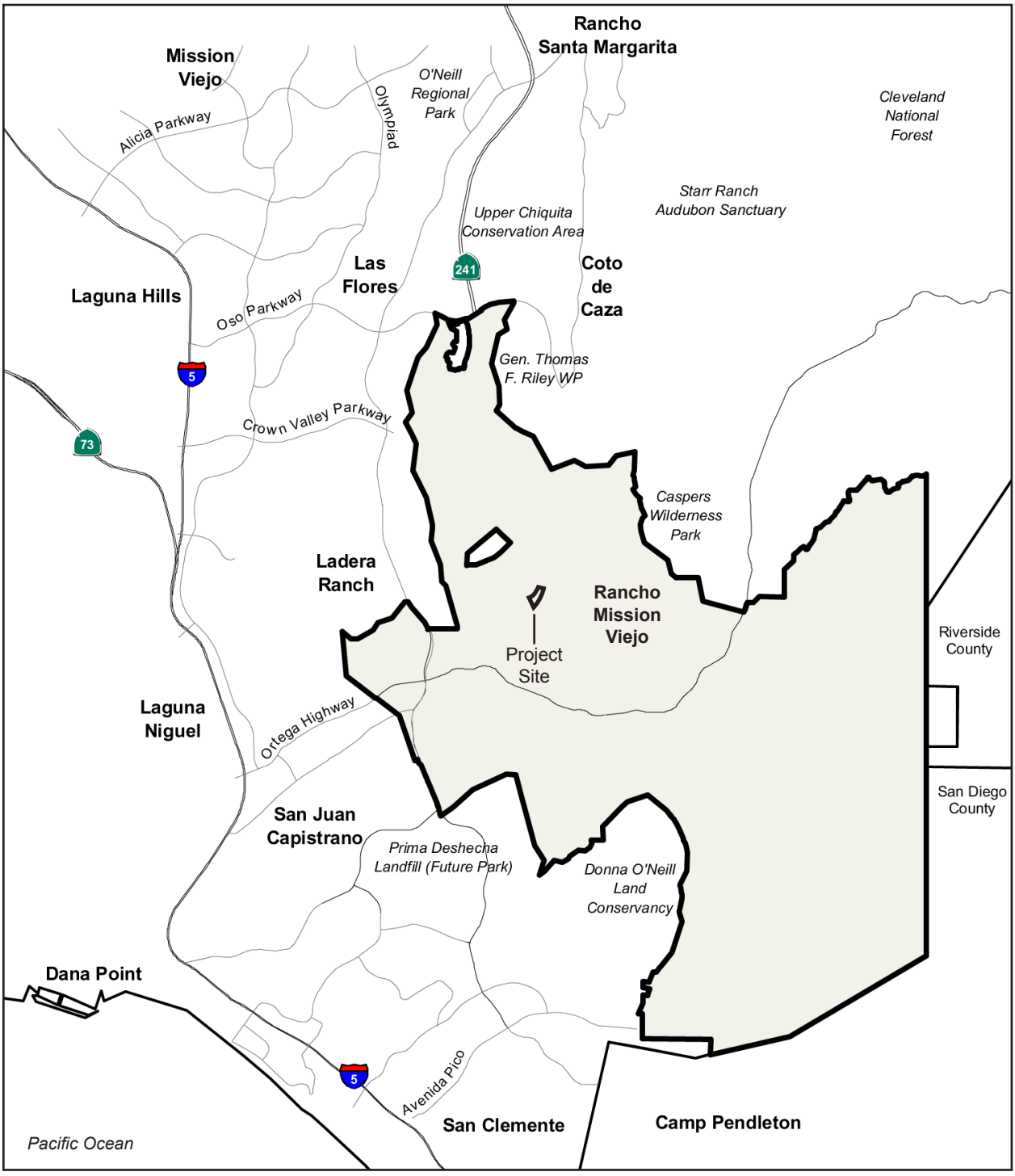


Source: ESRI, 2015

2. Environmental Setting

This page intentionally left blank.

Figure 2 - Local Vicinity
2. Environmental Setting



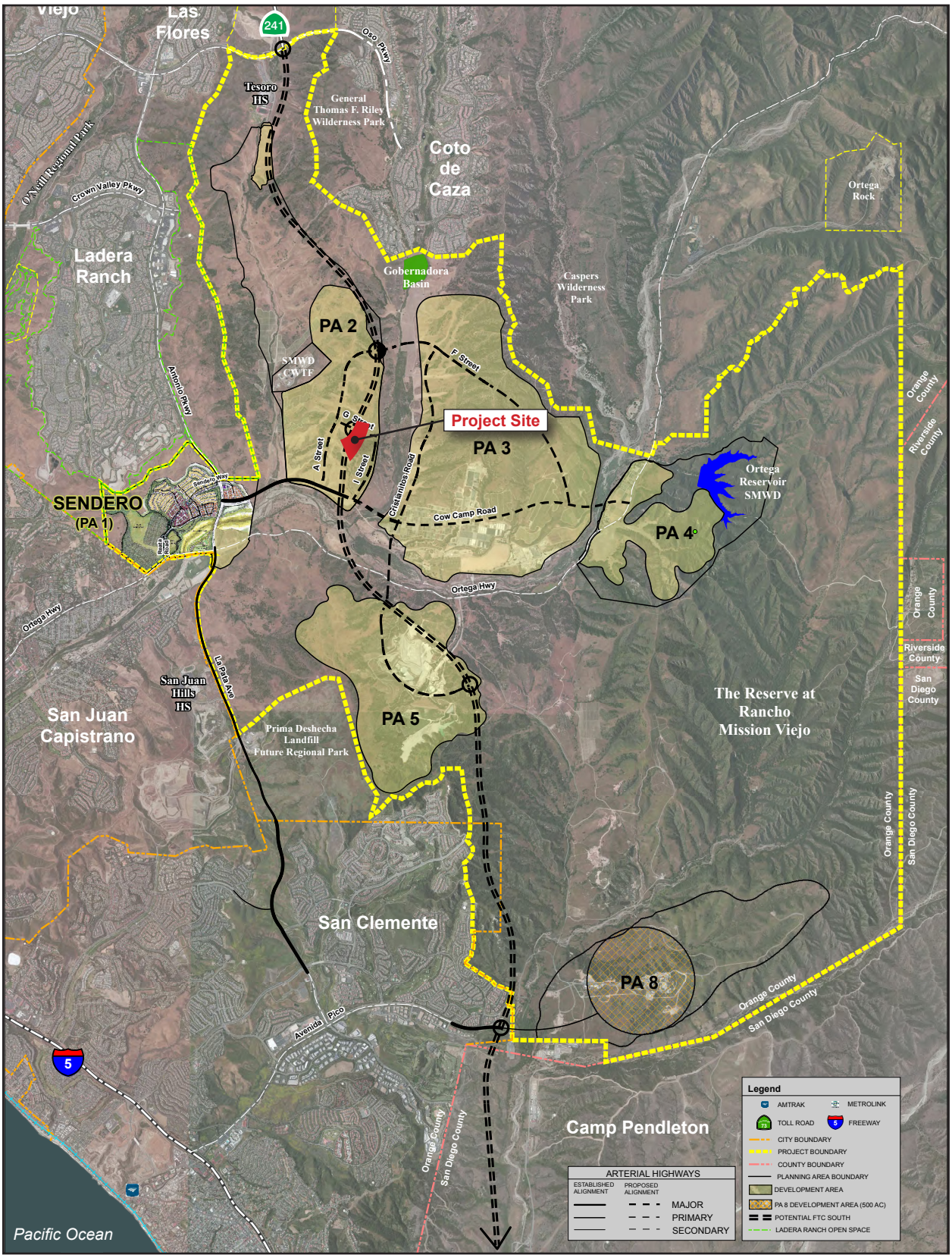
0 10,000
Scale (Feet)

Source: EDAW, Inc., 2004

2. Environmental Setting

This page intentionally left blank.

Figure 3 - Rancho Mission Viejo - Escencia (PA 2)



Source: Rancho Mission Viejo Co., 2015

2. Environmental Setting

This page intentionally left blank.

Figure 4 - Land Use - Escenia (PA 2, Subarea 2.1)

2. Environmental Setting

1 **AURORA** | William Lyon
Approx. 1,340 to 1,931 sq. ft.

2 **TRELLIS** | Warmington
Approx. 1,512 to 1,899 sq. ft.

3 **ARIA** | TRI Pointe
Approx. 1,763 to 1,948 sq. ft.

4 **CITRON** | Ryland
Approx. 1,797 to 2,205 sq. ft.

5 **VENTANA** | Shea
Approx. 2,207 to 2,669 sq. ft.

6 **HEIRLOOM** | Ryland
Approx. 2,351 to 3,233 sq. ft.

7 **CIRRUS** | Meritage
Approx. 2,698 to 3,211 sq. ft.

8 **AUBERGINE** | TRI Pointe
Approx. 3,097 to 3,765 sq. ft.

Gavilán
Exclusively for the 55+

9 **VIREO** | William Lyon
Approx. 1,456 to 1,950 sq. ft.

10 **AVOCET** | Standard Pacific
Approx. 1,473 to 2,110 sq. ft.

11 **CORTESA** | Shea
Approx. 1,816 to 2,362 sq. ft.

12 **ALONDRA** | Shea
Approx. 2,325 to 2,589 sq. ft.

NO SCALE

Source: Rancho Mission Viejo Co., 2015

2. Environmental Setting

This page intentionally left blank.

Figure 5 - Conceptual Illustration - Escenia (PA 2, Subarea 2.1)
2. Environmental Setting

Project Site Boundary

NO SCALE

Source: Rancho Mission Viejo Co., 2015

2. Environmental Setting

This page intentionally left blank.

Figure 6 - Existing Land Use
2. Environmental Setting

Project Boundary

1 Site Photo Location and Number

0 500
Scale (Feet)

Source: Google Earth Pro, 2015

2. Environmental Setting

This page intentionally left blank.

Figure 7a - Site Photographs
2. Environmental Setting

Photo 1

Photo 2

Photo 3

Photo 4

Note: See Figure 6, "Existing Land Use" for Photo Location Key.

2. Environmental Setting

This page intentionally left blank.

Figure 7b - Site Photographs
2. Environmental Setting

Photo 5

Photo 6

Photo 7

Photo 8

Note: See Figure 6, "Existing Land Use" for Photo Location Key.

2. Environmental Setting

This page intentionally left blank.

Figure 7c - Site Photographs
2. Environmental Setting

Photo 9

Photo 10

Photo 11

Photo 12

Note: See Figure 6, "Existing Land Use" for Photo Location Key.

2. Environmental Setting

This page intentionally left blank.

3. Project Description

3.1 PROPOSED PROJECT

The project consists of the construction and operation of a 16-acre K–8 school and 4-acre shared/joint use facilities. The school campus would have 50 classrooms for 1,236 kindergarten through 8th grade students, along with an administration/kitchen/multipurpose building, lunch shelters, hardcourts and playgrounds, a soccer field, and two parking lots. The project also includes shared/joint-use sports fields (soccer and baseball), a multipurpose building, and parking lot.

The District is responsible for construction of the school campus and funding a portion of the shared/joint use facilities. The Rancho Mission Viejo Company would fund and construct the remaining portion of the shared/joint-use facility construction. The Esencia Homeowners Association would be responsible for the long-term maintenance of the shared/joint-use facilities.

The District is seeking clearance under the California Environmental Quality Act and review from the California Department of Education (CDE) and Department of Toxic Substances Control (DTSC). Because students would use the shared/joint-use multipurpose building and sports fields, CDE and DTSC clearances must cover that portion of the site. The "project" is defined as the school campus and the shared/joint-use facilities. All figures are found at the end of this chapter.

3.1.1 School and Shared Facilities

The 16-acre school campus would have facilities as outlined in Table 1 and Figure 8a, *Conceptual Site Plan*.

3. Project Description

Table 1 Project Site Development

Buildings	Classrooms			Building Space	
		Capacity		Room Square Footage (Gross)	Total Square Footage
	Number	Students/Room	Total Students		
School Facilities					
Classrooms	50	--	1,236	--	51,800
Preschool, Transitional Kindergarten, Kindergarten	8	25	150	1,350	8,100
1st Grade	5	25	125	960	4,800
2nd Grade	5	25	125	960	4,800
3rd Grade	5	25	125	960	4,800
4th Grade	5	25	125	960	4,800
5th Grade	5	25	125	960	4,800
6th Grade	4	27	108	960	3,840
7th Grade	4	27	108	960	3,840
8th Grade	4	27	108	960	3,840
Science Lab	2	27	54	1,300	2,600
Special Day Class	3	11	33	960	2,880
Office Space					1,810
Physical Education Support (grades 6–8)					3,475
Administration/Food/Media Center					11,955
Custodial and Building Services					4,515
				Total Building Space	75,850*
Covered Outdoor Spaces					10,303
2 Parking Lots					176 spaces
				School Site Total	16 acres
Shared/Joint-Use Facilities					
Multipurpose Building and Play Area					13,600
Sports Field (soccer & baseball)					25,000
Parking Lot					59 spaces
				Shared/Joint-Use Site Total	4 acres
PROJECT SITE TOTAL					20 acres

Note: Special Day Classes (SDC) serve pupils with severe disabilities whose more intensive educational needs cannot be met in regular classrooms.
*Approximate total, including internal circulation and contingency.

Temporary portable classrooms would be installed on the Esencia K–8 campus to accommodate a maximum of approximately 400 students until a new school is constructed in Planning Area 3 of the Ranch Plan (see Figure 8b, *Conceptual Site Plan (Interim Housing)*). The portables would be removed once the PA 3 school has opened. Construction of Planning Area 3 depends on many factors, including but not limited to the sales of homes in PA 2 and the Orange County economy.

Operation

The proposed campus would have a total capacity of 1,236 students and 48 staff. The school would operate on a traditional two-semester academic calendar from August through June. School hours would be 8:00 AM

through 3:20 PM; some teachers and students may be on campus after school hours. Additionally, some public events may be held on the campus after school hours and/or during some weekends.

Athletic Facilities

The school would have hardcourts and a soccer field and could use the shared/joint-use soccer field and baseball field during school hours.

Access and Parking

The school would have two parking lots with 176 total parking spaces. The staff/overflow lot, on the north side of the campus, would provide 102 spaces, and the visitor/staff lot, along the east side of the site, would provide 74 spaces.

The parent drop-off would be in the east lot, and the bus drop-off would be in the north lot. Vehicular access to the campus would be via three driveways:

- One driveway from Aprender Street to the staff/overflow north lot
- Two driveways from Aprender Street to the visitor/staff east lot

Lighting

Security lighting would be installed in parking lots; along internal roadways, driveways, and walkways; and on building exteriors. No school or shared playfield lighting would be provided.

3.1.2 Shared/Joint-Use Facilities

As shown in Table 1, the shared/joint-use facilities would consist of a multipurpose building, play area, sports fields (soccer and baseball), and 56 space parking lot. The fields would be used by different leagues after school hours (before dark) and on weekends, and the multipurpose building and play area would be used by the community after school hours and on weekends. These facilities would be constructed by the Rancho Mission Viejo Company as part of Subarea 2.1. The Esencia Homeowners Association would be responsible for the long-term maintenance of the shared/joint-use facilities.

3.1.3 Construction Phasing

Overall project construction is anticipated to begin in the second quarter of 2017 and be finished in the second quarter of 2018. Students in the Village of Esencia will attend Las Flores elementary and middle schools until the Esencia K–8 school opens. Phasing durations are approximate, and some tasks described below would overlap. Because the site is part of the Rancho Mission Viejo PA 2 (Esencia) development, the entire site has been graded flat.

- Fine Grading: 24 days. Approved, engineered, fill soils are wetted and compressed to specifications in the project geotechnical investigation report, and areas proposed for improvements are graded to finish elevations.

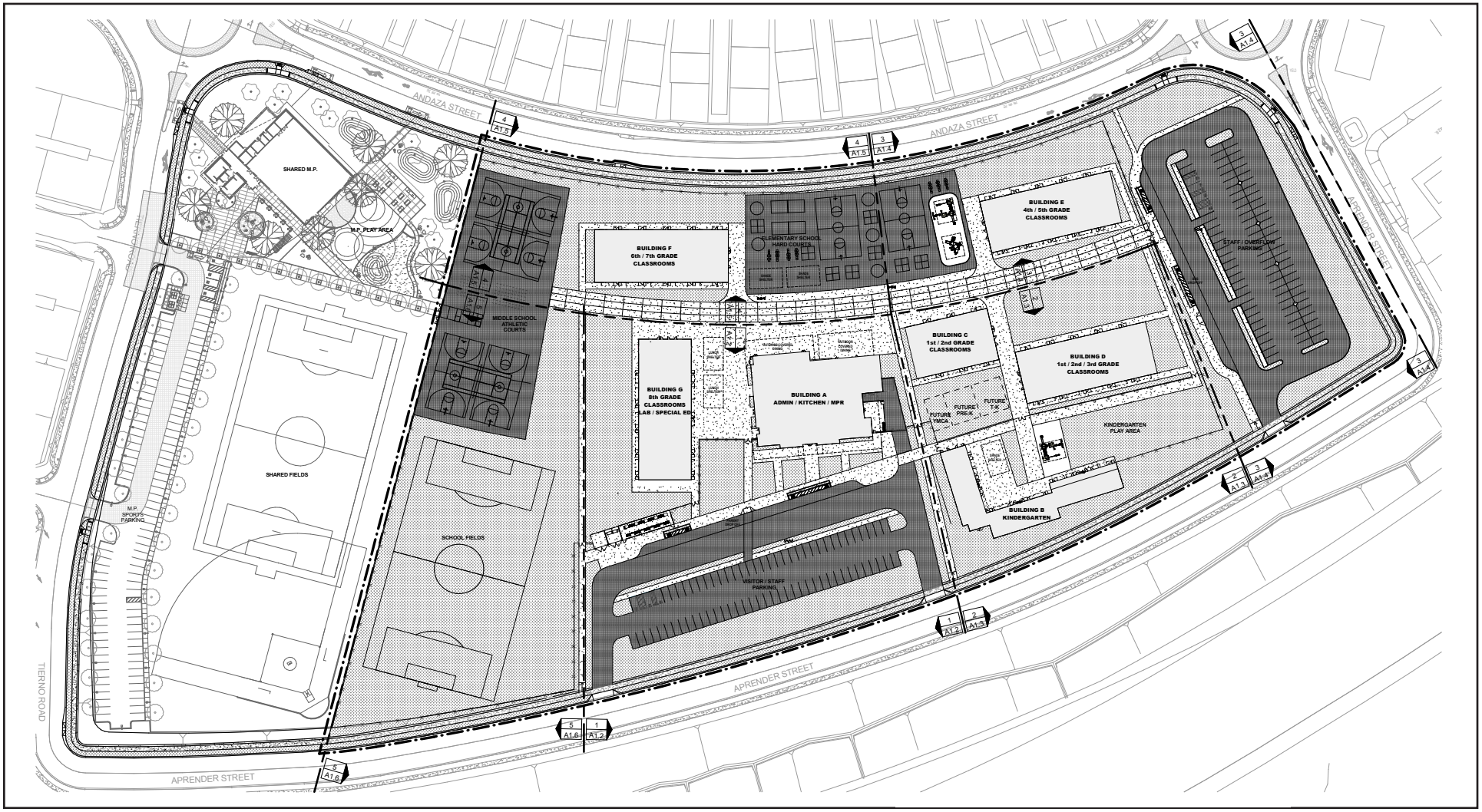
- Building Construction: 258 days
- Architectural Coating: 16 days. Paints and other architectural coatings would be applied to buildings.
- Asphalt Paving: 16 days.
- Finishing and Landscaping: 90 days. Indoor finishing work such as installing carpet, utility and telecommunications, furniture; installation of landscaping and turf playfield.

3.2 LEAD AGENCY

The District is the lead agency under CEQA and has approval authority over the proposed project. This IS/ND must be adopted by the board of trustees, confirming its adequacy in complying with the requirements of CEQA. The board will consider the information in the IS/ND while deciding to approve or deny the proposed project. The analysis is intended to provide environmental review for the whole of the proposed project, including planning, construction, and operation.

Figure 8a - Conceptual Site Plan

3. Project Description



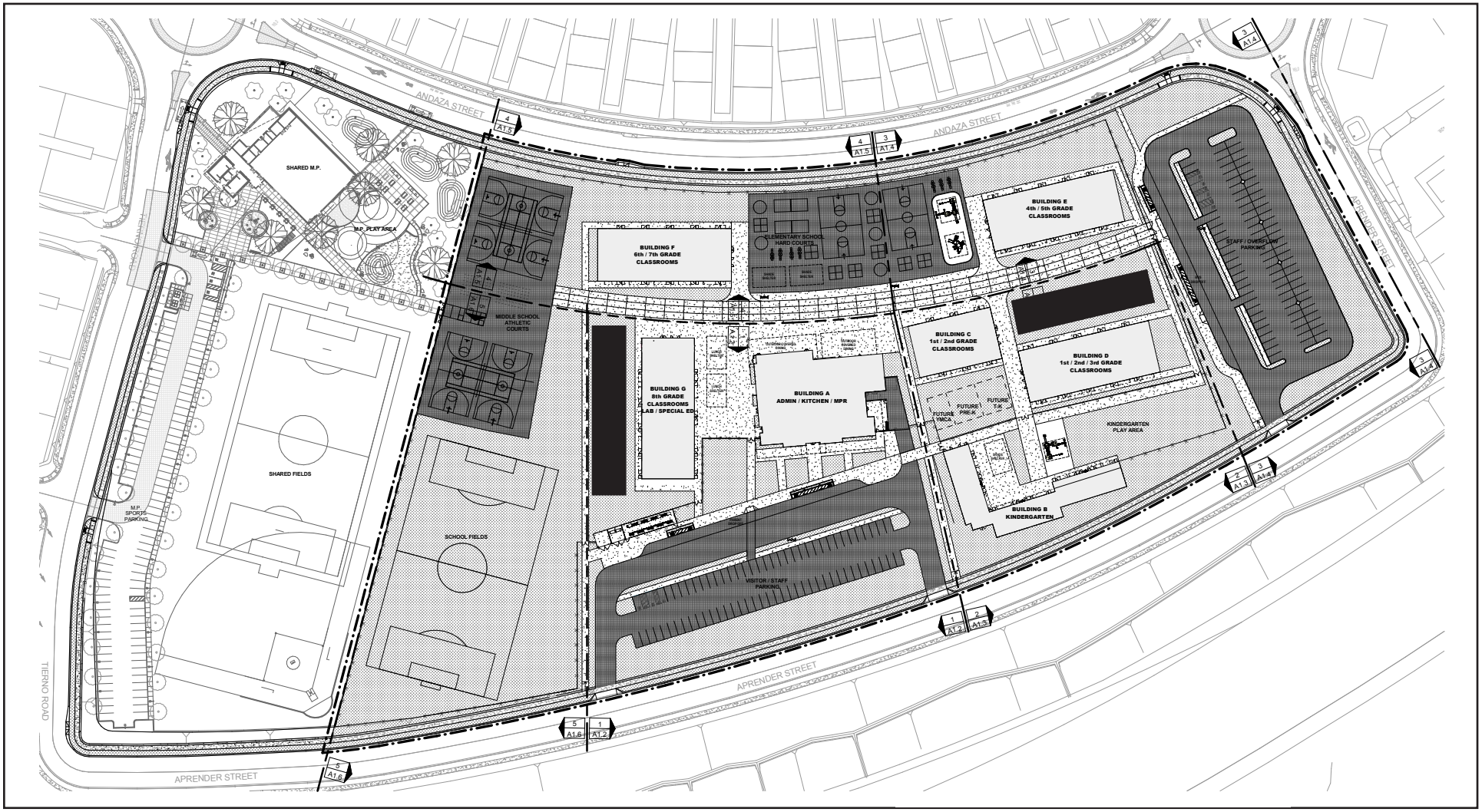
Source: HMC Architects, 2015

3. Project Description

This page intentionally left blank.

Figure 8b - Conceptual Site Plan (Interim Housing)

3. Project Description



Temporary Portable Housing

0 200
Scale (Feet)

Source: HMC Architects, 2015

3. Project Description

This page intentionally left blank.

4. Environmental Checklist

4.1 BACKGROUND

1. **Project Title:** Esencia K–8 School

2. **Lead Agency Name and Address:**
   Capistrano Unified School District
   33122 Valle Road
   San Juan Capistrano, California 92675

3. **Contact Person and Phone Number:**
   John Forney, Executive Director, Facilities, Maintenance & Operations
   949.234.9543

4. **Project Location:**
   The 20-acre project site is in the Community of Rancho Mission Viejo in unincorporated Orange County. The site is 1.5 miles northeast of the intersection of State Route 74 and Antonio Parkway.

5. **Project Sponsor's Name and Address:**
   Capistrano Unified School District
   33122 Valle Road
   San Juan Capistrano, California 92675

6. **General Plan Designation:** 1B, Suburban Residential

7. **Zoning:** PC (Planned Community)

8. **Description of Project:**
   The project consists of the construction and operation of a 16-acre K–8 school and 4-acre shared/joint-use facilities. The school campus would have 50 classrooms for 1,236 kindergarten through 8th grade students, along with an administration/kitchen/multipurpose building, lunch shelters, hardcourts and playgrounds, a soccer field, and two parking lots. The project also includes shared/joint-use sports fields (soccer and baseball), a multipurpose building, and parking lot.

9. **Surrounding Land Uses and Setting:**
   The site is surrounded by new residential and road construction as part of the Rancho Mission Viejo, Ranch Plan Community Plan, Planning Area 2 (Village of Esencia), Subarea 2.1.

10. **Other Public Agencies Whose Approval Is Required:** None

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

4.3 DETERMINATION

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* 01/05/2016

Ryan Carter — *Printed Name*

Capistrano Unified School District — *For*

4.4 SPECIAL REQUIREMENTS UNDER STATE SCHOOL FACILITY PROGRAM

The State of California's standards for school site selection are in Title 5 of the California Code of Regulations, Section 14010. Additional regulations applicable to school facilities that are in the Education, Government, and Public Resources Codes. These criteria and requirements are addressed in other documents and are not within the purview of the California Environmental Quality Act. Generally, CEQA is limited to the assessment of a project's potential impacts on the environment and not the environment's impacts on a project. However, CEQA requires that no EIR or Negative Declaration be approved without making findings relative to certain health and safety factors in the lead agency's assessment of a new school site or addition to an existing school site. These are outlined in PRC Section 21151.8.

21151.8. SCHOOLSITE ACQUISITION OR CONSTRUCTION; APPROVAL OF ENVIRONMENTAL IMPACT REPORT OR NEGATIVE DECLARATION; CONDITIONS

(a) An environmental impact report shall not be certified or a negative declaration shall not be approved for a project involving the purchase of a school site or the construction of a new elementary or secondary school by a school district unless all of the following occur:

(1) The environmental impact report or negative declaration includes information that is needed to determine if the property proposed to be purchased, or to be constructed upon, is any of the following:

(A) The site of a current or former hazardous waste disposal site or solid waste disposal site and, if so, whether the wastes have been removed.

(B) A hazardous substance release site identified by the Department of Toxic Substances Control in a current list adopted pursuant to Section 25356 of the Health and Safety Code for removal or remedial action pursuant to Chapter 6.8 (commencing with Section 25300) of Division 20 of the Health and Safety Code.

(C) A site that contains one or more pipelines, situated underground or aboveground, that carries hazardous substances, extremely hazardous substances, or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood, or other nearby schools.

(D) A site that is within 500 feet of the edge of the closest traffic lane of a freeway or other busy traffic corridor.

(2)(A) The school district, as the lead agency, in preparing the environmental impact report or negative declaration has notified in writing and consulted with the administering agency in which the proposed school site is located, pursuant to Section 2735.3 of Title 19 of the California Code of Regulations, and with any air pollution control district or air quality management district having

jurisdiction in the area, to identify both permitted and nonpermitted facilities within that district's authority, including, but not limited to, freeways and busy traffic corridors, large agricultural operations, and railyards, within one-fourth of a mile of the proposed school site, that might reasonably be anticipated to emit hazardous emissions or handle hazardous or extremely hazardous substances or waste. The notification by the school district, as the lead agency, shall include a list of the locations for which information is sought.

(B) Each administering agency, air pollution control district, or air quality management district receiving written notification from a lead agency to identify facilities pursuant to subparagraph (A) shall provide the requested information and provide a written response to the lead agency within 30 days of receiving the notification. The environmental impact report or negative declaration shall be conclusively presumed to comply with subparagraph (A) as to the area of responsibility of an agency that does not respond within 30 days.

(C) If the school district, as a lead agency, has carried out the consultation required by subparagraph (A), the environmental impact report or the negative declaration shall be conclusively presumed to comply with subparagraph (A), notwithstanding any failure of the consultation to identify an existing facility or other pollution source specified in subparagraph (A).

(3) The governing board of the school district makes one of the following written findings:

(A) Consultation identified no facilities of this type or other significant pollution sources specified in paragraph (2).

(B) The facilities or other pollution sources specified in paragraph (2) exist, but one of the following conditions applies:

(i) The health risks from the facilities or other pollution sources do not and will not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the proposed school.

(ii) Corrective measures required under an existing order by another agency having jurisdiction over the facilities or other pollution sources will, before the school is occupied, result in the mitigation of all chronic or accidental hazardous air emissions to levels that do not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the proposed school. If the governing board makes a finding pursuant to this clause, it shall also make a subsequent finding, prior to occupancy of the school, that the emissions have been so mitigated.

(iii) For a school site with a boundary that is within 500 feet of the edge of the closest traffic lane of a freeway or other busy traffic corridor, the governing

board of the school district determines, through analysis pursuant to paragraph (2) of subdivision (b) of Section 44360 of the Health and Safety Code, based on appropriate air dispersion modeling, and after considering any potential mitigation measures, that the air quality at the proposed site is such that neither short-term nor long-term exposure poses significant health risks to pupils.

(C) The facilities or other pollution sources specified in paragraph (2) exist, but conditions in clause (i), (ii) or (iii) of subparagraph (B) cannot be met, and the school district is unable to locate an alternative site that is suitable due to a severe shortage of sites that meet the requirements in subdivision (a) of Section 17213 of the Education Code. If the governing board makes this finding, the governing board shall adopt a statement of Overriding Considerations pursuant to Section 15093 of Title 14 of the California Code of Regulations.

These air quality and hazard topics are additional to the standard CEQA checklist. The following matrix identifies the specific questions related to the required findings and where in the CEQA checklist these are addressed. The assessment may be used to make the written findings as required in PRC Section 21151.8(a)(3).

SPECIAL CEQA REQUIREMENTS FOR A NEW SCHOOL SITE OR ADDITION TO EXISTING SCHOOL

Topic	Applicable Code	Environmental Checklist (See Table in Section 4.5)
Air Quality		
Is the boundary of the proposed school site within 500 feet of the edge of the closest traffic lane of a freeway or busy traffic corridor? If yes, would the project create an air quality health risk due to the placement of the School?	PRC § 21151.8 (a)(1)(D)	Section III, Air Quality, Question (f)
Would the project create an air quality hazard due to the placement of a school within one-quarter mile of: (a) permitted and nonpermitted facilities identified by the jurisdictional air quality control board or air pollution control district; (b) freeways and other busy traffic corridors; (c) large agricultural operations; and/or (d) a rail yard, which might reasonably be anticipated to emit hazardous air emissions, or handle hazardous or acutely hazardous material, substances, or waste?	PRC § 21151.8 (a)(2)	Section VII, Hazards and Hazardous Materials, Question (g)
Hazards and Hazardous Materials		
Does the proposed school site contain one or more pipelines, situated underground or aboveground, which carry hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood?	PRC § 21151.8 (a)(1)(C)	Section VII, Hazards and Hazardous Materials, Question (h)
Does the project site contain a current or former hazardous waste disposal site or solid waste disposal site and, if so, have the wastes been removed?	PRC § 21151.8 (a)(1)(A)	Section VII, Hazards and Hazardous Materials, Question (i)
Is the project site a hazardous substance release site identified by the state Department of Health Services in a current list adopted pursuant to §25356 for removal or remedial action pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code?	PRC § 21151.8 (a)(1)(B)	Section VII, Hazards and Hazardous Materials, Question (j)

4.5 EVALUATION OF ENVIRONMENTAL IMPACTS

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

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

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

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

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

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

   b) 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. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

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

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

9) The explanation of each issue should identify:

a) the significance criteria or threshold, if any, used to evaluate each question; and

b) the mitigation measure identified, if any, to reduce the impact to less than significant.

4.6 ENVIRONMENTAL CHECKLIST

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	

4. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
d) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
e) Create objectionable odors affecting a substantial number of people?			**X**	
f) Is the boundary of the proposed school site within 500 feet of the edge of the closest traffic lane of a freeway or busy traffic corridor? If yes, would the project create an air quality health risk due to the placement of the School? [PRC § 21151.8 (a)(1)(D)]			**X**	
g) Would the project create an air quality hazard due to the placement of a school within one-quarter mile of: (a) permitted and nonpermitted facilities identified by the jurisdictional air quality control board or air pollution control district; (b) freeways and other busy traffic corridors; (c) large agricultural operations; and/or (d) a rail yard, which might reasonably be anticipated to emit hazardous air emissions, or handle hazardous or acutely hazardous material, substances, or waste? [PRC § 21151.8 (a)(2)]			**X**	
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				**X**
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				**X**
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				**X**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				**X**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				**X**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074?				X
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	

4. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	
i) Does the proposed school site contain one or more pipelines, situated underground or aboveground, which carry hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood?				X
j) Does the project site contain a current or former hazardous waste disposal site or solid waste disposal site and, if so, have the wastes been removed?				X
k) Is the project site a hazardous substance release site identified by the state Department of Health Services in a current list adopted pursuant to §25356 for removal or remedial action pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code?				X
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
XI. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

4. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XVI. TRANSPORTATION AND TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?				X
e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	

4. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			**X**	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				**X**

5. Environmental Analysis

Section 4.6 provided a checklist of environmental impacts. This section provides an evaluation of the environmental topics in the checklist.

5.1 AESTHETICS

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

No Impact. The project site is a vacant, flat, graded dirt lot, and surrounding lands are currently under construction. There are no scenic vistas on site and no land uses adjacent to the site from which existing public views of a scenic resource would be obstructed by project development. No impact would occur.

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

No Impact. The nearest designated state scenic highway to the site is State Route 91 (SR-91) about 24 miles to the north.[6] No state scenic highway impact would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

No Impact. The site is a flat, graded lot, and surrounding lands are currently under construction as part of the Village of Esencia residential development. Project development would not degrade the existing visual character of the site or its surroundings, and no adverse impact would occur.

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 would include parking lot lights, walkway lights, and exterior and interior building lights. No field lights would be installed. At project completion, the Village of Esencia will have been completed and residential units would be occupied. All streets, buildings, and parking lots would have lights. Although the project site does not currently generate light, at completion the new buildings and parking lots would not significantly add to the Esencia development's light generation. Project-related impacts would be less than significant.

[6] California Department of Transportation (Caltrans). 2011, September 7. California Scenic Highway Mapping System. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

5.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:

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

No Impact. The project site has been graded. The project site is not mapped as important farmland on the California Important Farmland Finder.[7] All vegetation has been cleared from the site; no impact would occur.

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

No Impact. The existing zoning designation for the site is PC (Planned Community). The site is not zoned for agricultural use, and project development would not conflict with such zoning. Williamson Act contracts restrict the use of privately owned land to agriculture and compatible open-space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. The project site is part of a residential development that is currently under construction, and there is no Williamson Act contract in effect onsite. 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 zoned PC (Planned Community) and is not zoned for forest land or timberland use. No impact would occur.

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

No Impact. The project site has been cleared and graded and does not contain forest land. 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?

No Impact. There is no mapped important farmland or forest land on or near the site, and project development would not indirectly cause conversion of such land to nonagricultural or nonforest use. No impact would occur.

[7] Division of Land Resource Protection (DLRP). 2015, July 9. California Important Farmland Finder. http://maps.conservation.ca.gov/ciff/ciff.html.

5.3 AIR QUALITY

Would the project:

A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling can be found in Appendix A.

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

Less Than Significant Impact. The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O_3), carbon monoxide (CO), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen dioxides (NO_2), and lead (Pb). Areas are classified under the federal and California Clean Air Act as in either attainment or nonattainment for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (SCAQMD), is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS.[8]

The most recent adopted comprehensive plan is the 2012 air quality management plan (AQMP), which was adopted on December 7, 2012 (see Appendix A to this Initial Study for a description of the 2012 AQMP).[9] Regional growth projections are used by SCAQMD to forecast future emission levels in the SoCAB. For southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations in city/county general plans. Typically, only large, regionally significant projects have the potential to affect the regional growth projections. The proposed project is not considered a regionally significant project that would warrant Intergovernmental Review by SCAG under CEQA Guidelines Section 15206.

Although the proposed project would result in a small increase in employment in the Rancho Mission Viejo area, the project would not substantially affect the regional growth projections because the land use is consistent with the current zoning and county general plan. Additionally, the regional emissions generated by construction and operation of the proposed project would be less than the SCAQMD emissions thresholds and would not be considered by SCAQMD to be a substantial source of air pollutant emissions that would have the potential to affect the attainment designations in the SoCAB. Therefore, the project would not affect the regional emissions inventory or conflict with strategies in the AQMP. Impacts are less than significant.

[8] California Air Resources Board (CARB). 2014, August 22. Area Designations Maps/State and National. http://www.arb.ca.gov/desig/adm/adm.htm.
[9] South Coast Air Quality Management District (SCAQMD). 2013, February. Final 2012 Air Quality Management Plan. http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

5. Environmental Analysis

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

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

Short-Term Air Quality Impacts

Construction activities would result in the generation of air pollutants. These would primarily be 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated by earthmoving and other construction activities; 3) exhaust from on-road vehicles; and 4) emissions from off-gas of volatile organic compounds (VOCs) from application of asphalt, paints, and coatings.

Construction on the 20-acre project site would involve fine grading, building construction, paving, and architectural coating, and is anticipated to start in spring 2017 and take approximately 13 months. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2, based on the project's construction information provided by the District.[10] Where specific information regarding construction activities was not available, analysis was based on CalEEMod defaults. Results of the construction emission modeling are shown in Table 2. Air pollutant emissions from construction activities would be less than their respective SCAQMD regional significance thresholds. Therefore, air quality impacts from project-related construction would be less than significant.

Table 2 Maximum Daily Regional Construction Emissions

	Criteria Air Pollutants (lbs/day)[1,2]					
Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2017 Fine Grading	6	70	48	<1	7	5
2017 Building Construction	4	29	26	<1	3	2
2018 Building Construction	3	26	25	<1	3	2
2018 Building Construction + Paving + Architectural Coating	52	45	42	<1	4	3
Maximum Daily Emissions	52	70	48	<1	7	5
SCAQMD Regional Threshold	75	100	550	150	150	55
Exceeds Regional Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2013.2.2
Notes: Totals may not equal 100 percent due to rounding.
1 CalEEMod defaults are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.
2 Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers. Modeling also assumes a VOC of 100 g/L for paints pursuant to SCAQMD Rule 1113.

[10] California Air Pollution Control Officers Association (CAPCOA). 2013. California Emissions Estimator Model (CalEEMod). Version 2013.2.2. Prepared by: ENVIRON International Corporation and the California Air Districts.

Long-Term Operation-Related Air Quality Impact

Long-term air pollutant emissions would be generated by area sources (e.g., landscape fuel use, aerosols, and architectural coatings), energy use (natural gas) associated with the proposed buildings, and project-related vehicle trips. Mobile-source emissions are based on an estimate of 1,830 project-related daily trips.[11] Table 3 identifies project-related criteria air pollutant emissions.

The air pollutant emissions from area sources, energy use, and vehicle trips would not exceed the SCAQMD's regional emissions thresholds for operational activities. Long-term air quality impacts would be less than significant.

Table 3 Net Maximum Daily Regional Operational Phase Emissions

	Criteria Air Pollutants (lbs/day)					
Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	4	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile Sources	5	6	57	<1	14	4
Total Emissions	9	6	57	<1	14	4
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceeds Regional Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2013.2.2. Highest winter or summer emissions are reported.
Notes: Numbers may not total to 100 percent due to rounding.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. The SoCAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS, and nonattainment for lead under the National AAQS.[12] According to SCAQMD methodology, any project that does not exceed or can be mitigated to less than the daily threshold values would not add significantly to a cumulative criteria pollutant impact.[13] Construction and operational activities would not result in emissions in excess of SCAQMD's significant thresholds. Therefore, the project would not result in a cumulatively considerable net increase in criteria pollutants, and impacts would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The proposed project could expose sensitive receptors to elevated pollutant concentrations if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike

[11] Garland Associates. 2015, October. Traffic Impact Analysis for the Proposed Esencia K-8 School Rancho Mission Viejo Planning Area 2.
[12] California Air Resources Board (CARB). 2014, August 22. Area Designations Maps/State and National. http://www.arb.ca.gov/desig/adm/adm.htm.
[13] South Coast Air Quality Management District (SCAQMD). 1993. California Environmental Quality Act Air Quality Handbook.

regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction LSTs

Localized significance thresholds (LSTs) are based on the California AAQS. These standards protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. Construction LSTs are based on the size of the project site, distance to the nearest sensitive receptor, and Source Receptor Area.[14] The nearest occupied residential land uses to the project site are about one mile to the southwest near the intersection of Antonio Parkway and Sendero Way, in the Village of Sendero (Ranch Plan PA 1). When construction begins on this project, sensitive receptors are anticipated to be living in the surrounding homes that are currently under construction.

Air pollutant emissions generated by project construction would temporarily increase air pollutant concentrations. Table 4 shows the maximum daily construction emissions generated during construction. As shown in this table, construction activities would not exceed the LSTs. Therefore, localized impacts would be less than significant.

Table 4 Localized Construction Emissions

Source	Pollutants(lbs/day)[1,2]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2017 Fine Grading	70	47	7.03	4.59
SCAQMD LST[3]	175	1,534	9.99	6.67
Exceeds LST?	No	No	No	No
2017 Building Construction	26	18	1.78	1.67
2018 Building Construction	23	18	1.49	1.40
2018 Building Construction + Paving + Architectural Coating	42	34	2.58	2.42
SCAQMD LST[3]	103	789	4.62	3.31
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2013.2.2., and SCAQMD, Localized Significance Methodology, Appendix A. October 2006.
Notes: In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment on the project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the project site in Source Receptor Area (SRA) 21.
1 CalEEMod defaults which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.
2 Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.
3 Construction LSTs are based on type of equipment and the daily acreage disturbed. CalEEMod default is 4.00 acres disturbed per day for fine grading equipment and 1.31 acres disturbed per day for building, paving, and architectural coating equipment.

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

Carbon Monoxide 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 parts per million (ppm) or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

The SoCAB has been designated as attainment under both the national and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact.[15] The proposed project would generate 1,830 average daily vehicle trips during a weekday,[16] which is substantially less than the volumes that would result in a CO impact. Furthermore, the SoCAB has since been designated in attainment of both the National and California AAQS for CO. The project would not substantially increase CO hotspots at intersections in the vicinity of the project site. Additionally, intersections adjacent to the project site are roundabouts, and traffic does not queue at stop signs. This intersections' design reduces CO impacts. Localized air quality impacts related to mobile-source emissions would be less than significant.

Health Risk Assessment

SCAQMD currently does not require health risk assessments to be conducted for short-term emissions from construction equipment. Emissions from construction equipment primarily consist of diesel particulate matter (DPM). In March 2015 the Office of Environmental Health Hazards Assessment (OEHHA) adopted new guidance for the preparation of health risk assessments.[17] OEHHA has developed a cancer risk factor and noncancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term, acute exposure levels have been developed for DPM. The proposed project would be constructed in approximately 13 months, which would limit the exposure to offsite receptors. SCAQMD currently does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. In addition, construction activities would not exceed LSTs. Potential health impacts from project construction would be less than significant.

---

[15] The South Coast Air Quality Management District (SCAQMD) has CEQA-related air quality guidelines but they do not have specific screening criteria for carbon monoxide (CO) hotspots. However, the Bay Area under the Bay Area Air Quality Management District's (BAAQMD) jurisdiction and the South Coast Air Basin (SCAB) under the SCAQMD's jurisdiction are both 'in attainment' for CO; therefore, the conditions are similar and comparable, so the screening criteria for CO hotspots from BAAQMD's CEQA air quality guidelines can be applied in the SCAB and other similar air basins.

[16] Garland Associates. 2015, October. Traffic Impact Analysis for the Proposed Esencia K-8 School Rancho Mission Viejo Planning Area 2.

[17] Office of Environmental Health Hazard Assessment (OEHHA). 2015, February. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. The proposed project would not result in objectionable odors. The threshold is generation of an odor nuisance pursuant to 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 have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The project does not include these uses. No significant impacts would occur.

f) Is the boundary of the proposed school site within 500 feet of the edge of the closest traffic lane of a freeway or busy traffic corridor? If yes, would the project create an air quality health risk due to the placement of the School? [PRC § 21151.8 (a)(1)(D)]?

According to Section 17213 of the Education Code "Freeway or other busy traffic corridors" means those roadways that, on an average day, have traffic in excess of 50,000 vehicles in a rural area, as defined in Section 50101 of the Health and Safety Code, and 100,000 vehicles in an urban area, as defined in Section 50104.7 of the Health and Safety Code.[18] Los Patrones Parkway is the most heavily traveled roadway within 500 feet of the school site. It is projected to be 43,000 average daily traffic;[19] therefore, does not qualify as a busy traffic corridor. Air quality health risk impacts would be less than significant.

[18] Source: http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200320040SB352

[19] Mestre Greve Associates, Division of Landrum & Brown 2013, October 3. Project #545501-0200. Noise Analysis for Planning Area 2. County of Orange, California. Prepared for Rancho Mission Viejo Company (see Appendix E of this Initial Study).

g) Would the project create an air quality hazard due to the placement of a school within one-quarter mile of: (a) permitted and nonpermitted facilities identified by the jurisdictional air quality control board or air pollution control district; (b) freeways and other busy traffic corridors; (c) large agricultural operations; and/or (d) a rail yard, which might reasonably be anticipated to emit hazardous air emissions, or handle hazardous or acutely hazardous material, substances, or waste? [PRC § 21151.8 (a)(2)]

There are no permitted and nonpermitted facilities identified by the South Coase AQMD, freeways and other busy traffic corridors, large agricultural operations, or rail yards within one-quarter mile of the school site. Air quality hazard impacts would be less than significant.[20]

5.4 BIOLOGICAL RESOURCES

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 site has been graded and cleared of all vegetation and habitat. There are no candidate, sensitive, or special status species on the project site; no impact would occur.

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 U.S. Fish and Wildlife Service?

No Impact. The site has been graded. There are no riparian habitats or other sensitive natural community onsite; no impact would occur.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site has been graded. No wetlands are present onsite. No impact would occur.

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?

No Impact. The project site is a flat-graded dirt lot surrounded by a chain-link fence. The site does not have cover or habitat needed for use by wildlife. No impact would occur.

[20] SCAQMD, 2015. Facility INformation Detail (FIND). http://www3.aqmd.gov/webappl/fim/prog/search.aspx.

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

No Impact. No biological resources are present onsite that could be protected under local ordinances, and 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. The project site is within the plan area of the Orange County Southern Subregional Habitat Conservation Plan (HCP); however, the site has no habitat. Project development would not conflict with the HCP.

5.5 CULTURAL RESOURCES

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

No Impact. Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. The project site has been graded and there are no structures onsite, with the exception of those related to construction of the surrounding residential units. No historical resource impact would occur.

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

No Impact. Between 5 and 104 feet of fill material from the immediate surrounding area was added to the project site. Therefore, no archaeological resources are present in soil that could be disturbed by project development. No archaeological resource impact would occur.

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

No Impact. The project site has compacted engineered fill material across the entire site; therefore, no paleontological resources are present in soil that could be disturbed by project development. No paleontological resource impact would occur.

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

No Impact. No human remains are present in soil that would be disturbed by project development. No impact would occur.

e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074?

No Impact. Native American representatives were consulted. The project site has had significant grading and placement of compacted engineered fill material; therefore, no tribal cultural resources are present onsite. No impact would occur.

5.6 GEOLOGY AND SOILS

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

No Impact. The site is not in an Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo Earthquake Fault Zone to the site is along the Elsinore Fault Zone about 16 miles to the northeast.[21] Project development would not expose people or structures to substantial hazards arising from surface rupture of a known active fault; no impact would occur.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The project site is in a seismically active region, and strong ground shaking will likely occur within the design lifetime of the buildings. The nearest mapped active faults are the San Joaquin Hills Blind Thrust, about 6 miles to the west, and the Newport-Inglewood Fault, offshore about 9 miles to the southwest.[22, 23] Structures for human occupancy must be designed to meet or exceed the current California Building Code (CBC) standards for earthquake resistance. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site. Seismic design parameters for the project site were calculated in the site-specific geotechnical study.[24] The project would be developed in compliance with recommendations in geotechnical study reports for the site. Impacts would be less than significant.

[21] California Geological Survey (CGS). 1980, January 1. Special Studies Zones Map, Alberhill Quadrangle. http://gmw.consrv.ca.gov/shmp/download/quad/ALBERHILL/maps/ALBRHL.PDF.

[22] GMU Geotechnical, Inc. 2013, April 15. Revised May 23, 2013. Report of Geotechnical Studies and Review of Preliminary Grading Plans, Rancho Mission Viejo Planning Area 2, TT 17561 (Sub-Area 2.1). Prepared for Rancho Mission Viejo (see Appendix D of this Initial Study).

[23] NMG Geotechnical, Inc. 2015, August 31. Geotechnical Investigation and Conceptual Plan Review, Proposed Esencia Kindergarten through Eight (K-8) School, Capistrano Unified School District, Rancho Mission Viejo, California. Prepared for Capistrano USD (see Appendix B of this Initial Study).

[24] GMU Geotechnical, Inc. 2013, April 15. Revised May 23, 2013. Report of Geotechnical Studies and Review of Preliminary Grading Plans, Rancho Mission Viejo Planning Area 2, TT 17561 (Sub-Area 2.1). Prepared for Rancho Mission Viejo (see Appendix D of this Initial Study).

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction refers to loose, saturated sand or silt deposits that behave as a liquid and lose their load-supporting capability when strongly shaken. Loose granular soils and silts that are saturated by relatively shallow groundwater are susceptible to liquefaction. Groundwater was not encountered during recent investigation to depths of 60 feet. The site is not in a seismic hazard zone for potential liquefaction, and based on groundwater conditions and the underlying soil conditions, the liquefaction potential at the site is considered very low to negligible.[25] Project development would not subject people or structures to substantial hazards arising from liquefaction, and impacts would be less than significant.

iv) Landslides?

No Impact. The project site has been cleared and graded, and has compacted engineered fill materials up to 104 feet deep.

- Shared/joint-use soccer field: 5 to 104 feet
- Shared/joint-use multi-purpose building: 5 to 55 feet
- School campus: 10 to 90 feet

There are no landslides mapped within or adjacent to the project site. Due to the recent grading that leveled the topography within and adjacent to the site and based on the underlying geologic conditions at the site, the potential for landslides within or adjacent to the site is considered negligible. No impact would occur.

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

Less Than Significant Impact.

Construction Phase

The project site has been engineered, covered by fill dirt, and graded; it does not have any topsoil.[26] During heavy rains, soil erosion may occur because the site does not have any vegetation. Construction projects of one acre or more are regulated under the Statewide General Construction Permit, Order No. 2012-0006-DWQ, issued by the State Water Resources Control Board (SWRCB) in 2012. Projects obtain coverage by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) estimating sediment risk from construction activities to receiving waters, and specifying best management practices (BMPs) that would be used by the developer to minimize pollution of stormwater. Categories of BMPs used in SWPPPs are

[25] NMG Geotechnical, Inc. 2015, August 31. Geotechnical Investigation and Conceptual Plan Review, Proposed Esencia Kindergarten through Eight (K-8) School, Capistrano Unified School District, Rancho Mission Viejo, California. Prepared for Capistrano USD (see Appendix B of this Initial Study).

[26] Topsoil is the upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining. 'Glossary of Soil Science Terms' http://nesoil.com/gloss.htm

described in Table 5. Implementation of BMPs to be specified in the SWPPP would reduce impacts to less than significant.

Table 5 Construction BMPs

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	Cover and/or bind soil surface, to prevent soil particles from being detached and transported by water or wind	Mulch, geotextiles, mats, hydroseeding, earth dikes, swales
Sediment Controls	Filter out soil particles that have been detached and transported in water.	Barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basin; cleaning measures such as street sweeping
Tracking Controls	Minimize the tracking of soil offsite by vehicles	Stabilized construction roadways and construction entrances/exits; entrance/outlet tire wash.
Non-Storm Water Management Controls	Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.	BMPs specifying methods for: paving and grinding operations; cleaning, fueling, and maintenance of vehicles and equipment; concrete curing; concrete finishing.
Waste Management and Controls (i.e., good housekeeping practices)	Management of materials and wastes to avoid contamination of stormwater.	Spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.

Source: California Stormwater Quality Association (CASQA). 2003, January. Stormwater Best Management Practice Handbook: Construction.

Operations Phase

At project completion the entire site would be developed with buildings, parking lots, hardcourts, walkways, playfields, and landscaped areas. Project operation would not cause substantial soil erosion. Impacts 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 off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. Structures would be constructed at or near the existing grades, with no more than an additional five feet of design fill over the existing surface. The proposed buildings would be on well-compacted engineered fill overlying dense sandstone bedrock. Foundation loads are not known at this time; however, they are anticipated to be relatively light due to the single-level, wood-framed structures.

Groundwater was not encountered during our recent investigation to depths of 60 feet. Consistent with large rough-graded sites within the County of Orange, canyon-type subdrains were installed within the bottom of the canyons prior to adding fill material to reduce potential groundwater/seepage that may accumulate between the compacted fill/bedrock contact.

5. Environmental Analysis

Liquefaction and landslide hazards are addressed above in Sections 5.6.a.iii and 5.6.a.iv, respectively.

Lateral spreading. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. Project development would not create substantial hazards due to lateral spreading, as no surface deformation due to liquefaction is expected onsite.

Subsidence. The major cause of ground subsidence is withdrawal of groundwater. The project site is not above a groundwater basin; the San Juan Valley Groundwater Basin is about 0.4 mile south of the site.[27] Project development would not result in hazards related to subsidence.

Settlement. The seismic settlements are predicted to be less than 0.1 inch, which is consistent with the high blow counts and densities of the compacted fill and sandstone bedrock.

Collapsible Soils. Remedial grading onsite involved removal of low-density surficial soils and alluvial materials down to competent Santiago Formation sandstone, which was determined by the project geotechnical engineer to be suitable for supporting the project buildings. Fifty feet of engineered fill soils were placed onsite, moistened, and compacted.[28] Project development would not cause substantial hazards arising from collapsible soils, and impacts would be less than significant.

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

Less Than Significant Impact. Soil samples tested for expansion index during rough grading yielded expansion indices ranging from low to high. Soil samples tested for expansion index on the rough graded pad yielded expansion indices ranging from very low to the lower end of medium.[29] Project development would not result in hazards arising from expansive soils. This impact is less than significant.

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

No Impact. Project development would include installation of sewer laterals connecting to sewer mains that were installed during road construction. The proposed school would not use septic tanks or other alternative wastewater disposal systems, and no impact would occur.

[27] State Water Resources Control Board (SWRCB). 2015, September 14. Groundwater Information Center Interactive Map Application. https://gis.water.ca.gov/app/gicima/.

[28] GMU Geotechnical, Inc. 2015, January 14. Report of Geotechnical Observation and Testing of Rough Grading, Lots 57, 63, and 65 of PA-2.1, Tentative Tract 17561, Esencia, Rancho Mission Viejo Orange County, California. Prepared for RMV PA2 Development, LLC (see Appendix C of this Initial Study).

[29] NMG Geotechnical, Inc. 2015, August 31. Geotechnical Investigation and Conceptual Plan Review, Proposed Esencia Kindergarten through Eight (K-8) School, Capistrano Unified School District, Rancho Mission Viejo, California. Prepared for Capistrano USD (see Appendix B of this Initial Study).

5.7 GREENHOUSE GAS EMISSIONS

A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix A to this Initial Study.

Would the project:

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

Less Than Significant Impact. Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydro fluorocarbons, per fluorocarbons, and chlorofluorocarbons.[30, 31, 32]

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

The proposed project would generate GHG emissions from vehicle trips, energy use (indirectly from purchased electricity use and directly through fuel consumed for building heating), area sources (e.g., equipment used on-site, consumer products, coatings), water/wastewater generation, and waste disposal. Annual GHG emissions were calculated for construction and operation of the proposed project. Annual average construction emissions were amortized over 30 years and included in the emissions inventory to account for GHG emissions from the construction phase of the project. Project-related GHG emissions are shown in Table 6. Implementation of the proposed project at buildout would generate 1,827 metric tons of carbon dioxide-equivalent ($MTCO_2e$) emissions per year. The total GHG emissions on-site from the project

[30] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

[31] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of PM emitted from burning fuels. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities. However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

[32] California Air Resources Board (CARB). 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

would not exceed the SCAQMD's bright-line threshold of 3,000 $MTCO_2e$.[33,34] Because the increase in GHG emissions associated with the project would not exceed the SCAQMD bright-line threshold, the proposed project's cumulative contribution to GHG emissions is less than significant.

Table 6 Project-Related GHG Emissions

Source	$MTCO_2e$/year	Percent of Project Total
Area	<1	<1%
Energy[1]	217	12%
Mobile	1,433	78%
Waste	103	6%
Water	55	3%
Amortized Construction Emissions[2]	19	1%
Total Emissions	1,827	100%
SCAQMD's Bright-Line Threshold	3,000	NA
Exceeds Bright-Line Threshold	No	NA

Source: CalEEMod Version 2013.2.2.
$MTCO_2e$: metric tons of carbon dioxide-equivalent
Note: Percent changes from each source may not total 100 percent due to rounding.
1 Assumes implementation of the 2016 Building and Energy Efficiency Standards. The 2016 Building and Energy Efficiency Standards are 33.5 percent more energy efficient than the 2008 Standards for non-residential buildings. Modeling assumes all structures onsite would be 33.5 percent more energy-efficient than the 2008 building code for non-residential structures.
2 Construction emissions are amortized over a 30-year project lifetime per SCAQMD methodology.

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

Less Than Significant Impact. The California Air Resources Board's (CARB's) Scoping Plan is California's GHG reduction strategy to achieve the state's GHG emissions reduction target established by Assembly Bill (AB) 32, which is to return to 1990 emission levels by year 2020. To estimate the reductions necessary, CARB projected statewide 2020 business-as-usual (BAU) GHG emissions and identified that the state as a whole would need to reduce GHG emissions by 28.5 percent from year 2020 BAU to achieve the target of AB 32.[35] The GHG emissions forecast was updated as part of the First Update to the Scoping Plan. In the First Update to the Scoping Plan, CARB projected that statewide BAU emissions in 2020 would be approximately 509 million $MTCO_2e$.[36] Therefore, to achieve the AB 32 target of 431 million $MTCO_2e$ (i.e., 1990 emissions

33 South Coast Air Quality Management District (SCAQMD). 2010, September 28. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 15. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf.
34 This threshold is based on SCAQMD's 3,000 MTCO2e for all land use types combined threshold proposed by SCAQMD's Working Group, which is based on a survey of the GHG emissions inventory of CEQA projects. Approximately 90 percent of CEQA projects GHG emissions inventories exceed 3,000 MTCO2e, which is based on a potential threshold approach cited in CAPCOA's white paper, "CEQA and Climate Change."
35 California Air Resources Board (CARB). 2008, October. Climate Change Proposed Scoping Plan, a Framework for Change.
36 The BAU forecast includes GHG reductions from Pavley and the 33% Renewable Portfolio Standard (RPS).

levels) by 2020, the state would need to reduce emissions by 78 million $MTCO_2e$ compared to BAU conditions, a reduction of 15.3 percent from BAU in 2020.[37, 38, 39]

Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the Corporate Average Fuel Economy standards, and other early action measures as necessary to ensure the state is on target to achieve the GHG emissions reduction goals of AB 32. In addition, new buildings are required to comply with the 2016 Building and Energy Efficiency Standards (or future cycle update) and California Green Building Code. The project's GHG emissions would be reduced through compliance with statewide measures that have been adopted since AB 32 was adopted.

In addition to AB 32, the California legislature passed Senate Bill (SB) 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plans to achieve the per capita GHG reduction targets. For the Southern California Association of Governments (SCAG) region, the SCS was adopted in April 2012.[40] The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency to governments and developers. The proposed project is consistent with the Ranch Plan. Therefore, the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the 2012 Regional Transportation Plan/Sustainable Communities Strategy. No impact would occur.

5.8 HAZARDS AND HAZARDOUS MATERIALS

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. Construction of the project would not require extensive or ongoing use of acutely hazardous materials or substances. While grading and construction may involve activities requiring the transport, storage, use, or disposal of some hazardous materials, such as onsite fueling or servicing of construction equipment, the activities would be short term and would be subject to federal, state, and local health and safety requirements.

The types of hazardous materials associated with operation of the new campus and shared/joint-use facilities would generally be limited to maintenance, janitorial, and repair activities, such as commercial cleansers,

[37] California Air Resources Board (CARB). 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

[38] If the GHG emissions reductions from Pavley I and the Renewable Electricity Standard are accounted for as part of the BAU scenario (30 million $MTCO_2e$ total), then the State would need to reduce emissions by 108 million $MTCO_2e$, which is a 20-percent reduction from BAU.

[39] In May 2014, CARB completed a five year update to the 2008 Scoping Plan. CARB recalculated the 1990 GHG emission levels with the updated global warming potential (GWP) in the Intergovernmental Panel on Climate Change's Fourth Assessment Report, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher, at 431 $MMTCO_2e$.

[40] Southern California Association of Governments (SCAG). 2012, April. 2012-2035 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). http://rtpscs.scag.ca.gov/Pages/default.aspx.

lubricants, paints, etc. All hazardous materials used at the campus would be stored, handled, and disposed of in compliance with regulations of the EPA, Occupational Safety and Health Administration, and Orange County Environmental Health.[41] The requirements of these agencies would be incorporated into the design and operation of the project. This would include providing for and maintaining appropriate storage areas for hazardous materials and installing or affixing appropriate warning signs and labels.

Compliance with applicable health and safety requirements, including manufacturers' product labels, would ensure that no significant hazard to the public, the students, or the environment would result through the routine transport, use, or disposal of hazardous materials. 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. The use, handling, storage, and disposal of hazardous materials in the course of project construction and operation would not cause substantial hazards to the public or the environment from accidental release of hazardous materials. Compliance with regulations described above would include training construction workers and school staff on containing and cleaning up hazardous materials spills that such personnel could safely contain and clean; maintenance of hazardous materials spill containment and cleanup supplies onsite; implementing school evacuation procedures as needed; and contacting the appropriate hazardous materials emergency response agency immediately pursuant to requirements of regulatory agencies. Impacts would be less than significant.

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

No Impact. There are no existing schools within 0.25 mile of the site, and no impact would occur.[42]

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

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

No hazardous materials were listed within 0.5 mile of the center of the site on any of the four databases searched.[43,44,45,46] School districts seeking state funding for acquisition and/or construction are required to go

[41] Orange County Environmental Health is the Certified Unified Program Agency (CUPA) for Orange County; the Certified Unified Program coordinates and makes consistent enforcement of several state and local laws governing hazardous materials.
[42] National Center for Education Statistics (NCES). 2015, September 10. School Districts Demographic System. https://nces.ed.gov/surveys/sdds/ed/index.asp.
[43] State Water Resources Control Board (SWRCB). 2015, September 10. GeoTracker. http://geotracker.waterboards.ca.gov/.

through a comprehensive environmental review under DTSC oversight. This ensures that selected properties are either free of contamination or that they are cleaned up to a level that is protective of the students and faculty who will occupy the new school. All proposed school sites must be comply with DTSC's most protective standard for children. According to the Phase I Environmental Site Assessment (ESA)[47] no recognized environmental conditions are known to have occurred on the project site (see Appendix E). The State Department of Toxic Substances Control (DTSC) will review the Phase I. The District is required to receive of a "no further action" determination letter from DTSC and certification of site. A "no further action" determination is required to confirm the elimination of any risk to the health and safety of students, faculty, employees, and other persons before construction can begin. Compliance with existing regulations would ensure a safe site. Project development would not create hazards related to existing hazardous materials sites, and no impact would occur.

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

No Impact. There are no public-use airports within two miles of the project site. Project development would not cause hazards related to aircraft safety hazards, and no impact would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no heliports near enough to the project site such that project development would cause hazards to people onsite from helicopters approaching or departing a heliport. The nearest heliport to the site is the Mission Hospital Helistop in the City of Mission Viejo about 4.4 miles to the northwest. The project site is part of the new development of Planning Area 2 of the Ranch Plan. No impact would occur.

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

No Impact. The local emergency response plan in effect the Orange County Emergency Plan developed and maintained by the Emergency Management Division of the Orange County Sheriff's Department. The project site is currently graded vacant land. Project construction and operation would not block roadways or otherwise impair emergency access to surrounding land. All construction staging would be done onsite. Public schools are built to more rigorous building and safety standards than are many other types of buildings; and schools are therefore often used as evacuation centers during disaster responses. No adverse impact would occur.

---

44 Department of Toxic Substances Control (DTSC). 2015, September 10. EnviroStor. http://www.envirostor.dtsc.ca.gov/public/.
45 US Environmental Protection Agency (USEPA). 2015, September 10. EnviroMapper for EnviroFacts. http://www.epa.gov/emefdata/em4ef.home.
46 California Department of Resources Recycling and Recovery (CalRecycle). 2015, September 10. SWIS Facility/Site Search. http://www.calrecycle.ca.gov/swfacilities/directory/Search.aspx.
47 PlaceWorks. November 2015. Phase I Environmental Site Assessment, Esencia K-8 School (included as Appendix E of this Initial Study).

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. The project site is in a Very High Fire Hazard Severity Zone mapped by the California Department of Forestry and Fire Prevention.[48] However, at completion of Planning Area 2 of the Ranch Plan, the site would be surrounded by developed urban uses extending from the site about 400 feet east, 1.4 miles north, 0.7 mile west, and 0.6 mile south.[49] Therefore, at completion of Planning Area 2, the proposed school is not expected to place people or structures at substantial hazard from wildfire, and impacts would be less than significant.

i) Does the proposed school site contain one or more pipelines, situated underground or aboveground, which carry hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or neighborhood?

No Impact. The following publicly available natural gas and hazardous materials pipeline maps were searched on August 5, 2015:

- ArcGIS Natural Gas Pipelines[50]
- Pipeline and Hazardous Materials Safety Administration (PHMSA) National Pipeline Mapping System (NPMS)[51]
- Southern California Gas Company Pipelines Map[52]

No underground or aboveground pipelines carrying hazardous materials or hazardous wastes were identified within 0.25 mile of the project site. No impact would occur.

j) Does the project site contain a current or former hazardous waste disposal site or solid waste disposal site and, if so, have the wastes been removed?

No Impact. The project site does not contain a current or former hazardous waste disposal site or solid waste disposal site.[53] No impact would occur.

[48] California Department of Forestry and Fire Prevention (CAL FIRE). 2007, November 6. Very High Fire Hazard Severity Zones in SRA: Orange County. http://frap.fire.ca.gov/webdata/maps/orange/fhszs_map.30.pdf.
[49] The distances given here are for four contiguous Planning Subareas, 2.1 through 2.4.
[50] ArcGIS.com. 2015, August 4. Natural Gas Pipelines. http://www.arcgis.com/home/webmap/viewer.html?webmap=f1d3e4fecd56429c9a3bd898d8134d2a.
[51] Pipeline and Hazardous Materials Safety Administration (PHMSA). 2015, August 4. National Pipeline Mapping System (NPMS). https://www.npms.phmsa.dot.gov/PublicViewer/.
[52] Southern California Gas Company. 2015, August 4. Pipelines Map.
[53] California Department of Resources Recycling and Recovery (CalRecycle). 2015, September 10. SWIS Facility/Site Search. http://www.calrecycle.ca.gov/swfacilities/directory/Search.aspx.

k) Is the project site a hazardous substance release site identified by the state Department of Health Services in a current list adopted pursuant to §25356 for removal or remedial action pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code?

No Impact. No hazardous substance release sites were identified on or within 0.25 mile of the project site in the database search described above in Section 5.8.d. No impact would occur.

5.9 HYDROLOGY AND WATER QUALITY

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact.

Construction Phase

Project development would include preparation and implementation of a SWPPP and implementation of BMPs (see Section 5.6.b above for description). Implementation of BMPs would reduce impacts of project construction on stormwater quality to less than significant.

Operation Phase

Regulations on waste discharges to storm drains are set forth in the Municipal Stormwater Permit for the San Diego Region, Order No. R9-2013-0001 issued by the San Diego Regional Water Quality Control Board (SDRWQCB) in 2013. The District would prepare and implement a water quality management plan (WQMP) identifying BMPs that would be included in the project design and installed during project construction to minimize stormwater pollution. Low-impact development (LID) BMPs are required as part of the project. LID BMPs maximize infiltration, provide retention, slow runoff, minimize impervious footprint, direct runoff from impervious areas into landscaping, and construct impervious surfaces to minimum widths necessary. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. The WQMP would specify BMPs in two other categories.

- **Source Control BMPs** reduce the potential for pollutants to enter runoff. Source control BMPs are divided into two types:
    - Structural source control BMPs are included in project design; and include roof runoff controls, protection of slopes and channels, efficient irrigation, and storm drain system signage.
    - Nonstructural source control BMPs consist of activity restrictions, such as requiring that trash can lids be closed at all times and prohibiting outdoor cooking; education of school staff; and periodic inspections and maintenance of water quality features such as catch basins and filters.
- **Treatment Control BMPs** remove pollutants from contaminated stormwater before the water is discharged offsite. Treatment control BMPs include filters and biofiltration through constructed project landscape elements such as bioswales, infiltration trenches, and/or infiltration basins.

Project construction and operation would comply with water quality requirements set forth by the SWRCB and the SDRWQCB. Impacts would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. The nearest groundwater basin is the San Juan Valley Groundwater Basin about 0.4 mile south of the site.[54] The project site is not over a groundwater basin and is not used for intentional groundwater recharge. The Santa Margarita Water District (SMWD) would supply water to the school. SMWD's water supplies are imported water from northern California and the Colorado River purchased through the Metropolitan Water District of Southern California.[55] Project construction and operation would not use groundwater, and no impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

No Impact. Development of the project site is part of a larger planned community that is currently under construction. The project site is a graded pad surrounded by a chain-link fence and paved streets. Project development would include installation of an onsite storm drainage system discharging to existing storm drainage infrastructure that is installed in surrounding roadways. The project would not alter drainage patterns of the site or area. No impacts would occur.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

No Impact. Project development would include installation of onsite drainage system connecting to offsite storm drains, as described above in Section 5.9.c. The project site and surrounding area have been planned and engineered to accommodate stormwater runoff. Project development would not result in substantial flooding on- or off-site, and no impacts would occur.

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

Less Than Significant Impact. The project site and surrounding area have been planned and engineered to accommodate stormwater runoff. The project would install LID BMPs that would minimize runoff from the site through a variety of measures such as minimizing impervious areas, bioretention facilities, and other

[54] State Water Resources Control Board (SWRCB). 2015, September 14. Groundwater Information Center Interactive Map Application. https://gis.water.ca.gov/app/gicima/.
[55] Malcolm Pirnie. 2011, July. Santa Margarita Water District: 2010 Urban Water Management Plan. http://www.smwd.com/assets/downloads/reports/2010-Urban-Water-Management-Plan.pdf.

infiltration facilities. Therefore, runoff from the site would not exceed the capacity of proposed onsite or existing off-site drainage facilities. Runoff water impacts would be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Water quality impacts would be less than significant, as substantiated above in Section 5.9.a.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The project site is outside of 100-year flood zones,[56] and the project would not develop housing. No impact would occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The project site is outside of 100-year flood zones, and therefore the project buildings would not impede or redirect flood flows. No impact would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. The nearest dam is at the Portola Reservoir, about 6.5 miles north of the project site. The project site is outside of the dam inundation area of the reservoir.[57] Additionally, the project site is not in an area mapped as protected from 100-year floods by levees. No impact would occur.

j) Inundation by seiche, tsunami, or mudflow?

No Impact.

A seiche is a surface wave created when an inland water body is shaken, usually by an earthquake. There are no inland water bodies near the site that could pose a seiche hazard to the site, and no impact would occur.

A tsunami is a sea wave caused by a sudden displacement of the ocean floor, most often due to earthquakes. The project site is at an elevation ranging from about 400 to 420 feet above mean sea level and is about 6.7 miles inland from the Pacific Ocean. The site would not be inundated by a tsunami.

A mudflow is a landslide composed of saturated rock debris and soil with a consistency of wet cement. The project site and surrounding areas have been planned and engineered; earthmoving involved cut slopes and fill material compacted for building construction and graded. There are no slopes on or next to the site that could generate a mudflow, and no impact would occur.

[56] Federal Emergency Management Agency (FEMA). 2009, December 3. Flood Insurance Rate Map 06059C0465J. http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=88229634&IFIT=1.
[57] California Emergency Management Agency (Cal/EMA). 2007. Dam Inundation DVD.

5.10 LAND USE AND PLANNING

a) Physically divide an established community?

No Impact. Development of the project site is part of a larger planned community that is currently under construction. The project site is a graded pad surrounded by a chain-link fence and paved streets. Project development would not divide an established community, and no impact would occur.

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

No Impact. The site is in Planning Area 2, Subarea 2.1, of the Ranch Plan. The existing zoning for the project site is PC (Planned Community), and the general plan land use designation is 1B, Suburban Residential. Schools are permitted in this designation. Development of the proposed school would not conflict with existing zoning or general plan designations for the project site, and no impact would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The project site is in the Orange County Southern Subregional Habitat Conservation Plan (HCP). The project site and surrounding land have been graded; therefore, project development would not conflict with the HCP.

5.11 MINERAL RESOURCES

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

No Impact. The project site is mapped Mineral Resource Zone 3 (MRZ-3) by the California Geological Survey, indicating that it is in an area containing mineral deposits, the significance of which cannot be evaluated from available data.[58] There are no active mines on or next to the site; the nearest active mine to the site is Carmeuse Industrial Sands about two miles to the south.[59] The site has been graded and is not available for mining. Project development would not cause a loss of availability of a known mineral resource valuable to the region and the state, and no impact would occur.

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

No Impact. The Orange County General Plan designates generalized mineral resource areas, but does not designate specific mineral resource recovery sites. The project site is not in a Mineral Resource Area; the

[58] California Geological Survey (CGS). 1995. Revised Mineral Land Classification Map: Aggregate Resources Only. Open File Report 94-15, Plate 2. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-15/OFR_94-15_Plate_2.pdf.

[59] Office of Mine Reclamation (OMR). 2015, September 14. Mines Online. http://maps.conservation.ca.gov/mol/mol-app.html.

nearest such area to the site is approximately 0.5 mile to the south. [60,61] Project development would occur on a flat graded site surrounded by residential development associated with Planning Subarea 2.1 of the Ranch Plan. Development would not cause a loss of availability of a mineral resource recovery site, and no impact would occur.

5.12 NOISE

Terminology

The following are brief definitions of terminology used in this section:

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The energy-average noise level over a specified measurement period (typically one hour). The L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the sound levels occurring during the period from 7:00 PM to 10:00 PM and 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

Would the project:

a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

County of Orange Noise Thresholds

The County General Plan Noise Element has exterior and interior standards for new noise-sensitive uses. For new schools, the exterior noise standard is 65 dBA. The interior classroom noise standard is 45 dBA Leq.

The County's noise ordinance is designed to protect people from nontransportation-related stationary noise sources such as construction activity, machinery and pumps, and air conditioners. The County of Orange

[60] Orange County Public Works (OCPW). 2012, June 5. General Plan Figure VI-3: Orange County Mineral Resources. http://ocplanning.net/civicax/filebank/blobdload.aspx?blobid=8625.
[61] Office of Mine Reclamation (OMR). 2015, September 14. Mines Online. http://maps.conservation.ca.gov/mol/mol-app.html.

5. Environmental Analysis

Code of Ordinances, Division 6, Noise Control, limits the exterior noise levels at residential properties to 55 dBA between 7:00 AM and 10:00 PM and to 50 dBA from 10:00 PM to 7:00 AM. Noise shall not exceed:

- A cumulative period of more than 30 minutes in any hour (equivalent to the L_{50} level)
- The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour (L_{25})
- The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour ($L_{8.3}$)
- The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour ($L_{1.6}$)
- The noise standard plus 20 dBA for any period of time (L_{max})

The county provides exemption for construction noise. Specifically, Code of Ordinances section 4-6-7(e) exempts noise sources associated with construction, repair, remodeling, or grading of any real property, provided it does not take place between 8:00 PM and 7:00 AM Monday through Saturday, or at any time on Sunday or a federal holiday.

Traffic Noise

In general for community noise, a noise level increase of 3 dBA is considered barely perceptible and is used as the threshold for a substantial increase; an increase of 5 dBA is considered clearly noticeable. The threshold for impacts to noise-sensitive receptors along a roadway segment is exposure to ambient noise levels over 65 dBA CNEL and a project contribution of 1 dBA or more.

Project-related traffic noise is based on existing and future scenarios from the traffic impact analysis[62] and the FHWA Highway Traffic Noise Prediction Model (RD-77-108); model calculations are included in Appendix E of this Initial Study.

The daily traffic noise averaged over a 24-hour period was calculated at 50 feet from the traffic study roadway segments for future 2020 conditions, with and without the project. As shown on Table 7, the traffic noise increase at study area segments ranges from 0.1 to 2.6 dBA. The greatest project-related increase is 2.6 dBA along Esencia Drive between Fauna Drive and Andaza Street. Future ambient traffic noise levels along roadways are predicted to be below 60 dBA CNEL, and the project-related traffic noise increases would be below the 3 dBA threshold. With implementation of the proposed project, changes in traffic noise due to the project would not result in significant daily long-term, traffic-related noise impacts.

Note that while noise-sensitive receptors along roadways would not experience perceptible daily (24-hour averaged) noise increases, they may be exposed to a short-term increase in traffic noise during student arrival and dismissal times. This would be limited to short periods during the daytime hours, and noise impacts would be less than significant.

[62] Garland Associates. 2015, October. Traffic Impact Analysis for the Proposed Esencia K-8 School Rancho Mission Viejo Planning Area 2.

Table 7 Project-Related Daily Traffic Noise Increases

Roadway	Segment	No Project*	With Project*	Cumulative Increase**
Cow Camp Rd	west of Chiquita Canyon	73.1	73.2	0.1
Cow Camp Rd	Chiquita Canyon to Esencia	68.7	68.8	0.1
Cow Camp Rd	east of Esencia Dr	66.9	67.0	0.1
Esencia Dr	north of Fauna Dr	58.5	59.0	0.5
Esencia Dr	Fauna Dr to Andaza St	51.0	53.6	2.6
Esencia Dr	south of Andaza St	59.6	60.1	0.5
Esencia Dr	north of Cow Camp	59.8	60.3	0.5
Andaza St	Esencia to Tierno	58.1	59.5	1.4
Andaza St	Tierno to Aprender	57.8	58.6	0.8
Andaza St	east of Aprender	73.1	73.2	0.1
Cow Camp Rd	west of Chiquita Canyon	68.7	68.8	0.1

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided by Garland Associates, 2015.
* dBA CNEL
** dBA

Stationary Noise

The major sources of stationary noise would be related to outdoor activities. The shared/joint-use play field (soccer and a baseball field) and multipurpose building would be used by students during the day and by the community on weekends; the school campus would have hardcourts and a soccer field. School hours would be 8:00 AM through 3:20 PM. The soccer and baseball fields would be in the western portion of the site, and the hardcourts in the northern portions of the site. The nearest occupied residential units to the project site are about one mile to the southwest near the intersection of Antonio Parkway and Sendero Way, in the Village of Sendero (Ranch Plan PA 1).When construction begins on this project, sensitive receptors are anticipated to be living in the surrounding homes that are currently under construction. The residential units to the north across Andaza Street would be approximately 130 feet and uphill from the hardcourts. The residential to the west across Tierro Road Street would be approximately 230 feet from the soccer and baseball fields, and the residential units to the east would be approximately 600 from the hardcourts. Based on similar schools, including previous noise level measurements taken at the San Jose Elementary School, noise levels from the use of hardcourts would average 51 dBA Leq, and noise from a play fields would average 59.6 dBA Leq at 100 feet away. Because the nearest sensitive receptor would be 130 feet away, the noise levels at homes would be less than the County of Orange 55 dBA threshold. Noise may be heard sporadically at the nearby residential units adjacent to the school, but due to the distance and the traffic on local streets that would generally overshadow noise from daytime school activities, noise impacts would be less than significant. No field lighting would be installed; therefore no night games would be held on play fields.

5. Environmental Analysis

In addition, noise from school building operations would include the operation of HVAC units, public address systems and bells, and student activity in the vicinity of the buildings between classes. These noise occurrences would be sporadic and would occur during the daytime hours when there is less sensitivity to noise. Further, noise dissipates at a rate of at least 6 dBA per doubling distance, and traffic on the local streets would generally overshadow noise from school building operations at the nearby homes. Therefore, noise impacts from school activities to the nearby residential uses in the vicinity of the school would be less than significant.

Land Use Compatibility

Traffic noise levels from Andaza Street along the project site would be 58.6 dBA CNEL (see Table 7).[63] Due to low traffic volumes and speeds on Andaza Street, traffic noise from this street would not result in a substantial noise impact to the school.

Noise levels along the east side of the project site would be elevated because of future traffic along the planned Los Patrones Parkway. Los Patrones Parkway is anticipated to be a 4-lane divided road with the capacity for 43,000 vehicles per day.

Outdoor Noise. The County of Orange defines noise-sensitive spaces as patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas, and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas). The County exterior noise level threshold is 65 Leq during school hours of operation for "outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise." Historically the County has applied this to specific areas such as teaching amphitheater and not to playgrounds. The County of Orange does not have exterior noise threshold for parks.[64] The school district, County, and the state of California do not have exterior noise standards for school playgrounds and sports fields.

The noise analysis prepared for the Ranch Plan, PA 2 (Village of Esencia) by Mestre Greve and Associates in 2013[65] identified future noise levels along the east edge of the planning area may be at the 65 dBA CNEL; however, the study did not include noise contours that include topography so the exact location of the 65 dBA CNEL is undefined. Noise analysis at the school campus was based on the site location only, not specific placement of classroom buildings or play fields. According to the 2013 noise study, the nearest property line in PA 2 to Los Patrones Parkway centerline would be at 135 feet and traffic noise at that distance would be

[63] Does not include traffic noise from future operation of Los Patrones Parkway.
[64] County of Orange General Plan. 2005. Chapter VIII. Noise Element. page VIII-22. http://ocplanning.net/civicax/filebank/blobdload.aspx?blobid=8616
[65] Mestre Greve Associates, Division of Landrum & Brown 2013, October 3. Project #545501-0200. Noise Analysis for Planning Area 2. County of Orange, California. Prepared for Rancho Mission Viejo Company (see Appendix F of this Initial Study).

68.8 dBA CNEL. The closest school property line is approximately 245 feet from the centerline of Los Patrones Parkway. The 65 dBA CNEL noise contour, without considering topography, was identified at 241 feet from the centerline of Los Patrones Parkway. Traffic noise from Los Patrones Parkway at the school campus would be reduced by ground topography, which includes an approximately 100-foot long steep slope between the east edge of the Aprender Street right-of-way and the west edge of Los Patrones Parkway right-of-way. Based on distance alone, without considering topography, a small portion of the northeast corner of the school property would have the potential for noise levels at 65 dBA CNEL, the rest of the school site is farther from Los Patrones Parkway and would be exposed to noise levels below 65 dBA CNEL.

The 2013 noise study did not definitively find significant noise impacts at the school site, but included an optional 6-foot high noise barrier along the school site boundary to reduce the noise levels at the exterior areas. Because the school district, County, and state do not have exterior noise standards for parks and exterior school play areas, and most of the exterior areas at the school campus would be under 65 dBA, the school would not be adversely impacted by traffic noise from Los Patrones Parkway. Traffic noise exposure at the school exterior areas would be less than significant.

Indoor Noise. The interior standard in classrooms is 45 dBA Leq. Based on the 2013 Mestre Greve Noise Study the 65 dBA CNEL contour would be near the northeast corner of the school site. Typical building construction provides at least a 20 dBA exterior to interior noise reduction. The reduction provided by a standard school building construction required by the building code would be sufficient to meet the 45 dBA Leq indoor noise standard (65 dBA exterior – 20 dBA = 45 dBA interior). Compliance with standard Title 24 building construction requirements would ensure interior noise impacts would be less than significant.

b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The County of Orange does not have specific thresholds for vibration. The Federal Transit Administration (FTA) provides criteria for acceptable levels of ground-borne vibration for various types of special buildings that are sensitive to vibration. The FTA criteria are often used to evaluate vibration impacts during construction.

Vibration-Related Human Annoyance. Table 8 shows the FTA's vibration criteria to evaluate vibration-related annoyance due to resonances of the structural components of a building. These criteria are based on extensive research that suggests humans are sensitive to vibration velocities in the range of 8 to 80 Hz.

Table 8 Groundborne Vibration Criteria: Human Annoyance

Land Use Category	Max Lv (VdB)	Description
Workshop	90	Distinctly felt vibration. Appropriate to workshops and nonsensitive areas
Office	84	Felt vibration. Appropriate to offices and nonsensitive areas.
Residential – Daytime	78	Barely felt vibration. Adequate for computer equipment.
Residential – Nighttime	72	Vibration not felt, but groundborne noise may be audible inside quiet rooms.

Source: Federal Transit Administration (FTA). 2006, May. *Transit Noise and Vibration Impact Assessment*. United States Department of Transportation. FTA-VA-90-1003-06.
Note: Max Lv (VdB): Lv is the velocity level in decibels, as measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz.

5. Environmental Analysis

Vibration-Related Architectural Damage. Structures amplify groundborne vibration, and wood-frame buildings such as typical residential structures are more affected by ground vibration than heavier buildings. The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively. The most conservative estimates are reflected in the FTA standards, shown in Table 9.

Table 9 Groundborne Vibration Criteria: Architectural Damage

Building Category	PPV (in/sec)	Lv (VdB)
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source Federal Transit Administration (FTA). 2006, May. *Transit Noise and Vibration Impact Assessment.* United States Department of Transportation. FTA-VA-90-1003-06.
Note: Lv (VdB): Lv is the velocity level in decibels, as measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz.

There would be no mechanism during ongoing use of the shared facilities or school campus that would generate enough energy to be of concern for groundborne vibration. However, construction activities can generate varying degrees of ground vibration, depending on the construction procedures, construction equipment used, and proximity to vibration-sensitive uses. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Rough grading for the project site has been completed. Earthwork would be limited to fine grading and excavation for the installation of utilities. Construction equipment required during project construction would include typical earthmoving equipment such as backhoes, front loaders, haul trucks, and rollers. This equipment would generate the highest levels of groundborne vibration. The nearest potentially affected residential units are currently under construction and may be occupied when the project site is developed.

The threshold at which there is a risk of architectural damage to normal houses with plastered walls and ceilings is 0.200 in/sec. Earthmoving and compacting soil construction equipment, such as vibratory rollers, bulldozers, and haul trucks, generate vibration levels no greater than 0.210 PPV in/sec at 25 feet away. Because vibration dissipates quickly with distance and because construction would mostly require the use of small earthmoving equipment that does not generate considerable amounts of vibration, the maximum construction-related vibration level would be well below the 0.2 PPV in/sec criteria for vibration-induced architectural damage at the nearby structures. Therefore, architectural-damage vibration impacts would be less than significant.

Vibration Annoyance. The County of Orange does not have vibration thresholds; for the purpose of this analysis, the FTA standards shown in Table 10 are utilized. For residential uses, the criteria for vibration annoyance during daytime hours is 78 VdB. The nearest occupied residential land uses to the project site are about one mile to the southwest near the intersection of Antonio Parkway and Sendero Way, in the Village of Sendero (Ranch Plan PA 1). When project construction begins, sensitive receptors are anticipated to be living in the surrounding homes that are currently under construction. The effect on buildings near a construction

site varies depending on soil type, ground strata, and receptor building construction. Table 10 lists vibration levels for construction equipment.

Table 10 Vibration Levels for Construction Equipment

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate RMS[1] Velocity at 25 Feet (in/sec)
Vibratory Roller	95	0.210
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Jackhammer	79	0.035
Small Bulldozer	58	0.003
Loaded Trucks	86	0.076
FTA Criteria – Human Annoyance (Daytime)	78	—
FTA Criteria – Structural Damage	—	0.200

Source: FTA 2006.
[1] RMS velocity calculated from vibration level (VdB) using the reference of 1 microinch/second.

Typical earthmoving equipment such as large bulldozers can generate levels of up to 87 VdB when measured at 25 feet, and vibratory rollers can generate levels of up to 95 VdB. Because vibration dissipates rapidly with distance, the groundborne vibration at the nearest structures in the vicinity of the project site would be negligible and not perceptible to the new residents; therefore, vibration impacts would be less than significant.

c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. As discussed under 5.12.a, above, the potential for noise increases with operation of the project would be less than significant.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Overall project construction is anticipated to begin in the second quarter of 2017 and be finished in the second quarter of 2018. As discussed in response 5.12.b, rough grading for the project site has been completed, and earthwork would be limited to fine grading and excavation for the installation of utilities.

Noise generated during construction is based on the type of equipment used, the location of the equipment relative to sensitive receptors, and the timing and duration of the noise-generating activities. Each stage of construction involves different kinds of equipment and therefore has its own distinct noise characteristics. Noise levels from construction activities are dominated by the loudest piece of equipment. The highest noise levels generally occur during the site preparation and grading phase, when the louder equipment such as bulldozers, backhoes, and graders are heavily utilized. There would be no pile driving or rock blasting required for project construction. Table 11 shows typical noise levels from construction equipment.

5. Environmental Analysis

Heavy earthmoving equipment such as backhoes and loaders generate maximum noise levels of up to 85 dBA L_{max} at 50 feet. Since noise dissipates at a rate of approximately 6 dBA per doubling distance, these levels would be 79 dBA at 100 feet and 73 dBA at 200 feet away.

Consistent with the County of Orange regulations, no construction would be performed between the hours of 8:00 PM and 7:00 AM on weekdays and Saturday, or at any time on Sunday or a federal holiday. Because equipment operates intermittently and moves around the site, noise would be sporadic and temporary during the construction period.

Heavy earthmoving equipment such as backhoes and loaders generate maximum noise levels of up to 85 dBA L_{max} at 50 feet. Since noise dissipates at a rate of approximately 6 dBA per doubling distance, these levels would be 79 dBA at 100 feet and 73 dBA at 200 feet away.

Table 11 Construction Equipment Noise Emission Levels

Construction Equipment	Typical Noise Level (dBA) at 50 Feet	Construction Equipment	Typical Noise Level (dBA) at 50 Feet
Air Compressor	81	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	96
Ballast Equalizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	76
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	98
Concrete Pump	71	Roller	74
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	89
Dozer	85	Shovel	82
Generator	81	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	85	Truck	88
Paver	89		

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

If occupied, homes in the vicinity of the project site to the north, east, and west would be exposed to noise from building construction activities. Construction noise would be noticeable. Consistent with the County of Orange regulations, no construction would be performed between the hours of 8:00 PM and 7:00 AM on weekdays and Saturday, or at any time on Sunday or a federal holiday. Because equipment operates intermittently and moves around the site, noise would be sporadic and temporary during the construction period.

The proposed project would result in a temporary, short-term increase in ambient noise during the daytime hours. Noise from construction activities would comply with the hours allowed by the County of Orange and would be temporary. Impacts would be less than significant.

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 expose people residing or working in the area to excessive noise levels?

No Impact. There are no public-use airports within two miles of the project site, and the site is not within the airport land use plan of any such airport. Project development would not expose people to excessive noise levels due to aircraft activity, no impact would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest heliport to the site is the Mission Hospital Helistop in the City of Mission Viejo about 4.5 miles to the northwest. There are no private-use airports or heliports within two miles of the project site, and the site is not within the airport land use plan of any such airport. Project development would not expose people to excessive noise levels due to aircraft activity, no impact would occur.

5.13 POPULATION AND HOUSING

a) Induce substantial 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)?

Less Than Significant Impact. The project does not propose new homes or businesses. The project would develop shared facilities and a school in an area where construction is already underway. The proposed school capacity will accommodate the growth. The project would install utility laterals into the school site connecting to planned utility infrastructure in surrounding roadways; however, such surrounding utility infrastructure is part of the Esencia development and is not part of the proposed project. Impacts would be less than significant.

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

No Impact. There is no housing onsite, and no impact would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. There are no residents onsite, and no impact would occur.

5.14 PUBLIC SERVICES

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

a) Fire protection?

No Impact. The Orange County Fire Authority (OCFA) would provide fire protection and emergency medical services to the proposed school. OCFA Station 56, at 56 Sendero Way in the Community of Rancho Mission Viejo in unincorporated Orange County—about 1.2 miles west of the project site—opened July 10, 2015.[66] Station 56 would provide adequate fire protection for Subareas 2.1 through 2.4 of Planning Area 2; and OCFA Station 58 in Ladera Ranch would provide fire protection for Subarea 2.5 of Planning Area 2. Project development would not require construction of new or expanded fire stations, and no impact would occur.

b) Police protection?

No Impact. The project site is within the service area of the Orange County Sheriff's Department (OCSD). Sheriff's patrols in the project region are based from the Southwest Operations Division station at 11 Journey in the City of Aliso Viejo. A sheriff's department substation within the Ranch Plan area is planned as part of the Ranch Plan development. OCSD would provide police protection for the proposed project from the planned susbstation, and project development would not require construction of new or expanded law enforcement facilities. No impact would occur.

c) Schools?

No Impact. The project would result in a benefit to the school district, and no adverse school impact would occur.

d) Parks?

No Impact. The project would develop physical education facilities for school use as well as soccer fields and a softball field for shared use between the school and the community. Project development would not require students to use off-site recreation facilities and would not require construction of new or expanded off-site facilities. No impact would occur.

[66] Hernandez, Michele (Management Analyst). 2015, July 14. Email. Orange County Fire Authority.

e) Other public facilities?

No Impact. Library services are provided in the project region by the City of Mission Viejo Library and by Orange County Public Library through facilities in the Community of Ladera Ranch and the cities of Rancho Santa Margarita, San Juan Capistrano, San Clemente, and Laguna Niguel. The proposed school would also include a library. Project development would have no adverse impact on library facilities.

5.15 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?

No Impact. The proposed project would include athletic facilities and would not require the use of other recreational facilities. Project development would not increase use or deterioration of recreational facilities, and no adverse impact would occur.

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?

No Impact. The project would not develop or require construction of off-site recreational facilities. No impact would occur.

5.16 TRANSPORTATION AND TRAFFIC

All figures for this topic are at the end of this section.

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact. This section summarizes the analysis in Garland Associates' 2015 traffic impact analysis.[67] This study is in Appendix F of this Initial Study. Unless otherwise cited, all information is from the Appendix F traffic study.

Existing Conditions

The roadway network—shown on Figure 9, *Study Area Roadway Network*—consists of:

[67] Garland Associates. 2015, October. Traffic Impact Analysis for the Proposed Esencia K-8 School Rancho Mission Viejo Planning Area 2.

5. Environmental Analysis

- **Cow Camp Road** is an east-west road that runs along the south end of Planning Area 2 south of the project site and provides a link between Antonio Parkway to the west and the proposed SR-241 to the east.

- **Esencia Drive** is a north-south street that intersects with Cow Camp Road south of the project site and runs north into Planning Area 2 west of the project site.

- **Andaza Street** intersects with Esencia Drive west of the project site and extends northeasterly along the northwest side of the site.

- **Chiquita Canyon Drive** is a north-south roadway that intersects with Cow Camp Road west of Esencia Drive and extends north into Planning Area 2.

- **Fauna Drive** intersects with Esencia Drive north of the Andaza Street intersection.

- **A loop road** intersects with Andaza Street at the north and south corners of the site and serves as a perimeter access road to the site. The streets that form the loop road are Tierno Road on the south and Aprender Street on the north and east.

Traffic for 2020 Without Project and 2020 With Project conditions were analyzed at six intersections, listed in Table 12. Traffic impact analyses often include two additional scenarios: existing conditions and existing conditions plus project. Those scenarios could not be analyzed for this project because the study area roadways are currently under construction and are not open to the public.

Table 12 Study Area Intersections

Intersection	Traffic Control
Cow Camp Road at Chiquita Canyon Drive	Traffic Signal
Cow Camp Road at Esencia Drive	Traffic Signal
Esencia Drive at Andaza Street	Roundabout
Esencia Drive at Fauna Drive	Traffic Signal
Andaza Street at Tierno Road	Roundabout
Andaza Street at Aprender Street	Roundabout

2020 Without Project Traffic Volumes

The traffic forecasts that were deemed most appropriate for this analysis are from "Ranch Plan Planning Area 2 - Traffic Forecast Data" prepared by Stantec in June 2013.[68] Daily and peak hour traffic forecasts were calculated for the roadways and intersections that are included in this traffic analysis. The forecasts are for the year 2020 and include the assumption that a 1,236-seat K–8 school would be developed in Planning Area 2. So the year 2020 has been used as the baseline year for the traffic analysis.

[68] Project construction is estimated to be completed in 2018. The two 2020 scenarios were analyzed because the baseline (without-project) traffic forecast, obtained from the traffic study prepared for the Ranch Plan Final Program Environmental Impact Report No. 589 (FEIR 589) is for 2020.

To quantify the year 2020 baseline traffic volumes without the project, the traffic that would be generated by the project was subtracted from the traffic volume forecasts. The resulting 2020 baseline traffic volumes and turning movements for the morning and afternoon peak hours are shown on Figure 10, *Traffic Volumes, 2020 without Project*.

The morning peak hour generally occurs between 7:00 and 8:00 AM, and the school's peak arrival traffic would coincide with commuters' morning peak hour. The school's afternoon peak period of traffic activity, however, would typically occur from 2:30 to 3:30 PM and would not coincide with the late afternoon commuter peak hour, which occurs generally from 5:00 to 6:00 PM.

Intersection Levels of Service

The operating conditions were identified by determining the levels of service for each intersection. Level of service (LOS) is a qualitative measure of traffic conditions that is used to represent various degrees of congestion and delay. LOS A represents excellent operating conditions with little or no delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS A through D are considered to be acceptable by the County of Orange General Plan Transportation Element.

For the signalized intersections, the LOS values were determined by calculating the intersection capacity utilization (ICU) values. The relationship between delay value, ICU value, and level of service is shown in Table 13.

Table 13 Relationship between ICU and LOS

Level of Service	ICU Value Signalized Intersections	Delay Value (seconds) Roundabouts
A	0.00 to 0.60	0.0 to 10.0
B	> 0.60 to 0.70	> 10.0 to 15.0
C	> 0.70 to 0.80	> 15.0 to 25.0
D	> 0.80 to 0.90	> 25.0 to 35.0
E	> 0.90 to 1.000	> 35.0 to 50.0
F	> 1.00	> 50.0

Based on the peak hour traffic volume forecasts, the turning movement volumes, and the proposed number of lanes at each intersection, the levels of service have been determined for the study area intersections, as summarized in Table 14. These values represent the baseline 2020 traffic conditions without the project. The study area intersections would all operate at acceptable levels of service during the morning and afternoon peak hours. Five of the intersections would operate at LOS A, and one intersection would operate at LOS B for the year 2020 without project baseline scenario.

5. Environmental Analysis

Table 14 Intersection Levels of Service, 2020 without Project

Intersection	ICU or Delay Value & Level of Service	
	AM Peak Hour	PM Peak Hour
Signalized Intersections (ICU)		
Cow Camp Road at Chiquita Cyn Dr	0.638 – B	0.623 – B
Cow Camp Road at Esencia Drive	0.591 – A	0.344 – A
Esencia Drive at Fauna Drive	0.168 – A	0.179 – A
Intersections with a Roundabout (Delay in Seconds)		
Esencia Drive at Andaza Street	6.30 – A	5.39 – A
Andaza Street at Tierno Road	6.16 – A	5.72 – A
Andaza Street at Aprender Street	6.06 – A	5.50 – A

2020 With Project Conditions

Project-Related Traffic

Table 15 shows the estimated project traffic for an average day during morning and afternoon peak hours.[69]

Table 15 Project-Related Traffic

Land Use	AM Peak Hour			PM Peak Hour			Daily Traffic
	Total	In	Out	Total	In	Out	
Trip Generation Rates							
Shared/joint-use facility (vehicle trips per acre)	0.65	50%	50%	0.45	50%	50%	5.0
Generated Traffic Volumes							
K-8 School (1,236 students)	594	330	264	186	90	96	1,750
Shared/joint-use facility (6 acres)	4	2	2	3	2	1	30
Total	598	332	266	189	92	97	1,780

The proposed school and shared facilities would generate an estimated 598 vehicle trips during the morning peak hour (332 inbound and 266 outbound), 189 trips during the afternoon peak hour (92 inbound and 97 outbound), and approximately 1,780 vehicle trips per day.

To quantify the increase in project-related traffic at each intersection, the project-generated traffic was geographically distributed onto the roadway network using the directional percentages shown below. The distribution assumptions are based on the layout of the roadway network and the geographical distribution of the residential uses in Planning Area 2 and the parts of Planning Areas 1 and 3 that the school is anticipated to serve.

[69] Stantec Consulting Services Inc. 2013, March 15. *The Ranch Plan Planning Area 2 Traffic Analysis*. Prepared for: Rancho Mission Viejo (see Appendix G of this Initial Study).

Geographical Distribution of Project Traffic

- Andaza Street to/from the northeast 40 percent
- Andaza Street to/from the southwest 5 percent
- Esencia Drive to/from the north 20 percent
- Fauna Drive to/from the west 5 percent
- Esencia Drive to/from the south 5 percent
- Cow Camp Road to/from the east 10 percent
- Cow Camp Road to/from the west 15 percent

Using the generated traffic volumes shown in Table 15 and the geographical distribution assumptions shown above, the volumes of project traffic on each access roadway and at each study area intersection were determined for the traffic impact analysis. The volume of project-generated traffic at each study area intersection is shown on Figure 11, *Project-Related Traffic Volumes*.

To quantify the year 2020 baseline traffic volumes with the project, the traffic that would be generated by the project was added back to traffic volume "without project" forecasts. The projected year 2020 traffic volumes for the with-project scenario are shown on Figure 12, *Traffic Volumes, 2020 with Project*.

Significance Criteria

The County of Orange General Plan Transportation Element indicates that the level of service standard for roadways and intersections is LOS D. Based on the LOS D thresholds of significance for Orange County, an intersection would be significantly impacted and mitigation would be required if a project would result in an increase of 0.01 or greater in the ICU value at an intersection that is projected to operate at LOS E or F. The impacts would not be significant at intersections that are projected to operate at LOS A through D.

Intersection Impact Analysis

The County of Orange General Plan Transportation Element indicates that the level of service standard for roadways and intersections is LOS D. Based on the LOS D thresholds of significance for Orange County, an intersection would be significantly impacted and mitigation would be required if a project would result in an increase of 0.01 or greater in the ICU value at an intersection that is projected to operate at LOS E or F. The impacts would not be significant at intersections that are projected to operate at LOS A through D.

An analysis of traffic impacts was conducted by quantifying the before and after traffic volumes, then determining the levels of service at the study area intersections with and without the project. The levels of service for the signalized intersections are based on the ICU values, and the levels of service for the roundabouts are based on the average vehicle delay values.

The before-and-after ICU values, delay values, and levels of service at each of the study area intersections are summarized in Table 16 for the year 2020 analysis scenario. Table 16 shows the projected 2020 traffic conditions without the project; the 2020 traffic conditions with the project; and the change in the ICU values,

delay values, and LOS associated with the project. The last column in Table 16 indicates if the intersection would be significantly impacted by the project traffic. The proposed project would not have a significant impact at any of the study area intersections. Five of the intersections are projected to operate at LOS A, and one intersection is projected to operate at LOS B.

Table 16 Intersection Impacts

Intersection	ICU/Delay Value & LOS		Increase in ICU/ Delay	Significant Impact
	2020 Without Project	2020 With Project		
Signalized Intersections (ICU)				
Cow Camp Road at Chiquita Cyn Dr				
AM Peak Hour	0.638 – B	0.668 – B	0.030	No
PM Peak Hour	0.623 – B	0.626 – B	0.003	No
Cow Camp Road at Esencia Drive				
AM Peak Hour	0.591 – A	0.600 – A	0.009	No
PM Peak Hour	0.344 – A	0.356 – A	0.012	No
Esencia Drive at Fauna Drive				
AM Peak Hour	0.168 – A	0.227 – A	0.059	No
PM Peak Hour	0.179 – A	0.203 – A	0.024	No
Intersections with a Roundabout (Delay in Seconds)				
Esencia Drive at Andaza Street				
AM Peak Hour	6.30 – A	7.28 – A	0.98	No
PM Peak Hour	5.39 – A	5.90 – A	0.51	No
Andaza Street at Tierno Road				
AM Peak Hour	6.16 – A	8.27 – A	2.11	No
PM Peak Hour	5.72 – A	6.14 – A	0.42	No
Andaza Street at Aprender Street				
AM Peak Hour	6.06 – A	9.33 – A	3.27	No
PM Peak Hour	5.50 – A	6.50 – A	1.00	No

Vehicular, Bicycle, and Pedestrian Safety and Circulation

Vehicular access to the project site would be provided by Andaza Street, which runs along the west side, and by Tierno Road and Aprender Street, which form a loop road along the perimeter. The intersections of Andaza Street and Esencia Drive, Andaza Street and Tierno Road, and Andaza Street and Aprender Street are roundabouts. Each approach to the roundabout intersections has an elongated triangular splitter island to separate the two directions of traffic flow and to channel the approaching motorists into the roundabout lanes. Pedestrian crosswalks are provided on each leg of the roundabout intersections.

With regard to bicycle and pedestrian amenities in the vicinity of the school site, the roadways have markings that indicate that they are to be shared (bikes and vehicles), and wide sidewalks are provided along the sides. In addition, off-street bicycle and pedestrian trails are proposed throughout the planning area. Pedestrian crosswalks are provided on each approach to the three intersections with roundabouts. These crosswalks are

positioned so that motorists will be confronted with the pedestrian crossings before and after the merging/emerging points of the roundabout. This design has been shown to enhance safety at pedestrian crossings.

The school would have two parking lots accessed from Aprender Street: one at the north end of the school and one on the east side of the school. The drop-off/pick-up zone would be in the east parking lot and bus loading in the north lot. Another parking lot at the south end of the site would be a shared lot that would also be used by the community.

Traffic, pedestrian, and bicycle activity would be controlled by compliance with existing regulations under the California Vehicle Code. California law requires the county to implement traffic control devices requested by a school district if they are meant to mitigate safety risks for students traveling to and from school.

California Vehicle Code, Division 11, Chapter 2, Article 1, Section 21372, Guidelines for Traffic Control Devices near Schools

The Department of Transportation and local authorities shall, with respect to highways under their respective jurisdictions, establish and promulgate criteria to be used as guidelines for the placement of traffic control devices near schools for the purpose of protecting students going to and from school. Such devices may include flashing signals. Such criteria shall be based upon, but need not be limited to, the following items: pedestrian volumes, vehicle volumes, width of the roadway, physical terrain, speed of vehicle traffic, horizontal and vertical alignment of the roadway, the distance to existing traffic control devices, proximity to the school, and the degree of urban or rural environment of the area.[70]

California Vehicle Code, Division 11, Chapter 2, Article 1, Section 21373, School Board Request for Traffic Control Devices

The governing board of any school district may request the appropriate city, county, city and county, or state agency to install traffic control devices in accordance with the warrants established pursuant to Section 21372. Within 90 days thereafter, the city, county, city and county, or state agency involved shall undertake an engineering and traffic survey to determine whether the requested crossing protection meets the warrants established pursuant to Section 21372. The city, county, city and county, or state agency involved may require the requesting school district to pay an amount not to exceed 50 percent of the cost of the survey. If it is determined that such requested protection is warranted, it shall be installed by the city, county, city and county, or state agency involved.[71]

California Vehicle Code, Division 11, Chapter 2, Article 1, Section 21368, Crosswalks near Schools

Whenever a marked pedestrian crosswalk has been established in a roadway contiguous to a school building or the grounds, it shall be painted or marked in yellow. Other established marked pedestrian crosswalks may be painted or marked in yellow if either (a) the nearest point of the crosswalk is not more than 600 feet from a school building or the grounds thereof, or (b) the nearest point of the crosswalk is not more than 2,800 feet from a school building or the grounds thereof, there are no intervening crosswalks other than those

[70] Amended Ch. 545, Stats. 1974. Effective January 1, 1975.
[71] Amended Ch. 1061, Stats. 1969. Effective November 10, 1969.

contiguous to the school grounds, and it appears that the facts and circumstances require special painting or marking of the crosswalks for the protection and safety of persons attending the school. There shall be painted or marked in yellow on each side of the street in the lane or lanes leading to all yellow marked crosswalks the following words, "SLOW-SCHOOL XING," except that such words shall not be painted or marked in any lane leading to a crosswalk at an intersection controlled by stop signs, traffic signals, or yield right-of-way signs. A crosswalk shall not be painted or marked yellow at any location other than as required or permitted in this section.

As part of the project, the following safety signs and markings would be installed in conformance with standards in Part 7, Traffic Control for School Areas, of the 2014 *California Manual of Uniform Traffic Control Devices*. Part 7 sets basic principles and prescribes standards for the design, application, installation, and maintenance of all traffic control devices (including signs, signals, and markings) and other controls (including adult crossing guards) required for the special pedestrian conditions in school areas.

- School area warning signs on Andaza Street north and south of the school site
- Install yellow school crosswalks at Andaza Street and Tierno Road, and at Andaza Street and Aprender Street, subject

The District would also prepare a "Suggested Route to School" plan to provide information for students, parents, and faculty regarding pedestrian and bicycle safety.

Traffic and pedestrian safety impacts would be less than significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. The Orange County Congestion Management Program (CMP) guidelines state that a project may have a significant impact and that a traffic study would be required if the project generates 2,400 or more vehicle trips per day or if the project contributes 1,600 or more trips per day directly to the CMP highway system. Since the project is not adjacent to a designated CMP highway and would not contribute traffic directly onto a CMP highway, the threshold of 2,400 trips per day is not applicable. Since the proposed project is estimated to generate 1,830 vehicle trips per day, the project-generated traffic volume would be below the designated CMP threshold. The project would not, therefore, exceed a level of service standard established by the county congestion management agency for designated roads or highways, and the project's impacts on the CMP roadways would be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. Project development would not change air traffic patterns. The nearest public-use airport to the site is John Wayne Airport, 18 miles to the northwest. Development of the project would not require a change in the location of air traffic patterns, and no impact would occur.

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

Less Than Significant Impact. Project development would not add incompatible uses to area roadways. The master plan anticipated a school in this location and made all appropriate street alignments in accordance with current regulations. All intersections of project access driveways with roadways would be perpendicular, and driveway intersections would be sufficiently spaced from intersections of roadways that no conflicting turning movements would be created. The loop road around the site was specifically designed to accommodate school traffic. School operation would include preparation and distribution of a Safe Routes to Schools plan. Impacts would be less than significant.

e) Result in inadequate emergency access?

No Impact. The school site plan would comply with requirements for fire apparatus access roads in Section 503 of the 2013 California Fire Code (California Code of Regulations Title 24 Part 9). Orange County Fire Authority review of emergency access roads on project site plans is required by the Division of the State Architect. Project development would not cause inadequate emergency access, and no impact would occur.

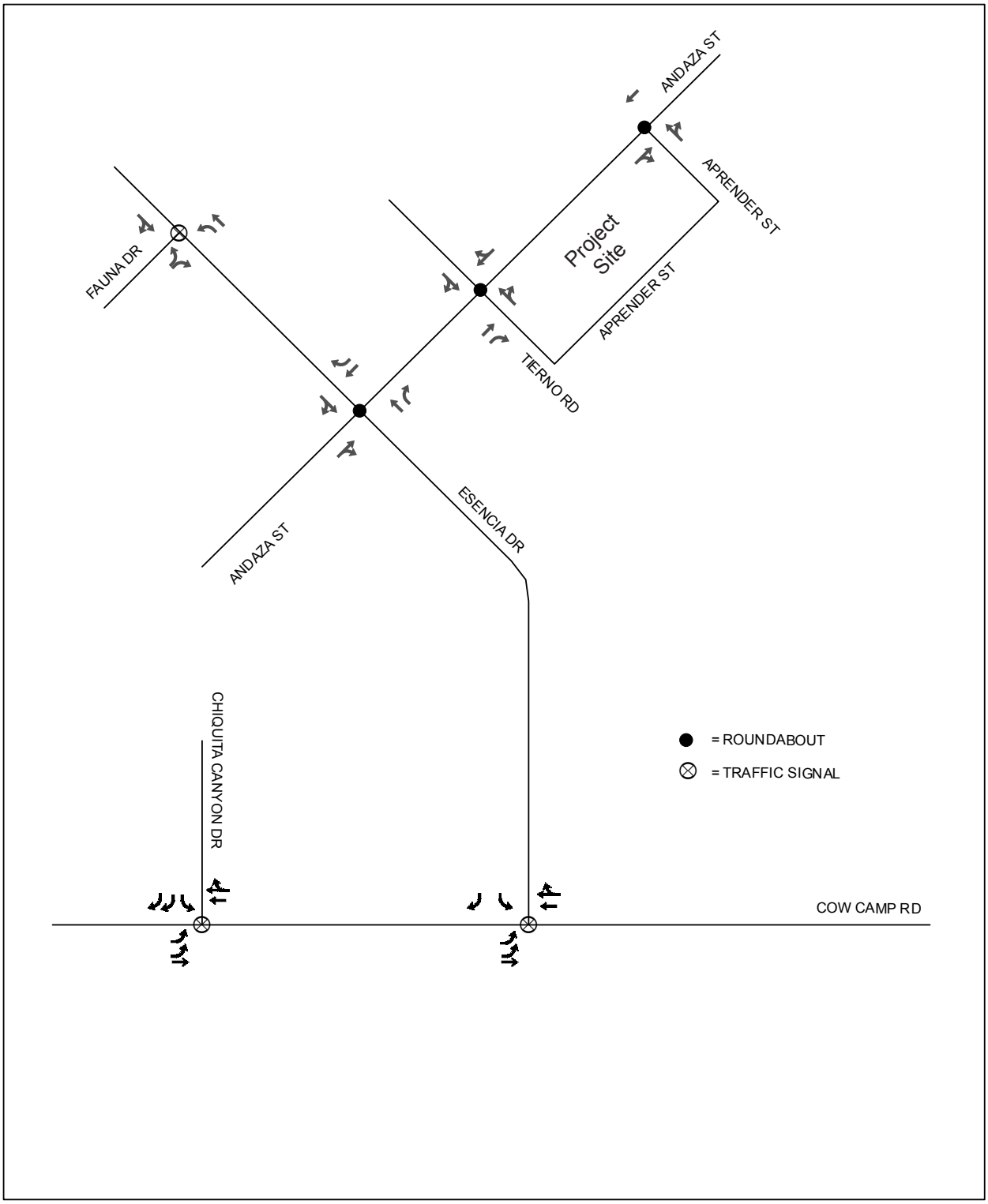
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. No impact would occur, as substantiated above in Section 5.16.a.

5. Environmental Analysis

This page intentionally left blank.

Figure 9 - Study Area Roadway Network
5. Environmental Analysis



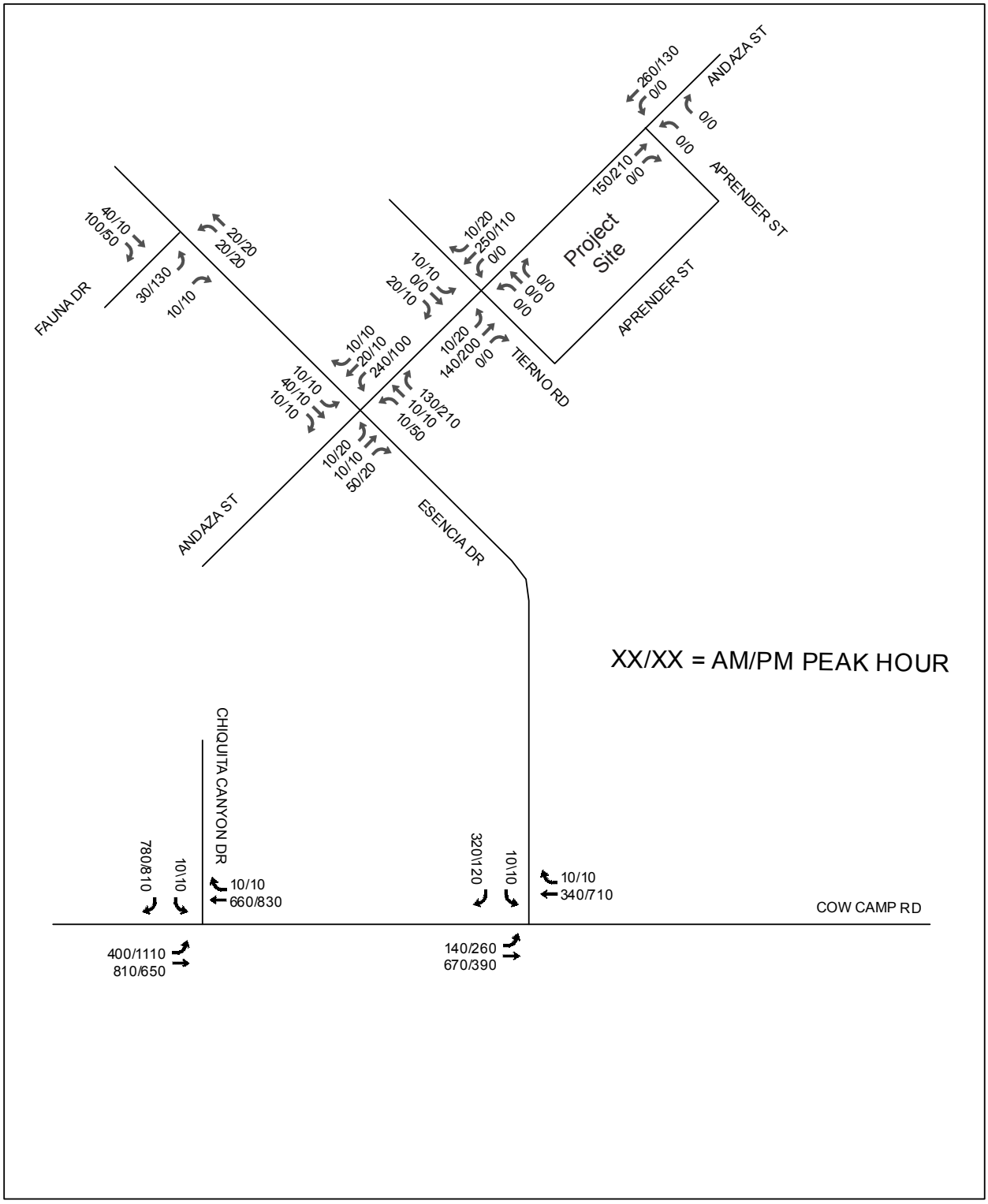
NO SCALE

Source: Garland Associates, 2015

5. Environmental Analysis

This page intentionally left blank.

Figure 10 - Traffic Volumes, 2020 without Project
5. Environmental Analysis



NO SCALE

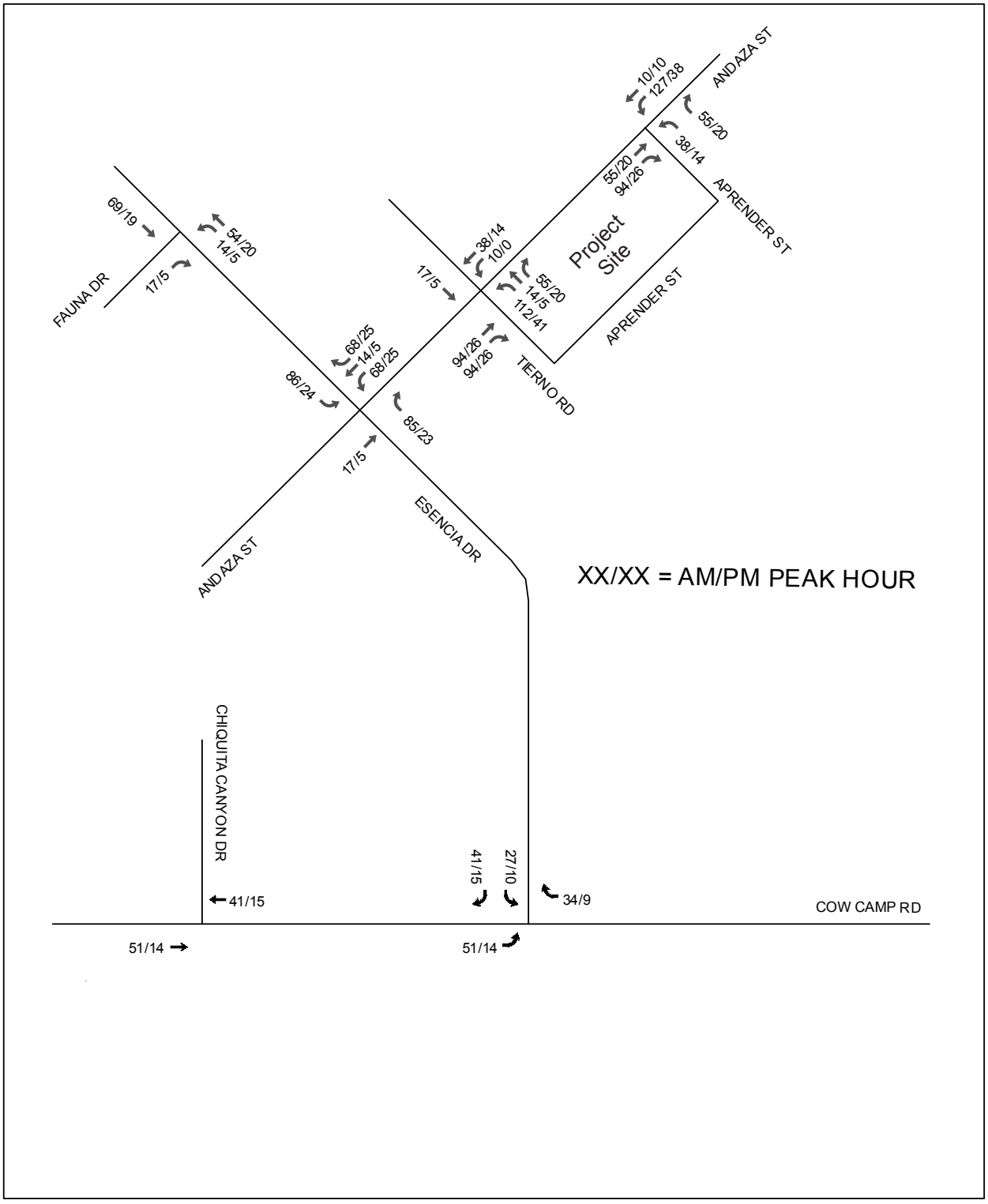
Source: Garland Associates, 2015

5. Environmental Analysis

This page intentionally left blank.

Figure 11 - Project-Related Traffic Volumes

5. Environmental Analysis



NO SCALE

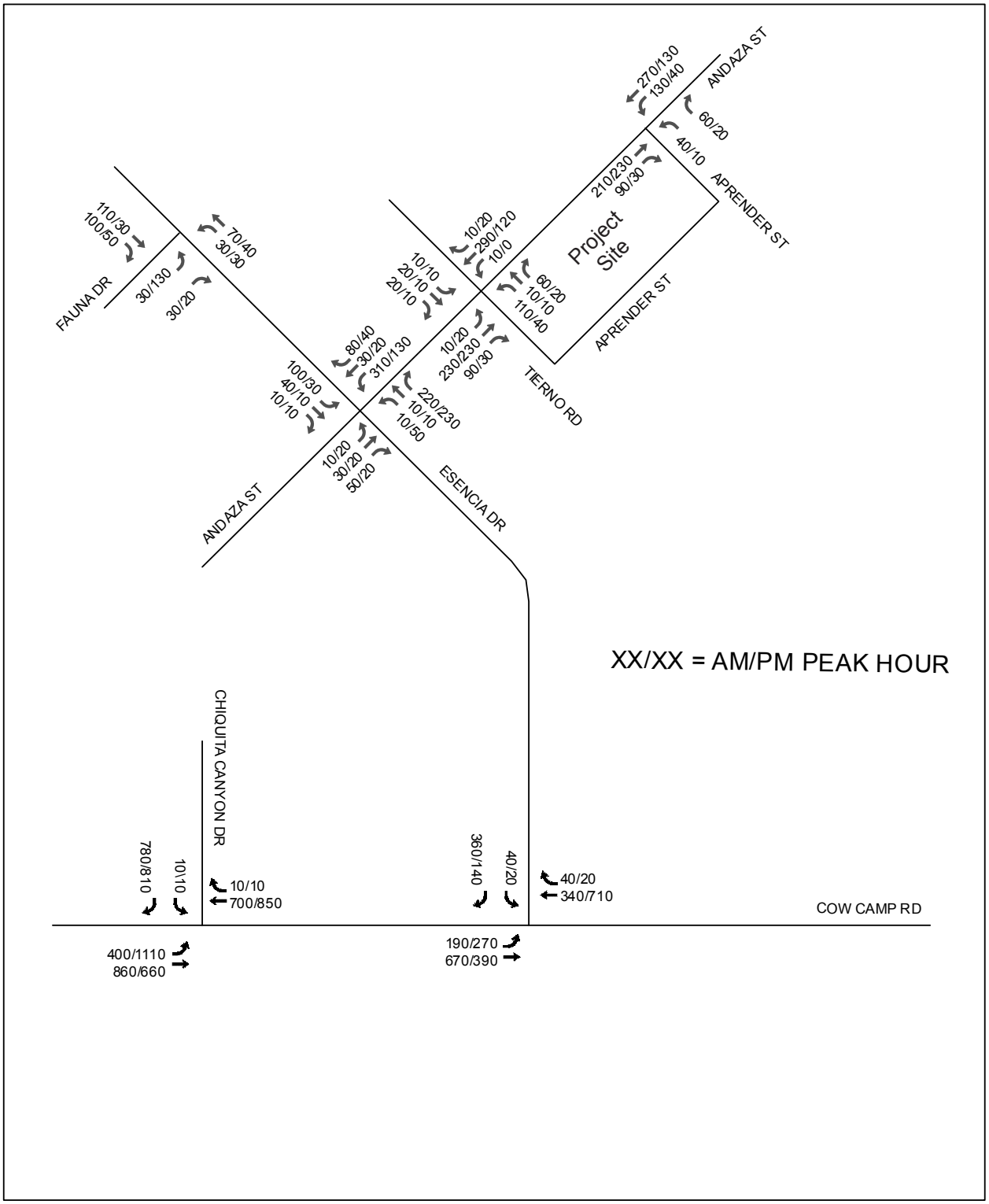
Source: Garland Associates, 2015

5. Environmental Analysis

This page intentionally left blank.

Figure 12 - Traffic Volumes, 2020 with Project

5. Environmental Analysis



NO SCALE

Source: Garland Associates, 2015

5. Environmental Analysis

This page intentionally left blank.

5.17 UTILITIES AND SERVICE SYSTEMS

a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The project would include installation of sewer laterals connecting to existing sewer mains that would convey wastewater to the Chiquita Water Reclamation Plant owned and operated by the SMWD. The proposed school would not generate polluted wastewater, such as from industrial or agricultural operations. No impact would occur.

b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact.

Water Treatment Facilities

Water treatment facilities filter and/or disinfect water before it is delivered to customers. Water imported from the MWD is treated at the MWD's Diemer Filtration Plant north of Yorba Linda whose capacity is 520 million gallons per day (mgd). The SMWD is collaborating with four other water districts to build the Baker Water Treatment Plant in Lake Forest. The Baker plant is scheduled for completion in 2016 and will have a 28.1 mgd capacity to treat raw (untreated) imported MWD water.[72] The proposed school is part of a master planned community in Subarea 2.1 of the Ranch Plan. Project development would not increase total water demand beyond what is anticipated by buildout of the Ranch Plan, and thus would not require construction of new or expanded wastewater treatment facilities. Impacts would be less than significant.

Wastewater Treatment Facilities

There is adequate existing and planned capacity at the Chiquita Water Reclamation Plant to accommodate estimated wastewater generation from buildout of the Ranch Plan, and no new or expanded wastewater treatment facilities would be required.[73] The proposed school is part of planned land uses in Subarea 2.1 of the Ranch Plan. Project development would not increase total wastewater generation above what was anticipated for the Ranch Plan. Impacts would be less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Project development would include installation of a storm drainage system onsite discharging to the existing storm drainage infrastructure installed as part of the roadways for Planning Subarea 2.1. The

[72] Irvine Ranch Water District (IRWD). 2015, September 14. The Baker Water Treatment Plant Project. http://bakerwatertreatmentplant.com/.

[73] BonTerra Consulting. 2004, Nov. 8. *Program Environmental Impact Report No. 589. The Ranch Plan General Plan Amendment/Zone Change (PA 01-114).* State Clearinghouse Number 2003021141. Prepared for County of Orange.
BonTerra Consulting. 2013. March 27. *Addendum to FEIR 589: The Ranch Plan – Master Plan and Subarea Plans for Planning Area 2.* Prepared for OC Public Works.

project site is a flat dirt lot; therefore, construction of the onsite storm drainage system would not cause a significant impact on the environment. No impact would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. Development of the proposed school would not change the total amount of development in the Ranch Plan, and thus would not change the plan's total water demands. The SMWD in 2010 forecast that it had adequate water supplies to meet demands in its service area through the 2015–2035 period in both normal and dry years. The SMWD is required to reduce water usage by 24 percent compared to 2013 in accordance with regulations issued by the SWRCB on May 5, 2015, pursuant to an executive order by the state.[74,75] The project would include water conservation features and would comply with state and local water reduction requirements. No impacts would occur.

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

No Impact. Project development would not change the total amount of wastewater that would be generated by buildout of the Ranch Plan, and thus would not require construction of new or expanded wastewater treatment facilities, as substantiated above in Section 5.17.b. No impacts would occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. The Prima Deshecha Sanitary Landfill (PDSL) in San Juan Capistrano is the landfill where solid waste from the Ranch Plan development would be disposed. The PDSL has remaining capacity of about 87.4 million cubic yards or 65.5 million tons, a maximum daily disposal capacity of 4,000 tons, an average disposal in 2013 of 1,456 tons, a residual daily disposal capacity of 2,544 tons, and an estimated closing date of 2067.[76,77]

The proposed school would not increase estimated solid waste generation by the Ranch Plan development. The PDSL has sufficient landfill capacity for the Ranch Plan's forecast solid waste generation, including the school, and impacts would be less than significant.

[74] State Water Resources Control Board (SWRCB). 2015, June 26. Emergency Conservation Regulation. http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/emergency_regulation.shtml.
[75] State Water Resources Control Board (SWRCB). 2015, June 11. Urban Water Supplier Conservation Tiers. http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/supplier_tiers.pdf.
[76] California Department of Resources Recycling and Recovery (CalRecycle). 2015, July 15. Prima Deshecha Sanitary Landfill. http://www.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0019/Detail/.
[77] California Department of Resources Recycling and Recovery (CalRecycle). 2015, July 15. Landfill Tonnage Reports. Reports. http://www.calrecycle.ca.gov/SWFacilities/Landfills/Tonnages/.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. Assembly Bill 939 (AB 939; Integrated Solid Waste Management Act of 1989; PRC §§ 40050 et seq.) established an integrated waste-management system for source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates; actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years disposal capacity for all jurisdictions within the county or show a plan to transform or divert its waste.

Assembly Bill 341 (2011) increases the statewide waste diversion goal to 75 percent by 2020 and mandates recycling for commercial and multi-family residential land uses.

Assembly Bill 1826 (PRC §§ 42649.8 et seq.), signed into law in September 2014, requires recycling of organic matter by businesses and multifamily residences of five of more units that generate such wastes in amounts over certain thresholds. The law takes effect in 2016.

The school would include storage areas for recyclable materials. The District would have organic matter from the school recycled, including green waste. The nearest composting facility to the project site is the Rancho Mission Viejo Compost Facility at 31641 Ortega Highway in unincorporated Orange County, about 1.5 miles to the southeast.[78] Project development would not conflict with laws governing solid waste disposal, and no impact would occur.

5.18 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to 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, 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. No substantial adverse impacts of the proposed project on fish or wildlife populations or habitats, plant or animal communities, or the numbers or ranges of rare or endangered plants or animals have been identified in this Initial Study. The project would not have the potential to substantially degrade the quality of the environment. Impacts would be less than significant.

[78] California Department of Resources Recycling and Recovery (CalRecycle). 2015c, July 15. Facility/Site Summary Details: Rancho Mission Viejo Compost Facility. http://www.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0448/Detail/.

5. Environmental Analysis

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

Less Than Significant Impact. No cumulatively considerable impacts have been identified in this Initial Study, and impacts would be less than significant.

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

No Impact. No direct or indirect impacts on human beings would occur.

6. List of Preparers

LEAD AGENCY

Capistrano Unified School District

John Stocks, Construction Manager

Korin Lawring, Facilities Planning Technician

CJ Knowland, Construction Manager

CEQA CONSULTANT

PlaceWorks

Dwayne Mears, AICP, Principal

Alice Houseworth, AICP, LEED AP, Senior Associate

Michael Milroy, Associate

Fernando Sotelo, PTP, Senior Associate

Nicole Vermilion, Associate Principal

John Vang, Associate

Stephanie Chen, Planner

Cary Nakama, Graphic Artist

Gina Froelich, Senior Editor

Laura Muñoz, Document Specialist

Maria Heber, Clerical

Garland Associates (Traffic)

Richard Garland, PE

6. List of Preparers

This page intentionally left blank.