DRAFT ENVIRONMENTAL IMPACT REPORT FOR Vineyard III Retail Development Project

State Clearinghouse No. 2019039100 Development Plan 2018-1691

LEAD AGENCY



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Acronyms and Abbreviations

Acronym	Definition
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	average daily traffic
AFY	acre-feet per year
AQMP	air quality management plan
BMP	best management practice
BTU	British thermal units
С	Commercial
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
CALINE4	California LINE Source Dispersion Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
Cell	Criteria Cell
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFC	chlorofluorocarbon
CH ⁴	methane
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
City	City of Murrieta
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
County	Riverside County
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CPUC	California Public Utilities Commission
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Acronym	Definition
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibel
DIF	Development Impact Fee
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EAC	Existing plus Ambient plus Cumulative
EAP	Existing plus Ambient plus Project
EAPC	Existing plus Ambient plus Project plus Cumulative
EDR	Environmental Data Resources Inc.
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EMWD	Eastern Municipal Water District
EO	Executive Order
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
EV	electric vehicle
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zone
FICON	Federal Interagency Committee on Noise
FMZ	fuel modification zone
FY	Fiscal Year
General Plan	Murrieta General Plan 2035
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutant
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HVAC	heating, ventilation, and air conditioning
	Interstate
in/sec	inches per second
IRWMP	Integrated Regional Water Management Plan
IRWMP	integrated regional water management plan
IWS	IWS Environmental Inc.
kBTU	thousand British thermal units
kBTU	thousand British thermal units
LACM	Natural History Museum of Los Angeles County
LCFS	Low Carbon Fuel Standard
L _{dn}	day-night average noise level
L _{eq}	equivalent noise level over a given period
LID	low-impact development
L _{max}	greatest sound level measured during a designated time interval
LOS	level of service

Acronym	Definition
LST	localized significance threshold
MFR	Murrieta Fire and Rescue
MMT	million metric tons
MPD	Murrieta Police Department
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MT	metric tons
MWD	Metropolitan Water District of Southern California
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
03	ozone
OPR	Governor's Office of Planning and Research
OPR Technical Advisory	Technical Advisory on Evaluating Transportation Impacts in CEQA
OSHA	Occupational Safety and Health Administration
Parks Master Plan	City of Murrieta Parks and Recreation Master Plan
P-E	population to employment
PFC	perfluorocarbon
PM10	particulate matter with an aerodynamic diameter less than or equal to 10 microns
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
ppm	parts per million
рру	peak particle velocity
project	Vineyard III Retail Development Project
RC	Regional Commercial
RCTC	Riverside County Transportation Commission
RFS	Renewable Fuel Standard
RPS	Renewables Portfolio Standard
RPS	Renewables Portfolio Standard
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RTP/SCS	regional transportation plan/sustainable communities strategy
RWQCB	Regional Water Quality Control Board
RWRF	regional water reclamation facility
SB	
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCE	Southern California Edison

Acronym	Definition
SF ₆	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazards Mapping Act of 1990
SKR HCP	Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County
SLF	Sacred Lands File
SO ₂	sulfur dioxide
SoCalGas	Southern California Gas Company
SO _x	sulfur oxide
SRA	source-receptor area
State Allocation Board	California State Allocation Board Office of Public School Construction
STIP	State Transportation Improvement Program
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TIA	Traffic Impact Analysis
TMDL	total maximum daily load
TUMF	Transportation Uniform Mitigation Fee
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	waste discharge requirement
WQMP	water quality management plan
WRCOG	Western Riverside Council of Governments
WRCOG Analysis	WRCOG SB 743 Implementation Pathway Document Package

1 Executive Summary

This section provides a summary of the Draft Environmental Impact Report (EIR) for the proposed Vineyard III Retail Development Project (project). The California Environmental Quality Act (CEQA) requires EIRs to contain a brief summary of the project and its consequences. The summary must include each significant impact with proposed mitigation measures and alternatives that would reduce or avoid that effect; areas of controversy known to the lead agency, including issues raised by agencies and the public; and, issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects (CEQA Guidelines Section 15123). In accordance with these requirements, this section provides a summary of the project and project impacts, lists mitigation measures and alternatives, describes areas of known controversy, and discusses issues to be resolved.

1.1 Introduction

CEQA requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. This EIR has been prepared in compliance with criteria, standards, and procedures of the CEQA Guidelines. This document has been prepared as a Project EIR (pursuant to Section 15161 of the CEQA Guidelines) and represents the independent judgment of the City of Murrieta (City) as lead agency (CEQA Guidelines Section 15050).

1.2 Project Location and Setting

The project site is located in the northern portion of the City of Murrieta in Riverside County (County) and contains approximately 6.65 acres of mostly vacant land composed of Assessor's Parcel Number 392-270-064 in the northeastern corner of the northbound on-ramp to Interstate (I) 215 and Clinton Keith Road.

The approximately 6.65-acre L-shaped project site is located at the southwest corner of an approximately 70-acre undeveloped area surrounded by suburban development. This undeveloped area is bounded by Clinton Keith Road to the south, Cape Aire Way to the north, vacant land proposed for development to the east, and the northbound on-ramp to the l-215 to the west. Prior to 2006, this undeveloped area contained two low-lying hills covered with low-growing shrubs and grasses. In approximately 2006, a rock, sand, and gravel-removal operation began within the central portion of the area. As part of the operation, the majority of area has been graded and excavated, resulting in an expanse of bare soil with stockpiles of gravel, sand, and boulders distributed throughout the site. The majority of these activities occurred on the properties to the east of the project site, although activities have affected some portions of the project site, and in particular, the southeastern portion of the project site. Under the existing conditions, the western portion of the project site remains relatively undisturbed and features low-growing scattered shrubs, although bare expanses of soil are located throughout where previous grading activities have occurred. A portion of the site is the vacated portion of old Antelope Road that remains paved through the site.

Although the project site is mostly vacant, some permanent structures and utilities exist on and immediately adjacent to the site. An existing cell tower is in the north of the site. The vacated portion of Antelope Road traverses the project site; however, access through the project site is currently not allowed, and concrete trafficcontrol barriers block roadway access at both the northern and southern ends of the project site. Access to the cell tower is provided via a private easement connected to Antelope Road. Additionally, the southeasternmost portion of the project site contains an easement for a traffic signal that serves the intersection of Creighton Avenue and Clinton Keith Road. Several other traffic-control structures are located at this intersection immediately beyond the project site boundary. Under the existing conditions, there is a small concrete drainage ditch within the northern portion of the project site that connects to Antelope Road, which eventually drains via the vacated Antelope Road to two catch basins and four storm drain inlets located just beyond the project site at the southern terminus of the vacated Antelope Road.

1.3 Project Summary

The project consists of the construction and operation of a new retail development on mostly vacant land situated between the northeastern corner of the northbound on-ramp to I-215 and Clinton Keith Road in the City (project site). The project would contain approximately 32,120 square feet of new development including an auto-related services/retail store, tire store, retail pad, three-tenant food and retail pad with one drive-through lane on the west and south of the building, drive-through fast food restaurant, and a two-lane freestanding drive-through ATM bank and a bank building. Building signage would include four monument signs that would be installed along the project boundaries, as well as wall signage on each proposed building. The project would include 204 parking spaces adjoining the retail and other commercial uses. The project would also involve improvements to the intersection of Clinton Keith Road and Creighton Avenue, such as sidewalk and crosswalk improvements, landscaping, lengthening of turn pockets and stoplight installation. Additionally, the project would involve the construction of an extension of a private access road to the north, and overlay of the vacated Antelope Road as a private drive through the site.

1.4 Project Objectives

The project has been designed to meet the following series of objectives:

- Enhance the City with an economically viable development that is architecturally designed to be sensitive to the Murrieta community
- Contribute to the City's tax base by further developing retail in the City
- Provide a development in a location that is convenient for its customers and employees to travel to shop and work
- Increase the number of employees in the City and contribute to the local job/housing balance in the City
- Design a project that is consistent with the City's General Plan and Development Code
- Create a new opportunity for integrated retail sales of goods and services in the growing Murrieta community
- Design a site plan that minimizes circulation conflicts between automobiles and pedestrians

1.5 Areas of Controversy/Issues to be Resolved

The City issued a Notice of Preparation (NOP) to prepare an EIR for the project. Issuance of the NOP began the 30-day public scoping period for project. The purpose of scoping is to seek input from public agencies and the general public regarding the environmental issues and concerns that may potentially result from the project. The NOP was circulated to interested agencies, organizations, and individuals on March 20, 2019. The NOP was sent to 60 local and state agency departments, including the City, where a hard copy of the NOP and Initial Study were available for review. The City also mailed a notice of the Project EIR scoping

meeting to approximately 14 property owners, residents, and organizations located within a 500-foot radius of the project site. During the scoping period, comment letters were received in response to the NOP and Initial Study. Copies of the comment letters, the Initial Study, and the NOP are provided in Appendix A. The primary areas of controversy identified by the public and agencies included the following potential issues (the EIR section that addresses the issue raised is provided in parentheses):

- Potential impacts associated with air quality that would result from all phases of the project, including construction and operations (Section 4.2, Air Quality, and Section 4.7, Greenhouse Gas and Emissions).
- Potential impacts to cultural and historic resources due to ground disturbances during construction activities (Section 4.4, Cultural Resources, and Section 4.15, Tribal Cultural Resources).
- Cumulative impacts of the project, particularly related to air quality, greenhouse gases, land use and planning, and traffic that could impact areas such as the City of Menifee due to the proximity of the project site to the City of Menifee's boundaries (Section 4.2, Air Quality, Cumulative Impacts; Section 4.7, Greenhouse Gas and Emissions, Cumulative Impacts; Section 4.14, Transportation, Cumulative Impacts).

1.6 Summary of Environmental Impacts

The project's potential environmental impacts are summarized in Table 1-1. This table contains a summary of the impacts described in this EIR, as well as the impacts that were addressed in the Initial Study and determined to require no further detailed analysis in the EIR. Table 1-1 also includes a list of the proposed mitigation measures that are recommended in response to the project's potentially significant impacts, as well as a determination of the level of significance of the impacts after implementation of the recommended mitigation measures.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Would the project have a substantial adverse effect on a scenic vista?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No impact.	No mitigation measures required.	No impact.
In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on aesthetic resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Agriculture and Forestry Resources			
Would the project 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.	No mitigation measures required.	No impact.
Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	No impact.	No mitigation measures required.	No impact.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project 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.	No mitigation measures required.	No impact.
Would the project result in the loss of forest land or conversion of forest land to non-forest use?	No impact.	No mitigation measures required.	No impact.
Would the project 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.	No mitigation measures required.	No impact.
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Potentially significant.	 MM-AQ-1 Off-Road Construction Equipment: To reduce the potential for criteria air pollutants, specifically oxides of nitrogen, as a result of construction of the project, prior to the start of construction activities, the project applicant, or its designee shall: Ensure that all 75-horsepower or greater diesel-powered equipment are powered with California Air Resources Board-certified Tier 4 Interim engines, except where the project applicant establishes to the satisfaction of the City of Murrieta (City) that Tier 4 Interim equipment is not available. An exemption from these requirements may be granted by the City in the event that the City is provided with sufficient evidence that equipment with the required tier is not reasonably available and corresponding reductions in criteria air 	Less-than-significant impact with mitigation incorporated.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the project applicant shall: (1) be required to demonstrate that two construction fleet owners/operators in Riverside County were contacted and that those owners/operators confirmed Tier 4 Interim equipment could not be located within the Riverside County, and (2) the proposed replacement equipment has been evaluated using the California Emissions Estimator Model or other industry standard emission estimation method and documentation provided to the City to confirm the project-generated emissions do not exceed applicable South Coast Air Quality Management District mass daily thresholds of significance and localized significance thresholds.	
Would the project 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?	Potentially significant.	MM-AQ-1.	Less-than-significant impact with mitigation incorporated.
Would the project expose sensitive receptors to substantial pollutant concentrations?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on air quality resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Biological Resources			
Would the project have a substantial adverse effect, either directly or through habitat	Potentially significant.	MM-BIO-1 Pre-Construction Burrowing Owl Surveys: Prior to initiation of construction activities, a burrowing	Less-than-significant impact with mitigation

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Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
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?		owl pre-construction survey shall be conducted in accordance with Western Riverside County Regional Conservation Authority's 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area. In accordance with these instructions, the survey shall occur within 30 days prior to ground-disturbance activities. A minimum of one survey site visit within the described timeframe prior to disturbance shall be required to confirm presence or absence of burrowing owl on the site. Pre- construction surveys shall be conducted by a qualified biologist.	incorporated.
		If surveys confirm occupied burrowing owl habitat is located within the project site or within 500 feet of the projects site, avoidance measures shall be implemented consistent with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan.	
		MM-BIO-2 <i>Pre-Construction Nesting Bird Survey:</i> To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground disturbance and/or vegetation clearance activities are scheduled to occur during the avian nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist within the project footprint and a 300-foot buffer around the project footprint. Surveys shall be conducted within 3 days prior to initiation of activity and be conducted between dawn and noon.	
		If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist. The buffer shall be of a distance to ensure avoidance of adverse	

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		effects to the nesting bird by accounting for topography, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed, or it is confirmed that the nest has been unsuccessful or abandoned.	
Would the project 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.	No mitigation measures required.	No impact.
Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No impact.	No mitigation measures required.	No impact.
Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No impact.	No mitigation measures required.	No impact.
Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a cumulative effect on biological resources?	Potentially significant.	MM-BIO-1 and MM-BIO-2.	Less-than-significant impact with mitigation incorporated.
Cultural Resources			
Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	No impact	No mitigation measures required.	No impact.
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially significant.	MM-CR-1 <i>Discovery of Archaeological Resources:</i> In the event that archaeological resources (e.g., sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether additional study is warranted. Depending upon the significance of the find and allow work to continue. If the discovery proves significant under the California Environmental Quality Act, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.	Less-than-significant impact with mitigation incorporated.
Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Less-than- significant impact	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on cultural resources?	Potentially significant.	MM-CR-1.	Less-than-significant impact with mitigation incorporated.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Energy			
Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Potentially significant.	MM-AQ-1.	Less-than-significant impact with mitigation incorporated.
Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on energy resources?	Potentially significant.	MM-AQ-1.	Less-than-significant impact with mitigation incorporated.
Geology and Soils			
Would the project directly or indirectly cause poter	ntial substantial adver	rse effects, including the risk of loss, injury, or death invol	ving:
a. 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?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
b. Strong seismic ground shaking?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
c. Seismic related ground failure including liquefaction?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
d. Landslides?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project result in substantial soil erosion or the loss of topsoil?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project 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?	No impact.	No mitigation measures required.	No impact.
Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No impact.	No mitigation measures required.	No impact.
Would the project 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.	No mitigation measures required.	No impact.
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on geology and soils resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Greenhouse Gas Emissions			
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on greenhouse gas emissions?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Hazards and Hazardous Materials	•		
Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project 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.	No mitigation measures required.	Less-than-significant impact.
Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No impact.	No mitigation measures required.	No impact.
Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a cumulative effect on hazards or hazardous materials?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Hydrology and Water Quality			
Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
 a. result in substantial erosion or siltation on or off site; 	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
 c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or 	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
d. impede or redirect flood flows?	No impact.	No mitigation measures required.	No impact.
In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	No impact.	No mitigation measures required.	No impact.

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Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on hydrology or water quality resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Land Use and Planning			
Would the project physically divide an established community?	No impact.	No mitigation measures required.	No impact.
Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No impact.	No mitigation measures required.	No impact.
Mineral Resources			
Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No impact.	No mitigation measures required.	No impact.
Would the project 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.	No mitigation measures required.	No impact.
Noise			
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

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For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No impact.	No mitigation measures required.	No impact.
Would the project have a cumulative effect on noise resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Population and Housing			
Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No impact.	No mitigation measures required.	No impact.
Would the project have a cumulative effect on housing and/or population resources?	No impact.	No mitigation measures required.	No impact.
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:			
Fire protection?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Police protection?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Schools?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

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Parks?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Other public facilities?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on public services resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Recreation			
Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Less-than significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on recreation resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Transportation			
Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Potentially significant.	MM-TRA-1 Creighton Avenue and Clinton Keith Road Intersection Improvements: The project applicant shall be responsible for designing, funding, and installing a second eastbound left-turn lane at the intersection of Creighton Avenue and Clinton Keith Road when the development exceeds 13,000 square feet (5,000-square-foot tire center, 3,000-square-foot high-turnover restaurant, and 5,000-square-foot drive-through bank).	Less-than-significant impact with incorporation of mitigation.
		MM-TRA-2 Bronco Way and Clinton Keith Road Intersection Improvements: In order to mitigate potential queuing impacts, the project applicant shall provide a second westbound left-turn lane at the	

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		intersection of Bronco Way and Clinton Keith Road. The project applicant shall be responsible for designing, furnishing, and installing the proposed lengthening of the turn pockets. The project shall be required to contribute a fair share amount to the City's Capital Improvement Project 8389 for the improvements to this intersection.	
		MM-TRA-3 Whitewood Road and Clinton Keith Road Intersection Improvements: In order to mitigate potential queuing impacts, the project applicant shall be required to contribute a fair share amount to the City's Capital Improvement Project 8389 for the improvements to the Whitewood Road and Clinton Keith Road Intersection.	
		MM-TRA-4 <i>On-Site Improvements:</i> Construction of on- site improvements shall occur in conjunction with adjacent project development activity or as needed for project access purposes, which include the following improvements:	
		 On-site traffic signing and striping in conjunction with detailed construction plans for the project Provision of minimum sight distance at the project access points, and A traffic calming circle to slow traffic on site 	
Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No impact.	No mitigation measures required.	No impact.

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Would the project result in inadequate emergency access?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on transportation resources?	Potentially significant.	No mitigation measures required.	Less-than-significant impact with mitigation incorporated.
Tribal Cultural Resources			
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
 a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? 	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
 b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? 	Potentially significant.	 MM-TCR-1: The project permittee/owner shall retain a Riverside County-certified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown cultural resources. Prior to grading, the project permittee/owner shall provide to the City verification that a certified archaeological monitor has been retained. Any newly discovered cultural resources evaluation. MM-TCR-2: Archaeological Monitoring: At least 30-days prior to grading permit issuance and before any grading, excavation, and/or ground-disturbing activities on the site take place, the project permittee/owner shall retain a Riverside County- 	Less-than-significant impact with mitigation incorporated.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		 certified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. 1. The Project Archaeologist, in consultation with consulting tribes, the permittee/owner, and the City, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include: a. Project grading and development scheduling; b. The development of a schedule in coordination with the permittee/owner and the Project Archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground-disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists; and, c. The protocols and stipulations that the permittee/owner, City, tribes, and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation. 2. A final report documenting the monitoring activity and disposition of any recovered cultural resources shall be submitted to the City of Murrieta, Eastern Information Center and the consulting tribe within 60 days of completion of monitoring. 	

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TCR-3: Native American Monitoring: Native American Tribal monitors shall also participate in monitoring of ground-disturbing activity. At least 30 days prior to issuance of grading permits, agreements between the permittee/owner and a Native American Monitor shall be developed regarding prehistoric cultural resources and shall identify any monitoring requirements and treatment of Tribal Cultural Resources so as to meet the requirements of CEQA. The monitoring agreement shall address the treatment of known Tribal Cultural Resources; the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation, and ground-disturbing activities; project grading and development scheduling.	
		MM-TCR-4 : <i>Disposition of Cultural Resources:</i> In the event that Native American cultural resources are inadvertently discovered during the course of grading for this project, one or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be submitted to the City of Murrieta Planning Department:	
		 Preservation-in-place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resource. 	
		2. On-site reburial of the discovered items as detailed in a Monitoring Plan. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items	
Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
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		is permitted without the written consent of all	
		Consulting Native American Tribal Governments	
		3. The permittee/owner shall relinquish ownership of all	
		cultural resources, including sacred items, burial	
		goods, and all archaeological artifacts and non-	
		human remains as part of the required mitigation for	
		impacts to cultural resources, and adhere to the	
		tollowing:	
		a. A curation agreement with an appropriate	
		qualified repository within Riverside County	
		Enderal Populations 200 Part 70 and therefore	
		would be curated and made available to other	
		archaeologists/researchers for further study	
		The collections and associated records shall be	
		transferred, including title, to an appropriate	
		curation facility within Riverside County, to be	
		accompanied by payment of the fees	
		necessary for permanent curation; and,	
		b. At the completion of grading, excavation, and	
		ground disturbing activities on-site, a Phase IV	
		Monitoring Report shall be submitted to the City	
		documenting monitoring activities conducted by	
		the Project Archaeologist and Native American	
		Tribal Monitors within 60 days of completion of	
		grading. This report shall document the impacts to	
		the known resources on the property; describe	
		now each mugation measure was fulfilled,	
		and the disposition of such resources: provide	
		evidence of the required cultural sensitivity	
		training for the construction staff held during the	
		required pre-grade meeting: and. in a confidential	
		appendix, include the daily/weekly monitoring	

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		notes from the archaeologist. All reports produced will be submitted to the City of Murrieta, Eastern Information Center and Consulting tribes.	
		MM-TCR-5: <i>Human remains:</i> If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendants(s)" for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations within 48 hours and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.	
Would the project have a cumulative effect on tribal cultural resources?	Potentially significant.	MM-TCR-1 through MM-TCR-5.	Less-than-significant impact with mitigation incorporated.
Utilities and Service Systems			
Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have sufficient water supplies	Less-than-	No mitigation measures required.	Less-than-significant

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	significant impact.		impact.
Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on utilities and/or service systems resources?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Wildfire			
Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Potentially significant.	MM-WF-1 <i>Fire-Resistant Landscaping</i> : A fully irrigated landscape, planted with drought-tolerant, fire- resistive plants, as listed in the Project Plant Palette, shall be planted within all fuel modification zones. No undesirable, highly flammable plant species shall be planted, as listed in the Prohibited Plant List. The landscaping shall be routinely maintained and shall be watered by an automatic irrigation system that will maintain healthy vegetation with high moisture contents that would prevent ignition by embers from a wildfire.	Less-than-significant impact with mitigation incorporated.
Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.
Would the project have a cumulative effect on wildfire?	Less-than- significant impact.	No mitigation measures required.	Less-than-significant impact.

1.7 Alternatives to the Proposed Project

Section 15126.6(a) of the CEQA Guidelines states that an EIR shall describe "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project," as well as provide an evaluation of "the comparative merits of the alternatives." Under Section 15126.6(a) of the CEQA Guidelines, an EIR does not need to consider alternatives that are not feasible, and is not required to address every conceivable alternative to the project. The range of alternatives "is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice" (14 CCR 15126.6[f]).

Alternatives Considered but Eliminated

The CEQA Guidelines provide that this EIR should "identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the Lead Agency's determination" (14 CCR 15126.6[c]). The following is a discussion of the proposed project alternatives that were considered during the scoping and planning process, and the reasons they were not selected for detailed analysis in this EIR.

With respect to the feasibility of potential alternatives to the project, CEQA Guidelines Section 15126.6(t)(l) states, "[a]mong the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries ... and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site."

In determining an appropriate range of project alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and then rejected. The freeway frontage and visibility for the uses for this project was of utmost importance and the possibility of a high-draw anchor was also a critical consideration. Project alternatives were rejected because they could not accomplish the basic objectives of the proposed project; they would not have resulted in a reduction of significant adverse environmental impacts; or they were considered infeasible to construct or operate.

Alternatives Selected for Further Analysis

A reasonable range of alternatives to the proposed project were evaluated, including a no project alternative, in compliance with CEQA Guidelines Section 15126.6(e). These alternatives include the following:

- Alternative 1: No Project/No Development Alternative
- Alternative 2: Reduced Project Alternative

Each alternative's environmental impacts are compared to the proposed project and determined to have fewer impacts than the proposed project, the same or similar impacts, or more impacts than the proposed project (refer to Chapter 6, Alternatives, for further details).

No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the impacts of a no project alternative. The "purpose of describing and analyzing a no project alternative is to allow decision makers to compare

the impacts of approving the proposed project with the impacts of not approving the proposed project" (14 CCR 15126.6[e][1]). When defining the no project alternative, the analysis shall be informed by "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (14 CCR 15126.6([e][2]). In the case of the No Project/No Development Alternative, the existing site would be vacant with existing vegetation left undisturbed in a High Fire Hazard zone. No significant improvements would be implemented.

Reduced Project Alternative

The Reduced Project Alternative would include a 5,000-square-foot tire store, a 3,000-square-foot sit down restaurant, and a 5,000-square-foot bank building and a freestanding drive-through ATM. This would reduce the project footprint from 32,120 square feet to 13,000 square feet, a 60% reduction in size. At this size, the project would not trigger the traffic mitigation (**MM-TRA-1**) that requires a second eastbound left-turn lane on Creighton Avenue.

Environmentally Superior Alternative

An EIR must identify an "environmentally superior" alternative; and, where the no project alternative is environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior (14 CCR 15126.6[e][2]).

As further discussed in Chapter 6, the environmentally superior alternative is the Reduced Project Alternative, because it reduces the proposed project's impacts, except those related to wildfire severity. Further, implementation of the Reduced Project Alternative would remove the need for MM-TRA-1, which requires the project applicant to design, fund, and install a second eastbound left-turn lane at the intersection of Creighton Avenue and Clinton Keith Road. However, despite having less of an impact than the proposed project, the Reduced Project Alternative would still require the same remaining mitigation to reduce potentially significant impacts to air quality, biological resources, cultural resources, transportation, and tribal cultural resources, to a less-than-significant level while wildfire would have an increased impact. The Reduced Project Alternative, therefore, is considered to be the environmentally superior alternative.

2.1 Project Description

The project applicant, Scott 215/Lambda LLC, proposes to develop an approximately 6.65-acre vacant site (Assessor's Parcel Number 392-270-064) (project site) in the City of Murrieta (City) with the proposed Vineyard III Retail Development Project (project) that would include construction and operation of 32,120 square feet of new retail development, consisting of a bank, tire store, retail pad, auto-related services/retail store, three-tenant food and retail pad, fast-food restaurant, an existing cell tower facility, and associated parking. The project site is located in the City of Murrieta, northeast of the intersection of Interstate 215 and Clinton Keith Road, as shown on the proposed site plan (see Figure 3-2, Site Plan, in Chapter 3, Project Description).

The project would develop parcels running from north to south, with parcel 1 located on the northern end of the project site and parcel 6 on the southernmost end. Parcel 1 would consist of a 4,000-square-foot auto-related services/retail store on approximately 0.921 acres. Parcel 2 would consist of a 5,000-square-foot tire store on approximately 0.91 acres. The tire store would include four bays and hydraulic lifts where customers could have new tires installed on their vehicle. Parcel 3 would consist of a 7,150-square-foot retail building on 0.76 acres. The retail store would include an auto parts store, office supply store, pet supply store, health and beauty store, shoe store, or other similar retailers. Parcel 4 would consist of a 10,000-square-foot three-tenant food and retail pad on 2.05 acres. The retail pad would include one retail or service tenant and two food tenants. Parcel 5 would consist of a 2,500-square-foot standalone fast-food restaurant with drive-through on 0.76 acres. Parcel 6 would consist of a 3,470-square-foot bank with a two-lane drive-through ATM station on 1.15 acres. It is anticipated that the project would employ 20 full-time employees. Parcel 7 is land around the existing cell tower facility and is 0.068 acres.

Four bio-retention basins would be located in the northwest and southwest corners of the project site, and adjacent to the proposed bank building, so that runoff from the proposed buildings and parking lots could be captured, percolate into the groundwater table, and reduce the rate of stormwater discharged off site to pre-development condition. One 65-foot-tall pylon sign and one 25-foot-tall pylon sign, visible from Interstate 215, would be constructed along the western property boundary. Two more pylon signs, one 25 feet tall along Clinton Keith Road and one 10 feet tall at Creighton Avenue and the private access drive, would also be constructed. Additionally, the project would involve construction of a private access drive at the Creighton Road intersection with Clinton Keith Road.

Mass grading would include 55,600 cubic yards of cut and 4,520 cubic yards of fill, resulting in 51,140 cubic yards of soil for export. Assuming a haul truck capacity of 14 cubic yards per truck, earth-moving activities would result in approximately 3,652 round trips (7,305 one-way truck trips) during the grading phase.

This Project Environmental Impact Report (EIR) evaluates the potential short-term, long-term, and cumulative impacts of the project. This Project EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.). EIRs are informational documents, "which inform public agency decision makers and the public of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" (14 CCR 15121). The purpose of this Project EIR is to evaluate the environmental effects of the project.

This Project EIR is intended for use by decision makers and the public. It provides relevant information concerning the potential environmental effects associated with the construction and operation of the project.

2.2 Environmental Procedures

2.2.1 CEQA Compliance

CEQA requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. This Project EIR has been prepared in compliance with criteria, standards, and procedures of the CEQA Guidelines. This document has been prepared as a Project EIR (pursuant to Section 15161 of the CEQA Guidelines) and represents the independent judgment of the City as lead agency (CEQA Guidelines Section 15050).

2.2.2 Notice of Preparation and Scoping

CEQA establishes mechanisms whereby the public and decision makers can be informed about the nature of the project being proposed and the extent and types of impacts that the project and its alternatives would have on the environment should the project or alternatives be implemented. Pursuant to Section 15082 of the CEQA Guidelines, a Notice of Preparation (NOP) dated March 20, 2019, was circulated to interested agencies, organizations, and individuals. The NOP was sent to 60 local and state agency departments, including the City, where a hard copy of the NOP and Initial Study were available for review. The NOP was posted at the County Clerk's office on March 20, 2019, for 30 days. The NOP was also sent to the State Clearinghouse at the California Governor's Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2019039100) to the Project EIR. The City also mailed a notice of the Project EIR scoping meeting to approximately 14 property owners, residents, and organizations located within a 500-foot radius of the project site.

The NOP is intended to encourage interagency communication regarding the project so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of this Project EIR. Pursuant to Section 15082 of the CEQA Guidelines, recipients of the NOP were requested to provide responses within 30 days after their receipt of the NOP. The 30-day public scoping period ended on April 22, 2019. Comments received during the NOP public notice period were considered during the preparation of this Project EIR. Copies of the comment letters are included in Appendix A and are summarized in Table 2-1.

Commenting Agency or Property Owner	Date	Written or Verbal Comment	Summary of Comment	EIR Chapter/Section Where Comment Is Addressed
State Agencies				
CAL FIRE	March 28, 2019	Written Comment	No comments on the NOP or initial study, but may have comments regarding the public facilities portion when the EIR does further evaluation.	Section 4.12, Public Services

Table 2-1. Summary of Comments Received in Response to the NOP

Commenting Agency or Property Owner	Date	Written or Verbal Comment	Summary of Comment	EIR Chapter/Section Where Comment Is Addressed
Regional Agencies		•	1	
Riverside County Airport Land Use Commission	March 26, 2019	Written Comment	The airport is located outside of an airport influence area.	Section 4.8, Hazards and Hazardous Materials and
Riverside Transit Authority	March 27, 2019	Written Comment	Provided the comment to include a bus turn out on Clinton Keith Rd at Creighton Avenue (going westbound) with ADA-compliant, connected sidewalk. ¹	Section 4.14, Transportation
South Coast Air Quality Management District	April 16, 2019	Written Comment	Recommends analysis of potential air quality impacts from the project that should be included in the EIR. A copy of the Draft EIR should be sent to South Coast AQMD. Additionally, the lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction and operations should be calculated.	Section 4.2, Air Quality Section 4.7, Greenhouse Gas and Emissions
Tribes				
Agua Caliente Band of Cahuilla Indians	March 26, 2019	Written Comment	A records check of the Tribal Historic Preservation Office's cultural registry revealed that this project is not located within the tribe's traditional use area. Therefore, the letter shall conclude the tribe's consultation efforts.	Section 4.15, Tribal Cultural Resources
Rincon Band of Luiseño Indians	April 16, 2019	Written Comment	The identified location is within the Territory of the Luiseño people, and is also within Rincon's specific area of historic interest. As stated in the consultation request letter dated December 19, 2018, they have knowledge of one Luiseño resource less than one-half mile from the project	Section 4.4, Cultural Resources Section 4.15, Tribal Cultural Resources

Table 2-1. Summary of Comments Received in Response to the NOP

¹ Note this is not feasible because the frontage west of Creighton Avenue on Clinton Keith Road is a 45 mph on-ramp to northbound Interstate 215.

Table 2-1. Summary of Comments Received in Response to the NOP

Commenting Agency or Property Owner	Date	Written or Verbal Comment	Summary of Comment	EIR Chapter/Section Where Comment Is Addressed
			site. Therefore, it is recommended that archaeological and Luiseño tribal monitoring be conducted during ground disturbances, as deemed necessary by the qualified archaeologist in consultation with the Luiseño tribal monitor.	
Pechanga Band of Luiseño Mission Indians	April 22, 2019	Written Comment	Request to be notified and involved in the project. This letter serves as a request to begin consultation under AB 52. The project location is a culturally sensitive area affiliated with the Pechanga Band of Luiseño Indians because of the tribe's cultural ties to the area. The tribe requests to be involved and participate with the City in assuring an adequate environmental assessment is completed and in developing all monitoring and mitigation plans during the duration of the project.	Section 4.15, Tribal Cultural Resources
Local Agencies		I		
County of Riverside Department of Environmental Health	April 9, 2019	Written Comment	DEH requests an original copy of a water and sewer "will-serve" letters from the appropriate water and sewer purveyor. Additionally, DEH requests that the applicant obtain written clearance from DEH Environmental Cleanup Programs. An ESA, Phase I study may be required at their discretion. Additionally, a list of Environmental Health Review Fees was provided by DEH. Fees are categorized into three tiers (Tier 1: Water and Sewer verification review, Tier 2: Phase I ESA review or additional report reviews, and Tier 3: Phase I ESA review and additional report reviews).	Section 4.9, Hydrology and Water Quality Section 4.16, Utilities and Services Section 4.8, Hazards and Hazardous Materials

Commenting Agency or Property Owner	Date	Written or Verbal Comment	Summary of Comment	EIR Chapter/Section Where Comment Is Addressed
City of Menifee, Community Development Department	April 22, 2019	Written Comment	Concerns regarding the NOP and EIR for the project include the following: the proximity of the proposed project to the City of Menifee's boundaries, resulting in impacts on traffic, air quality, greenhouse gases, land use and planning, and cumulative impacts. Thus, the City of Menifee requests subsequent notices on the project and requests to work with City of Murrieta on identifying all approved and pending projects within City of Menifee that should be included in cumulative analysis of the Traffic Study.	Section 4.2, Air Quality, Cumulative Impacts Section 4.7, Greenhouse Gas and Emissions Section 4.14, Transportation

Table 2-1. Summary of Comments Received in Response to the NOP

Notes: NOP = Notice of Preparation; ADA = Americans with Disabilities Act; EIR = Environmental Impact Report; AQMD = Air Quality Management District; CAL FIRE = California Department of Forestry and Fire Protection; DEH = Department of Environmental Health; ESA = Environmental Site Assessment; AB = Assembly Bill.

2.3 Contents of the Project EIR

To describe the direct, indirect, and cumulative impacts, as well as mitigation measures and alternatives for the project, this Project EIR is organized as follows:

- Chapter 1, Executive Summary, outlines the conclusions of the environmental analysis and provides a summary of the project compared to the alternatives analyzed in the Project EIR. This chapter also includes a table summarizing all environmental impacts identified in this Project EIR, along with the associated mitigation measures proposed to reduce or avoid each impact.
- Chapter 2, Introduction, serves as a foreword to the Project EIR, introducing the project background, the applicable environmental review procedures, and format of the Project EIR and identifying topics raised during the scoping process.
- Chapter 3, Project Description, provides a thorough description of the existing setting and baseline, project components, and required discretionary approvals. It also provides a list of key project objectives.
- Chapter 4, Environmental Analysis
 - The Introduction includes a discussion of the approach to the analysis of potentially significant impact areas and an overview of the organization of each of these categories.
 - Sections 4.1 through 4.17, which constitute the project's environmental analysis, provide an analysis
 of the potentially significant environmental impacts identified for the project, as well as proposed
 mitigation measures to reduce or avoid any potentially significant impacts. The chapters also include a
 cumulative effects analysis, which is a summary of effects associated with the project that, when

considered with other effects, create a considerable impact or compound or increase other environmental impacts. This can be a result of a single project or multiple separate projects.

The following impact areas are discussed:

- 4.1 Aesthetics
- 4.2 Air Quality
- 4.3 Biological Resources
- 4.4 Cultural Resources
- 4.5 Energy
- 4.6 Geology and Soils
- 4.7 Greenhouse Gas Emissions
- 4.8 Hazards and Hazardous Materials
- 4.9 Hydrology and Water Quality
- 4.10 Noise
- 4.11 Population and Housing
- 4.12 Public Services
- 4.13 Recreation
- 4.14 Transportation
- 4.15 Tribal Cultural Resources
- 4.16 Utilities and Service Systems
- 4.17 Wildfire
- Chapter 5, Other CEQA Considerations, includes a summary of impacts found not to be significant, which
 is a discussion of potential environmental topics that have been found, through the Initial Study process,
 to have a less-than-significant impact or no impact on the environment. This chapter also includes a
 summary of significant irreversible environmental changes, which addresses environmental areas where
 significant environmental effects cannot be avoided and any significant irreversible environmental changes
 that would result from implementation of the project.
- Chapter 6, Alternatives, discusses the two alternatives to the project: (1) the No Project/No Development Alternative, and (2) the Reduced Project Alternative.
- Chapter 7, List of Preparers, provides a list of the individuals who prepared this Project EIR.
- Appendices include the following technical studies prepared for the project:
 - o Appendix A, Initial Study/NOP and Comments Received
 - o Appendix B, Air Quality and Greenhouse Gas Report, Health Risk Assessment
 - Appendix C, Biological Resources Report
 - Appendix D, Cultural Resources Report
 - o Appendix E, Geotechnical Reports and Paleontology Report
 - o Appendix F, Phase I Environmental Site Assessment
 - Appendix G, Hydrology Reports
 - Appendix H, Noise Report
 - Appendix I, Traffic Impact Analysis
 - o Appendix J, Utilities Reports

3 Project Description

This chapter describes the objectives of the proposed Vineyard III Retail Development Project (project) and the Draft Environmental Impact Report (EIR), and provides a detailed description of the project characteristics. This chapter also discusses the required development approvals and discretionary actions necessary to implement the project.

3.1 Project Location

The project site is located in the northern portion of the City of Murrieta (City) in Riverside County (County) and contains approximately 6.65 acres of mostly vacant land composed of Assessor's Parcel Number 392-270-064 in the northeastern corner of the northbound on-ramp to Interstate (I) 215 and Clinton Keith Road (see Figure 3-1, Project Location).

3.2 Existing Project Setting

City of Murrieta

The City is located in southwestern Riverside County and consists of 26,852 acres, of which 21,511 acres is located within the City limits and 5,341 acres is located within the City's sphere of influence. The City is situated between the Santa Ana Mountains and the San Jacinto Mountains. Surrounding communities include Menifee to the north, Temecula to the south, Wildomar to the west, and unincorporated Riverside County to the north, south, and east. The San Diego County border is just south of Temecula, and the Orange County border lies on the other side of the Santa Ana Mountains to the west. Regional access to the City is provided by I-215 and I-15.

Project Site

Regionally, the project site is located at the southern edge of the Paloma Valley, which stretches from the Antelope Hills west of I-215 across the valley to the foothills in the east. The Paloma Valley is generally bounded by Bell Mountain and Menifee Valley to the north, the Hogback Hills to the south, and the Sedco Hills to the southwest. Within the Paloma Valley, the project site is located within the Antelope Hills, an area containing low-lying hills that has seen moderate levels of suburban development over the past decade.

More specifically, the approximately 6.65-acre L-shaped project site is located at the southwest corner of an approximately 70-acre undeveloped area surrounded by suburban development. This undeveloped area is bounded by Clinton Keith Road to the south, Cape Aire Way to the north, residential development to the east, and I-215 to the west. The Antelope Road alignment is a cul-de-sac adjoining the north edge of the site.

Prior to 2006, this undeveloped area contained two low-lying hills covered with low-growing shrubs and grasses. In approximately 2006, a rock, sand, and gravel removal operation began within the central portion of the area. As part of the operation, the majority of area has been graded and excavated, resulting in an expanse of bare soil with stockpiles of gravel, sand, and boulders distributed throughout the site. The majority of these activities occurred on the properties to the east of the project site, although activities have affected some portions of the project site, and in particular, the southeastern portion of the project site. Under the existing conditions, the western portion of the project site remains relatively undisturbed and features low-growing scattered shrubs, although bare expanses of soil are located throughout where previous grading activities have occurred.

Although the project site is mostly vacant, some permanent structures and utilities exist on site and immediately adjacent to the project site. An existing cell tower is in the north of the site. The vacated portion of Antelope Road traverses the project site; however, access through the project site is no longer provided, and concrete traffic control barriers block roadway access at both the northern and southern ends of the project site. A cell tower is located within the northern tip of the project site, and access to this tower is provided via a private easement connected to Antelope Road. Additionally, the southeasternmost portion of the project site contains an easement for a traffic signal that serves the intersection of Creighton Avenue and Clinton Keith Road. Several other traffic control structures are located at this intersection immediately beyond the project site boundary. Under the existing conditions, there is a small concrete drainage ditch within the northern portion of the project site that connects to Antelope Road, which eventually drains via the vacated Antelope Road to two catch basins and four storm drain inlets located just beyond the project site at the southern terminus of the vacated Antelope Road.

The City's General Plan Land Use Map designates the project site as Commercial (C) (City of Murrieta 2011). The City's Zoning Map shows the site as being zoned Regional Commercial (RC) (City of Murrieta 2014).

Elevations on the project site range from approximately 1,530 to 1,560 feet above mean sea level. Overall, the project site is relatively flat, with the exception of approximately 2.5:1 slopes in some areas of the site along the vacated road.

Surrounding Uses

As discussed previously, the project site is located in the southwestern portion of an undeveloped area bounded by Clinton Keith Road to the south, Cape Aire Way to the north, residential development to the east, and I-215 to the west. Directly north of the project site is Antelope Road, a portion of the aforementioned undeveloped area, Cape Air Way, and a nursery and truck yard. The Antelope Road alignment has been vacated through the project site and is currently owned by the applicant. To the south and across Clinton Keith Road and the I-215 northbound on-ramp is a residential subdivision and Vista Murrieta High School, south of which lies open space associated with the Hogback Hills. I-215 and the northbound I-215 on-ramp are located directly west of the project site, followed by commercial development. The portion of the undeveloped area directly east of the project site is a vacant dirt site. The southern portion of this area contains the approved Vineyard I commercial development site, and the northern portion of this area contains an approximately 26-acre site that is proposed for a Costco Wholesale and gas station and retail center (Vineyard II).

3.3 Project Objectives

The project has been designed to meet the following series of objectives:

- Enhance the City with an economically viable development that is architecturally designed to be sensitive to the Murrieta community
- Contribute to the City's tax base by further developing retail in the City
- Provide a development in a location that is convenient for its customers and employees to travel to shop and work
- Increase the number of employees in the City and contribute to the local job/housing balance in the City
- Design a project that is consistent with the City's General Plan and Development Code
- Create a new opportunity for integrated retail sales of goods and services in the growing Murrieta community
- Design a site plan that minimizes circulation conflicts between automobiles and pedestrians

3.4 Project Characteristics

The project applicant, Retail Development Advisors, proposes to develop an approximately 6.65-acre vacant site in the City of Murrieta with the Vineyard III Retail Development Project that would include construction and operation of approximately 32,120 square feet of new development, including an auto-related services/retail store, tire store, retail pad, three-tenant food and retail pad with one drive-through lane on the west and south of the building, drive-through fast food restaurant, and a two-lane drive-through ATM bank. The project would include 204 parking spaces (179 required by the City) adjoining the retail and other commercial uses. The site plan with buildings labeled is shown on Figure 3-2, Site Plan.

Auto-Related Services/Retail Store (Building T)

The northernmost corner of the project site would consist of the existing cell tower and a 4,000-square-foot autorelated services/retail store. The store would sell materials related to general vehicle maintenance, such as oil- and synthetic-based lubricants, headlight replacements, and batteries. No maintenance would be allowed within parking areas. The store would have a total of 16 designated parking stalls located on the north, east, and south sides of the building. Additionally, the store would be provided two clean air vehicle parking stalls.

Tire Store (Building U)

Sharing the northern portion of the project site, a 5,000-square-foot tire store would be located directly south of the autorelated services/retail store. The tire store would have four bays and hydraulic lifts where customers could have new tires installed on their vehicle. Oil-change services and tune ups could also be offered on site, but services that are more intensive would not be permitted (i.e., bodywork, engine removal). The building would be surrounded by a through-road for vehicles being serviced. Customers would likely spend 1 to 3 hours on site. The store would have 20 designated parking stalls located to the east and south, including 2 parking stalls with electric vehicle (EV) charging stations, 1 of which would also serve as disabled person parking. One clean air vehicle stall would also be provided.

Retail Store (Building V)

South of the auto-related services/retail store would be a 7,370-square-foot retail store. The retail store may be an auto parts store, office supply store, pet supply store, health and beauty store, shoe store, or other similar retailers. A total of 29 parking stalls, located on the south and sides of the building, would be provided for the retail store. Two EV charging stations would be provided.

Three-Tenant Food and Retail Pad (Building W)

A 10,000-square-foot, three-tenant food and retail pad, which would house one retail or service tenant and two food tenants, would be located at the southern end of the project site. Upon completion of construction, the building would border a parking lot to the north and east, retention basin to the south, and drive-through lane to the west. The tenant on the south corner of the building would comprise of a 2,500-square-foot food shop with a drive-through lane on the west and south side of the building. A second 3,000-square-foot food shop would be located on the north corner of the building. Both food tenants would have casual dining spaces. Situated between the two food shops would be a 4,500-square-foot building for a retail/service tenant with a service-oriented business such as a pick up and drop off dry cleaner (no plant on site), hair salon, or phone store. The three stores would have a combined total of 73 designated parking spots spread across the north and east sides. Four parking stalls for disabled persons would be located on the east side of the buildings near the store entrances. Three clean air vehicle stalls would also be provided.

Fast-Food Restaurant (Building X)

The south end of the project site, would have a 2,500-square-foot standalone fast-food restaurant with drivethrough. The building would border a retention basin to the west and a paved roadway and parking stalls to the east. The restaurant would service customers needing to be served quickly. It would have 25 designated parking stalls located to the north and east sides of the building. The design would match elements of the overall architecture of the balance of the shopping center. Two EV charging stations would also be provided.

Bank (Building Y)

On the southernmost corner of the project site, east of the proposed fast-food restaurant, would be a 3,470-square-foot bank. The bank would feature a two-lane drive-through ATM station, along with 14 designated parking stalls on the north and west sides. Four EV charging stations would also be provided.

Mass-Grading Activities

Mass grading would include 55,600 cubic yards of cut and 4,520 cubic yards of fill, resulting in 51,140 cubic yards of soil for export. Assuming a haul truck capacity of 14 cubic yards per truck, earth-moving activities would result in approximately 3,652 round trips (7,305 one-way truck trips) during the grading phase.

The project would also include four bio-retention basins that would be located in the northwest and southwest corners of the site, and adjacent to the proposed bank building, so that runoff from the proposed buildings and parking lots can be captured, percolate into the groundwater table, and reduce the rate of stormwater discharged off site to pre-development condition. The project would be constructed in one phase.

Access, Parking, and Site Circulation

Site access would primarily be from Creighton Avenue in the south and Antelope Road in the north. The project would involve construction of a private access drive from Creighton Avenue into the site. Secondary access would be provided through an internal drive parallel to Clinton Keith Road through Vineyard I, which is currently under construction.

The project would involve improvements to the intersection of Clinton Keith Road and Creighton Avenue, such as sidewalk and crosswalk improvements, landscaping, and stoplight installation. The project would also involve the construction of an extension of a private access road to the north, and overlay of the vacated Antelope Road as a private drive to the south. Access to the project site would be provided by two driveways: one driveway on the northern project boundary off Antelope Road, and one driveway on the southernmost project boundary at the intersection of Clinton Keith Road and Creighton Avenue.

A 30-foot drive isle that connects to a 28-foot drive isle would surround the proposed retail development center and provide fire access and circulation for the delivery trucks. An Americans with Disabilities Act (ADA)-compliant pedestrian pathway is required from the new retail pads to the public right-of-way to ensure connectivity throughout the site and easy access from adjacent streets and neighboring properties.

The project would provide 204 parking stalls (179 required by the City), which would include 10 stalls designated for ADA parking and 10 stalls with EV charging stations, 5 of which have dual designation for ADA parking and 6 clean air vehicle stalls. Paved passenger vehicle parking areas would be provided throughout the project site. In total, the project would provide 32,120 square feet of commercial space and associated improvements and approximately 23% landscape area coverage.

Building Design and Landscape Plan

The proposed project would be designed with a vineyard–California craftsman theme, as depicted on Figures 3-3A through 3-3F, Elevations. The proposed color palette would feature an array of beiges, gold, cream, and white with brown roofs and gray canopies over the storefront windows. The architectural detailing used throughout the project site would break up long elevations horizontally and vertically. The technique of breaking a long elevation into smaller elements would be used to create a more visually interesting building that is at a pedestrian-friendly scale. The building entrance designs would create visual cues with architectural design, materials, and details blended together to give this location a look and feel that is specific to the context of the City. Buildings heights would vary between approximately 18 feet to 34 feet and 6 inches above finished floor.

The landscape plan would include a mix of drought-tolerant and fire-resistant shrubs and grasses and a variety of shade trees to be used throughout the parking area and along the street that are appropriate for the climate in the City (Figure 3-4, Planting Plan). A system of bio-filtration planters at the perimeter of the parcel and within the parking area would provide an ecologically responsive method of on-site stormwater treatment.

Lighting

Exterior lighting would be affixed to each building and would be downward facing. Lighting fixtures would be located on the buildings approximately every 50 feet to provide safety and security. The parking lot would be illuminated with standard downward-pointing lights, each containing two LED bulbs affixed to a 36.5-foot-tall light pole. To provide security and emergency lighting, parking lot lighting would remain along the main driveways only.

Signage

Building signage would consist of four monument signs, as described in the approved comprehensive sign program for the Vineyard development (DP-2018-1592). The first monument sign would be located at the northernmost boundary of the project site adjacent to Building T. This sign would be a 60-foot-tall freeway-facing illuminated pylon tenant sign. One smaller 25-foot-tall monument sign would be located along the western boundary of the project site adjacent to proposed Building V. Two more monument signs would be located along Creighton Avenue in the southwestern portion of the site. These signs would be 10-foot-tall and 25-foot-tall pylon signs, respectively. Furthermore, each proposed building would include wall signage corresponding to the appropriate commercial business and would be sized proportionately to accommodate for the size of the building, all in accordance with the City-approved Vineyard sign program.

3.4.1 Project Operations

All deliveries to the stores would be through the front doors before 10:30 a.m., except for the bank, which would receive deliveries throughout the day. Hours for businesses would vary by store, but it is anticipated that the stores with the longest operating hours would be open from 9 a.m. to 9 p.m. every day of the week.

In total, the development is expected to employ approximately 20 full-time employees.

The tire store would follow standard operating practices in storing and recycling discarded tires and oil in designated areas away from public view.

3.4.2 Project Construction

Conservatively, for the purposes of the EIR analysis, the project is assumed to be constructed in one phase, with grading and construction expected to take place between February 2021 and September 2021. The phase would consist of the construction of the retail development center, retention basins, and new site amenities such as landscaping, lighting, and parking lots. The construction would include an extension of a private access road to the north and overlay of the vacated Antelope Road as a private drive to the south. Retail building construction may occur in a phased manner, depending upon leasing of the buildings, but all grading and site work and common areas would be constructed as one phase. The construction phasing assumptions are shown in Table 3-1.

	One-Way Vehicle Trips		Equipment			
Construction Phase	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Vineyard III				·		
Site Preparation	16	0	4	Rubber-Tired Dozer	1	8
				Rubber-Tired Loaders	1	8
				Tractors/Loaders/Backhoes	2	8
Grading	38	2	5,000	Excavators	1	8
				Graders	1	4
				Rubber-Tired Dozers	1	8
				Rubber-Tired Loaders	1	8
				Scrapers	3	8
				Tractors/Loaders/Backhoes	2	8
Building	96	4	236	Cranes	1	1
Construction				Forklifts	2	8
				Generator Sets	12	1
				Tractors/Loaders/Backhoes	3	7
Trenching	12	0	0	Excavators	1	7
				Tractors/Loaders/Backhoes	2	7
Paving	22	144	0	Tractors/Loaders/Backhoes	2	7
				Rollers	2	8
				Tractors/Loaders/Backhoes	2	8
Architectural Coating	12	2	0	Air Compressors	2	8

Table 3-1. Construction Scenario Assumptions

Notes: See Appendix B for details.

3.5 Standard Requirements and Conditions of Approval

The project is consistent with existing general plan land use and zoning designations. Implementation of the project is anticipated to require, but not necessarily be limited to, the permits and approvals set forth below. This EIR may be utilized by the City and any other governmental entities, as responsible agencies, for approvals needed in connection with the project, regardless of whether such agencies or specific approvals are listed below.

City of Murrieta:

- A site development permit
- Tentative Parcel Map
- Design review approval of the site plan, landscape, and building architecture to allow for retailing of general merchandise and services
- Approval of the project and certification of the EIR

Other agency approvals:

- Regional Water Quality Control Board
 - National Pollutant Discharge Elimination System Construction General Permit
- Riverside County Department of Environmental Health
 - Permit to Operate a Food Facility (Riverside County Code, Section 4.52, and the California Health and Safety Code)

3.6 Related Projects

The Cities of Murrieta and Menifee provided a list of approved/proposed related projects in the project area, as described in Table 3-2. Figure 3-5, Cumulative Projects, shows the location of each related project in relation to the proposed project.

Project Name	Description
Mitchell Crossing	331 multi-family housing dwelling units
	30,000-square-foot specialty retail
The Orchard	436,735-square-foot shopping center
	215,850 square feet remaining to be built; 100,000 square
	feet assumed to be built by 2020
Vineyard I Shopping Center ¹	78,489-square-foot shopping center
	91-room hotel
Makena Hills	116,200-square-foot medical office
	9,300-square-foot restaurant
	206-room hotel
Adobe Springs	287 single-family detached dwelling units
-	208,500-square-foot business park

Table 3-2. Related Projects

Project Name	Description
Alderwood	10 single-family detached dwelling units
Golden Cities Phase 3	69 single-family detached dwelling units
Golden Cities Phase 4	126 single-family detached dwelling units
Golden Cities Phase 5	119 single-family detached dwelling units
Junction (City of Menifee)	148,663-square-foot discount club
	140,760-square-foot home improvement store
	237,377-square-foot retail/shopping center
Walmart (City of Menifee)	205,000-square-foot discount store
	6,680-square-foot automobile care center
	13,800-square-foot specialty retail
	6,500-square-foot high-turn-over (sit-down) restaurant
	6,200-square-foot fast-food with drive-through
	16,000-square-foot gas station with food mart and car wash
Costco/Vineyard II	153,362 square-foot Costco Wholesale
	32-fuel pump gas station
	72,000-square-foot shopping center
TTM 33732 (City of Menifee)	296 single-family dwelling units
PP 2009-006; PP 2016-126 (City of Menifee)	827,777 square feet of light industrial buildings
TR 36684 (City of Menifee)	10 single-family detached dwelling units

Source: Appendix I.

Notes: The project list was derived from contacting the jurisdictions directly, and then the traffic engineer reviewed the list to include locations that would contribute traffic to the project's study intersections and would be open by 2021.

Although the Vineyard Shopping Center traffic study includes a 78,489-square-foot shopping center and 91-room hotel, updated plans for the site include an approximately 32,700-square-foot shopping center and no hotel because 4.48 acres are included under Costco in this EIR. The segment of Warm Springs Parkway from Clinton Keith Road to the southern project boundary was analyzed as part of the Vineyard Shopping Center project.

3.7 References Cited

City of Murrieta. 2014. "Murrieta Zoning Map" [map]. Adopted June 17, 2014. Effective July 17, 2014. http://www.murrietaca.gov/civicax/filebank/blobdload.aspx?blobid=6214.

City of Murrieta. 2011. "General Plan 2035 Land Use Map" [map]. Adopted July 19, 2011. Accessed August 2018. https://www.murrietaca.gov/civicax/filebank/blobdload.aspx?BlobID=5668.



SOURCE: USGS 7.5-Minute Series Murrieta Quadrangle

FIGURE 3-1 Project Location Vineyard III Retail Development Project

DUDEK 🌢 🛀

1,000 2,000



SOURCE: Architects Orange 2020

FIGURE 3-2 Site Plan Vineyard III Retail Development Project

DUDEK & 250 Beet 0 125

DUDEK

SOURCE: Alhambra Group

FIGURE 3-3A Elevations Vineyard III Retail Development Project

KEY PLAN



HERE HERE











DUDEK

SOURCE: Alhambra Group

FIGURE 3-3B Elevations Vineyard III Retail Development Project

MATERIALS



E C A G M (A) $\begin{pmatrix} A \\ 2 \end{pmatrix}$ $\begin{pmatrix} G \\ 4 \end{pmatrix}$

DUDEK

SOURCE: Alhambra Group

FIGURE 3-3C Elevations Vineyard III Retail Development Project



-4

BUILDING V

V-100

110'-0"

 $\begin{array}{c} P \\ \hline 2 \\ \hline 4 \\ \hline 6 \\ \hline 6 \\ \hline 5 \\ \hline \end{array}$ $\begin{array}{c} \hline G \\ \hline 4 \\ \hline 6 \\ \hline 9 \\ \hline 9 \\ \hline 9 \\ \hline 4 \\ \hline 15 \\ \hline 5 \\ \hline 4 \\ \hline 5 \\ \hline 5 \\ \hline 4 \\ 1 \\ \hline 4 \hline$ $\left< \frac{A}{3} \right>$ **9** 32' 6 BUILDING V - EAST ELEVATION SCALE: 1'-0" = 3/32"



BUILDING V- SOUTH ELEVATION SCALE: 1'-0" = 3/32"





BUILDING V - WEST ELEVATION SCALE: 1'-0" = 3/32"



BUILDING V - NORTH ELEVATION SCALE: 1'-0" = 3/32"



KEY PLAN-

MATERIALS

STEEL WIDE FLANGE COLUMN AND BEA

A EXTERIOR PLASTE B STANDING SEAM METAL ROOFING C METAL SIDING

STONE BAS

I SIGNAGE BY TENA



SOURCE: Alhambra Group

FIGURE 3-3D Elevations Vineyard III Retail Development Project

DUDEK

DUDEK

SOURCE: Alhambra Group

Elevations Vineyard III Retail Development Project

FIGURE 3-3E





FIGURE 3-3F Elevations Vineyard III Retail Development Project

DUDEK


SOURCE: Alhambra Group

FIGURE 3-4 Planting Plan Vineyard III Retail Development Project

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SOURCE: Trames Solutions Inc 2020

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800 Beet FIGURE 3-5 Cumulative Projects Vineyard III Retail Development Project INTENTIONALLY LEFT BLANK

4 Environmental Analysis

The following environmental analyses provide information relative to 17 environmental topics as they pertain to the proposed Vineyard III Retail Development Project (project). Each section of this chapter describes existing environmental and regulatory conditions, presents the criteria used to determine whether an impact would be significant, analyzes significant impacts, identifies mitigation measures for each significant impact, discusses the significance of impacts after mitigation is applied, and discusses cumulative impacts.

This chapter includes a separate section for each of the following issue areas:

- Section 4.1, Aesthetics
- Section 4.2, Air Quality
- Section 4.3, Biological Resources
- Section 4.4, Cultural Resources
- Section 4.5, Energy
- Section 4.6, Geology and Soils
- Section 4.7, Greenhouse Gas Emissions
- Section 4.8, Hazards and Hazardous Materials
- Section 4.9, Hydrology and Water Quality
- Section 4.10, Noise
- Section 4.11, Population and Housing
- Section 4.12, Public Services
- Section 4.13, Recreation
- Section 4.14, Transportation
- Section 4.15, Tribal Cultural Resources
- Section 4.16, Utilities and Service Systems
- Section 4.17, Wildfire

The following issue areas were found not to be significant through the Initial Study process and are therefore not discussed in this EIR: agriculture and forestry resources, mineral resources, and land use planning. These environmental topics are discussed in Section 5.4, Effects Fount Not to Be Significant, of Chapter 5, Other CEQA Considerations, of this Project Environmental Impact Report (EIR), and are not discussed in further detail pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15128 (14 CCR 15000 et seq.).

Analysis Format

This Project EIR assesses how the project would impact the issue areas listed above. Each environmental issue addressed in this EIR is presented in terms of the following subsections:

- Introduction. Discusses the resource area to be evaluated and describes the methodology used for the analysis, including any surveys and documentation reviewed to conduct the analysis of existing conditions and potential impacts.
- Existing Conditions. Describes the existing setting on or surrounding the project site that may be subject to change as a result of implementation of the project. This setting describes the conditions that existed when the Notice of Preparation was sent to responsible agencies and the State Clearinghouse.

- **Relevant Plans, Policies, and Ordinances.** Describes relevant federal, state, and local policies and regulations pertaining to a particular issue area.
- **Thresholds of Significance.** Provides criteria for determining the significance of project impacts for each environmental issue.
- **Impacts Analysis.** Provides a discussion of the project's characteristics that may have an impact on the environment, includes a discussion of methodology as applicable, analyzes the nature and extent to which the proposed project is expected to change the existing environment, and indicates whether the project's impacts meet or exceed the levels of significance thresholds.
- Mitigation Measures. Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.
- Level of Significance After Mitigation. Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, and adverse environmental impacts that are not significant.
- **Cumulative Impacts.** Provides a discussion of the past, present, and reasonably foreseeable projects relevant to each resource analysis, and documents cumulatively considerable environmental impacts that cannot be feasibly mitigated or avoided, cumulatively considerable environmental impacts that can be feasibly mitigated or avoided, and environmental impacts that are not cumulatively considerable. Mitigation measures to reduce cumulative impacts are included where necessary.
- References Cited. Lists the sources cited during preparation of the EIR.

Cumulative Projects Analysis

Section 15130(b)(1)(A) of the CEQA Guidelines (14 CCR 15000 et seq.) allows for the preparation of a list of past, present, and reasonably anticipated future projects as a viable method of determining cumulative impacts. Table 3-2, Related Projects, in Chapter 3, Project Description, presents the cumulative projects accounted for in this EIR.

4.1 Aesthetics

This section describes the existing visual conditions within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). Information presented in this section was gathered from a variety of publicly available sources, including the Murrieta General Plan 2035 (General Plan), City of Murrieta (City) Municipal Code, and the County of Riverside General Plan.

4.1.1 Existing Conditions

Regionally, the project site is located at the southern edge of the Paloma Valley, which stretches from the Antelope Hills west of Interstate (I) 215 across the valley to the foothills in the east. The Paloma Valley is generally bounded by Bell Mountain and Menifee Valley to the north, the Hogback Hills to the south, and the Sedco Hills to the southwest. Within the Paloma Valley, the project site is located within the Antelope Hills, an area containing low-lying hills that has seen moderate levels of suburban development over the past decade.

More specifically, the approximately 6.65-acre L-shaped project site is located at the southwest corner of an approximately 70-acre undeveloped area surrounded by suburban development. This undeveloped area is bounded by Clinton Keith Road to the south, Cape Aire Way to the north, residential development to the east, and northbound on-ramp to the I-215 to the west. Antelope Road traverses this undeveloped area and a vacated portion of it through the project site, although access to this vacated road is no longer allowed. Prior to approximately 2006, this undeveloped area contained two low-lying hills covered with low-growing shrubs and grasses. In approximately 2006, a rock, sand, and gravel removal operation began within the central portion of the area. As part of the operation, the majority of area has been graded and excavated, resulting in an expanse of bare soil with stockpiles of gravel, sand, and boulders distributed throughout the site. The majority of these activities occurred on the properties to the east of the project site, although activities have affected some portions of the project site, and in particular, the southeastern portion of the project site. Under the existing conditions, the western portion of the project remains relatively undisturbed and features low-growing scattered shrubs, although bare expanses of soil are located where previous grading activities have occurred. Additionally, a cell tower is located within the northern tip of the project site.

4.1.2 Relevant Plans, Policies, and Ordinances

Federal

There are no applicable federal regulations regarding the protection of visual resources that would be applicable to the proposed project or the project site.

State

The California Scenic Highway Program

California's Scenic Highway Program was created by the state legislature in 1963. This program's purpose is to "preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways" (Caltrans 2014). The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The California Scenic Highway System includes a list of highways

that either have already been designated as scenic highways or that are eligible for designation as scenic highways. There are no state-designated or eligible scenic highways in the project area (Caltrans 2019).

California Building Standards Code

Title 24 of the California Building Standards Code serves as the basis for the design and construction of buildings in California. In addition to safety, sustainability, new technology, and reliability, the California Building Standards Code addresses light pollution and glare hazards through the establishment of maximum allowable backlight, uplight, and glare ratings (State of California 2011). The following components of Title 24 include standards related to lighting.

<u> Title 24, Part 6 – California Energy Code</u>

The California Energy Code stipulates allowances for lighting power and provides lighting control requirements for various lighting systems, with the aim of reducing energy consumption through efficient and effective use of lighting equipment.

<u> Title 24, Part 11 – California Green Building Standards Code</u>

The California Green Building Standards Code, which is Part 11 of Title 24, is commonly referred to as the CALGreen Code. Paragraph 5.1106.8, Light Pollution Reduction, requires that all non-residential outdoor lighting comply with the minimum requirements in the California Energy Code or the applicable local ordinance if more stringent.

California Vehicle Code

Chapter 2, Article 3 of the California Vehicle Code stipulates limits to the location of light sources that may cause glare and impair the vision of drivers.

Article 3, Offenses Relating to Traffic Devices [21450–21468] (Article 3 enacted by Stats. 1959, Ch. 3.), Section 21466.5, stipulates that no person shall place or maintain or display, upon or in view of any highway, any light of any color of such brilliance as to impair the vision of drivers upon the highway.

Local

County of Riverside General Plan

The Circulation Element of the County of Riverside General Plan identifies I-215 as a County Eligible Scenic Highway (County of Riverside 2016), and the Circulation Element, Land Use Element, and Multipurpose Open Space Element contain policies related to the protection and maintenance of resources along scenic corridors and highways (County of Riverside 2015, 2016, 2017).

County of Riverside Ordinance 655 (Regulation of Light Pollution)

The intent of Ordinance 655 is to "restrict the permitted use of certain light fixtures emitting into the night sky undesirable light rays which have a detrimental effect on astronomical observation and research" (County of Riverside 1988). The ordinance establishes requirements for lamp source and shielding for outdoor lighting fixtures based on location—more stringent lighting standards are applicable to lands located within a 15-mile radius of Mount Palomar Observatory (these lands are located in "Zone A") than for lands located greater than 15

miles from the observatory (i.e., lands in "Zone B"). The project site is located approximately 24 miles from the observatory and would, thus, be subject to the lamp source and shielding requirements applicable to Zone B areas. Low-pressure sodium lamps and lamp types of 4,050 lumens and less (including yellow LED lights and white LED lights with cut offs) are allowed (no shielding is required) up to 11 p.m., and lamp types of 4,050 lumens and more are prohibited after 11 p.m. (County of Riverside 1988).

Murrieta General Plan 2035

The Conservation Element and Recreation and Open Space Element of the City's General Plan include the following goals and policies related to the preservation of aesthetic resources (City of Murrieta 2011a, 2011b):

Conservation Element

Goal CSV-5 Hills and ridges are protected for their environmental and aesthetic values.

Policy CSV-5.1 Promote compliance with hillside development standards and guidelines to maintain the natural character and the environmental and aesthetic values of sloped areas.

Recreation and Open Space Element

Goal ROS-7 Open space areas are planned to protect, conserve, and utilize resources of unique character and value for the community.

Policy ROS-7.2 Designate open space to preserve habitat and scenic views of natural areas.

City of Murrieta Municipal Code

Title 16 of the City's Municipal Code contains regulations that identify the permitted land uses on all parcels in the City through assigned districts. It also identifies applicable use regulations, site development criteria (e.g., lot size, density/intensity, yard setbacks, open space, heights, parking, landscaped areas), performance standards, and general design regulations (e.g., site design, building orientation, access, parking areas, landscaping, fencing/screening, lighting, building design).

Section 16.18.100, Lighting, of the City's Municipal Code, contains regulations specific to lighting. These regulations include the following (original numbering and lettering retained throughout this section) (City of Murrieta 1997a):

- A. Exterior lighting shall be:
 - 1. Architecturally integrated with the character of adjacent structure(s);
 - 2. Directed downward and shielded so that glare is confined within the boundaries of the subject parcel;
 - 3. Installed so that lights do not blink, flash, or be of unusually high intensity or brightness; and
 - 4. Appropriate in height, intensity, and scale to the uses they are serving. Outside and parking lot lighting shall not exceed 0.3 foot candles at residential property lines.
- B. Security lighting shall be provided at all entrances/exits, to structures in multi-family zoning districts and nonresidential zoning districts. The minimum illumination shall be two-foot candles at ground level in front of the entrance/exit.

C. Light sources shall be shielded to direct light rays onto the subject parcel only. The light source, whether bulb or tube, shall not be visible from an adjacent property, with the exception of residential uses, sign illumination, traffic safety lighting, or public street lighting.

Similar to County of Riverside Ordinance 655, Section 16.18.100 of the City's Municipal Code establishes regulations to restrict the use of certain light fixtures that may have a detrimental effect on astronomical observation and research at the Mount Palomar Observatory. However, unlike the County of Riverside ordinance, the City's Municipal Code establishes a "Dark Sky Zone" that includes all areas located within a 30-mile radius of the observatory. Within the Dark Sky Zone (within which the project site is located), all outdoor lighting fixtures must be fully shielded or constructed such that emitted light rays are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted, and lighting shall be below 4050 lumens after 11 p.m.

Section 16.18.120, Screening and Buffering, provides standards for the screening and buffering of adjoining land uses, equipment, outdoor storage areas, and surface parking areas. Multifamily and nonresidential land uses are required to comply with the requirements of this section. The relevant standards of Section 16.18.120 of the City's Municipal Code are as follows (City of Murrieta 1997a):

- A. Mechanical Equipment, Utility Services, Loading Docks, and Refuse Areas. The manner and adequacy of the screening for mechanical equipment, utility services, loading docks and refuse areas shall consider the adjacent structures, land uses and zoning, as well as the overall site and building design.
 - 1. All building-mounted and ground-mounted mechanical equipment and utility services (air conditioning, heating, cooling, elevator shafts, ventilation ducts and exhaust, equipment panels, etc.) shall be adequately screened from view in all horizontal directions as determined by the Director and in accordance with the following standards:
 - a. The screening method shall be architecturally compatible and integrated with the site development in terms of design, materials, color, form, architectural style and landscaping.
 - b. At a minimum, adequate screening shall be based on a line-of-sight in all directions from a point five (5) feet above the grade of the building finished floor at a distance of six-hundred and sixty (660) feet.
 - c. Line-of-sight details shall be prepared by a qualified draftsperson, licensed contractor, licensed architect, registered civil engineer or licensed land surveyor and provided to the City.
- B. Parking Areas Abutting Public Streets and Rights-of-Way. An opaque screen shall be installed along parking areas abutting public streets and rights-of-way. The screening shall have a height of not less than thirty (30) inches and not more than forty-two (42) inches at maturity. Where the finished elevation of a parking area is lower at the boundary line than an abutting property elevation by at least twenty-four (24) inches, the change in elevation may be used in lieu of, or in combination with, additional screening to satisfy the requirements of this subsection. Drive-through lanes facing oncoming traffic must be treated with the same opaque screen.

The opaque screen shall consist of one, or a combination, of the following:

- 1. Landscaped Berm. A berm constructed of earthen materials and landscaped to form an opaque screen;
- 2. Fences. A solid fence constructed of wood, or other materials a minimum nominal thickness of two inches to form an opaque screen; and/or
- 3. Walls, Including Retaining Walls. A wall of concrete, block, stone, brick, tile, or other similar type of solid masonry material, a minimum of six inches thick (Ord. 440-10 § 1, 2010; Ord. 182 § 2 (part), 1997).

Section 16.24, Hillside Development, contains regulations for the development of areas in the City that, because of their topography, require special consideration to ensure that they are developed in a way that substantially maintains their natural character and environmental and aesthetic values to implement the General Plan, and to provide for the safety, health, and welfare of the public. The provisions of Section 16.24 apply to uses and structures within areas that have a natural slope of 20% or greater and/or are designated on the significant features map on file with the Planning Department. Portions of the project site (e.g., along exterior boundaries and along the vacated Antelope Road) exhibit slopes greater than 20%; however, these slopes were graded (i.e., non-natural) by the County in constructing Antelope Road and the provisions of this section do not apply to the proposed project or project site. Additionally, the project site is not listed on a significant features map.

Section 16.38, Sign Standards, contains regulations regulating the size, height, design, quality of materials, construction, location, lighting, and maintenance of signs and sign structures not enclosed within a building. Specifically, Section 16.38.060, Comprehensive Sign Program, allows for the development of a comprehensive sign program, which provides a means for the flexible application of sign regulations for multitenant projects. All comprehensive sign programs must be reviewed and approved by the Planning Director, who will issue a development plan permit for implementation of the comprehensive sign program.

Section 16.34.070, Development Standards for Off-Street Parking, establishes regulations for off-street parking areas. The relevant standards of Section 16.34.070 of the City's Municipal Code are as follows (City of Murrieta 1997b):

 Lighting. Parking areas shall have lighting capable of providing adequate illumination for security and safety. Lighting standards shall be energy-efficient and in scale with the height and use of the on-site structure(s). All illumination, including security lighting, shall be directed downward, away from adjacent properties and public rights-of-way in compliance with Section 16.18.100 (Lighting).

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to aesthetics would occur if the project would:

- 1. Have a substantial adverse effect on a scenic vista.
- 2. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- 3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
- 4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Thresholds 1 and 2 were analyzed in the project's Initial Study (see Appendix A of this Environmental Impact Report [EIR]). The project site is located in a developing area of the City and is not located within the viewshed of any identified scenic vistas. As described in the Murrieta General Plan 2035 Final EIR, a scenic vista is described as "a view of undisturbed natural lands exhibiting a unique or unusual feature that comprises an important or dominant portion of the viewshed" (City of Murrieta 2011c). Given that the project site is located within a developing part of the City, it was determined that the site is not located within a scenic vista. Additionally, there

are no designated or proposed state scenic highways within the vicinity of the project site. For these reasons, the impacts of the project with respect to scenic vistas and state scenic highways were determined to be nonexistent or less than significant, and will not be analyzed further in this EIR.

4.1.4 Impacts Analysis

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

Less-than-Significant Impact. Section 21071 of the California Public Resources Code (i.e., CEQA) defines an "urbanized area" as "(a) an incorporated city that meets either of the following criteria: (1) Has a population of at least 100,000 persons, or (2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons." As of January 1, 2019, the U.S. Census Bureau estimated the population of the City to be 118,125 persons (DOF 2019). Therefore, the City is located within an urbanized area as defined by CEQA.

To ensure that both current and future development within the City is designed and constructed to conform to the existing visual character and quality of the surrounding built environment, the City's Municipal Code includes design standards, specific to each Zoning District, related to building height, parking, landscaping requirements, and other visual considerations. The purpose is to regulate and restrict the uses of buildings and structures, and to encourage the most appropriate use of land. The City's General Plan Land Use Map designates the project site as Commercial (C) (City of Murrieta 2011d), and the City's Zoning Map shows the site as zoned Regional Commercial (RC) (City of Murrieta 2014). The proposed project will be required to be developed in accordance with the existing land use and zoning designations. The plan-check phase of project review. Therefore, because the proposed project would be required to comply with all applicable regulations governing scenic quality, potential impacts would be less than significant.

Additionally, development of the proposed project would be consistent with surrounding development and would not degrade the existing visual character of the project site and its surroundings. The project site is located in an urbanized area of the City and is currently characterized as an undeveloped site. As indicated above, the City's hillside development standards (set forth in the City's Municipal Code Section 16.24) apply to uses and structures within areas that have a natural slope of 20% or greater and/or are designated on the significant features map on file with the Planning Department. Because the project site has been previously graded, no natural slopes greater than 20% exist on the project site, and the provisions of this section do not apply to the proposed project or project site. Additionally, the project site is not listed on a significant features map.

Construction of the proposed project would require the use of heavy machinery such as large trucks, cranes, bulldozers, and other equipment needed for construction activities. However, these activities would be temporary, and would conclude with completion of construction of the project.

Once construction of the project is complete, the condition of the site would change from an undeveloped site to a developed condition for commercial purposes. The project would be built consistent with existing patterns of development in the surrounding area, which is becoming more urbanized, including the residential neighborhoods east and south of the project site, Vista Murrieta High School, the Vineyard I project under construction to the west, and the retail development west of I-215 known as The Orchard. In addition, the proposed project would be subject to design review by the City and would meet the City's conditions of approval, which would ensure that proposed structures, landscaping, signs, and perimeter walls are consistent with the City's General Plan and Municipal Code. To minimize the visual impact of retail pads, the design would integrate design techniques such as compatible color schemes, landscaping, and varying parapet cap heights and towers. Project buildings would vary in height from approximately 18 to 34.5 feet, and would be constructed of materials in warm, natural earth tones consistent with the architectural detailing of the more recent buildings in the area. Using these design elements would break up long elevations horizontally and vertically, a technique that is used to create a more visually interesting building that is at a pedestrian-friendly scale. The color and material board for the proposed project would be consistent with the previously approved retail project immediately east of the project site, which uses real natural rock on sign bases, mansards, and column bases.

The landscape plan would include a mix of drought-tolerant shrubs and grasses and a variety of shade trees to be used throughout the parking field and along the street that are appropriate for the City's climate (see Figure 3-4, Planting Plan, in Chapter 3, Project Description). Bio-retention basins (depressed landscaped areas to collect stormwater and runoff) would also be located at the north and southern edges of project site. The exterior details of the proposed project, including architectural character, materials, and landscaping, were designed to blend together to create a look and feel that acknowledges the design of the surrounding environment. Therefore, implementation of the proposed project consistent with the development standards in the City's Municipal Code, as required by the City's conditions of approval and as reviewed as part of the plan check process, would not substantially degrade the existing visual character or quality of the site or its surroundings or result in significant visual impacts. Impacts would be less than significant and no mitigation is required.

Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Light

Less-than-Significant Impact. Currently, there are no existing lighting sources on the project site, since it is undeveloped and vacant; however, the project site is located in an area where nighttime lighting is a relatively common feature. Existing light sources in the area include streetlights installed along I-215, Clinton Keith Road, Antelope Road, and Creighton Avenue to the south of the project site, as well as local neighborhood roads; exterior and interior lighting associated with residential, commercial, and school development in the surrounding area; lighting from signage associated with commercial development along the I-215 corridor; and lights from motorists. On occasion, nighttime lighting in the area includes lighting associated with the Vista Murrieta High School football stadium.

The proposed project would include exterior lighting for safety and security purposes. The project would comply with the California Green Building Standards, County of Riverside ordinances, and the City's Municipal Code requirements with respect to lighting. Parking and site lighting would incorporate cutoff lenses to keep light from spilling over onto adjacent properties and to keep light sources from being visible on or directing light rays onto adjoining property. Lighting on the project site would be reduced to levels below 4050 lumens at 11 p.m. to ensure compliance with Section 16.18.100 of the City's Municipal Code and to reduce nighttime lighting impacts on the Mount Palomar Observatory. A lighting plan for the project would be submitted to City staff for review and approval to ensure compliance with the City's lighting regulations (City's Municipal Code Section 16.18.100) and with the Palomar Observatory lighting requirements as established in City's Municipal Code Section 16.18.110.

Light spillage refers to the undesirable condition in which light is cast where it is not wanted. The City has not established a quantitative threshold of significance for light spillage. However, the Electric Power Research Institute and the Institute of Lighting Engineers have established recommendations for light spillage onto adjacent residential properties. They have determined that light spillage of up to 0.3 foot-candles would not result in significant illumination affecting adjacent residential properties (EPRI 2000; ILE 2011). This standard is incorporated into the City's Municipal Code, which prohibits light spillage onto residential areas in excess of 0.3 foot-candles at residential property lines. The project site is not located adjacent to residential uses, so this standard does not apply. However, a photometric plan (see Figures 4.1-1A and 4.1-1B, Photometric Plan) was prepared for the project. The photometric plan demonstrates that light spillage would be minimized along the project site's southern and western boundaries (i.e., the boundaries that abut the I-215 on-ramps) and would be below 1.3 foot-candles. Light spillage in excess of 1.3 foot-candles would occur on the project site's northern and eastern boundaries; however, these uses are planned for commercial uses and would illuminate sidewalks and roadways, such as Creighton Avenue driveway into the site. Therefore light spillage would not be considered a nuisance.

Building facades would include a variety of signs on each storefront for identification purposes. Additionally, four monument signs would be installed throughout the project site, as described in the comprehensive sign program for the overall Vineyard development (DP-2018-1592). The first monument sign would be located at the northernmost boundary of the project site adjacent to proposed Building T. This sign would be a 60-foot-tall freeway-facing illuminated pylon tenant sign. One smaller 25-foot-tall monument sign would be located along the western boundary of the project site adjacent to proposed Building V. Two more monument signs would be located along Creighton Avenue in the southwestern portion of the site. These signs would be 10-foot-tall and 25foot-tall pylon signs, respectively. All project signage would be designed consistent with the Vineyard Sign Program, which has been prepared and approved by the City as part of separate projects (i.e., the Vineyard I project and the Costco/Vinevard II project) pursuant to Section 16.38, Sign Standards, of the City's Municipal Code. While the exact sign design would vary based on the occupant of each store, signs would feature a unified architectural theme that is consistent with the overall theme of the development. Under the approved Vineyard Sign Program, signs may be comprised of face-illuminated channel letters. However, pursuant to Section 16.38.110 (D) of the City's Municipal Code, all illuminated signs are required to be designed in such a way that limits direct illumination of any object other than the sign. Section 16.38.110 (D) stipulates that light from an illuminated sign shall not be of an intensity or brightness that may interfere with the reasonable enjoyment of surrounding residential properties. These standards are incorporated into the City's Municipal Code for the purposes of ensuring that potential light impacts are minimized to acceptable levels. Project signage has been designed such that it does not have adverse effects on receptors that would be sensitive to nighttime lighting. such as surrounding residences. Additionally, per the conditions of approval for the approved Vineyard Sign Program, the proposed illuminated pylon sign facing I-215 is conditioned to be consistent with the California Department of Transportation standards for outdoor advertising displays visible from California Highways. Compliance with the California Department of Transportation standards would ensure that motorists on I-215 are not adversely affected by project signage.

Although the lighting proposed by the project would change the lighting on the site compared to existing conditions, the project would not create a new source of substantial light that would adversely affect daytime or nighttime views in the area. Given these factors, the contribution of light emitted from the project would be less than significant.

Glare

Less-than-Significant Impact. The project would comply with City's Municipal Code requirements with respect to glare, including Section 16.18.100(A)(2), which requires that exterior lighting be directed downward and that shielding be provided so that glare is confined within the boundaries of the site. As a result, project signage would not affect receptors who may be sensitive to nighttime lighting, such as the residences south and approximately 1,000 feet east of the project site. Additionally, landscaping throughout the project site would further shield these residences from any potential project-related glare.

The proposed project would include drive-through restaurants where motorists would line up while waiting for service. Given that the restaurants would operate during nighttime hours, headlights from motorists' vehicles could shine onto oncoming traffic, creating a potential hazard to opposing motorists. However, these drive-through restaurants would be required to comply with Section 16.44.080 of the City's Municipal Code, which requires drive-through aisles to be appropriately screened with a combination of landscaping, low walls, and/or berms to prevent headlight glare from impacting adjacent streets and parking lots. The color of the buildings' exteriors would be warm, natural earth tones that would blend with the colors of the surrounding landscape. The windows used in the proposed project would have glazing that is predominately lightly tinted in a natural glass color that has a low reflectance. As a result, the reflection of natural or artificial light off the structural façade would not cause any visual impacts or result in safety issues along adjacent public roads, Clinton Keith Road, Antelope Road, Creighton Avenue, or the north bound on-ramp to the I-215. Additionally, the proposed project would be designed in accordance with the California Building Standards Code, which addresses light pollution and glare hazards. As such, impacts would be less than significant and no mitigation is required.

4.1.5 Mitigation Measures

Impacts related to aesthetics would be less than significant. Therefore, no mitigation measures are necessary.

4.1.6 Level of Significance After Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.1.7 Cumulative Impacts

The City's General Plan Land Use Element designates land uses in the vicinity of the project site, including commercial uses immediately north and east of the site (City of Murrieta 2011e). Commercial development combined with the proposed project may have cumulative impacts on the visual landscape of the area, and residents and visitors may notice the visual effects of increased development. However, the proposed project would not block a scenic view or result in the change of a unique scenic resource. In addition, the project would not conflict with applicable zoning and other regulations governing scenic quality. The anticipated development is similar in scale and approach to others along the I-215 corridor, and is consistent with the expectations of the City as expressed in its General Plan. The change in the appearance of the surrounding properties was anticipated as part of the City's existing General Plan designation that calls for regional commercial development on and around the project site (City of Murrieta 2011e). The project would have the potential to result in a cumulative impact if, in combination with other projects, it would result in a significant increase in light and glare at adjoining properties. In order to contribute to cumulative light or glare impacts, related projects must be located in the same field of view as the project. As such, impacts with respect to light and glare are typically localized. Because

of the project's proximity to the related projects, there exists the possibility for the project to result in a cumulative light and glare impact. However, the project would adhere to existing regulations and requirements that govern light and glare, and therefore the project would avoid light trespass and glare. All other projects, including the related projects, would also be subject to applicable local, regional, and state regulations regarding light and glare and the City's Municipal Code requirements for project signage, which would ensure that cumulative light and glare impacts are minimized. Additionally, the project's participation in the approved Vineyard Sign Program, which includes design standards for all project signage for the projects immediately surrounding the project site (i.e., Vineyard I and Costco/Vineyard II), as well as conditions of approval, would further ensure cumulative light and glare impacts are minimized.

As with the proposed project, future developments would be required to comply with the City's Municipal Code requirements and General Plan policies that regulate the visual characteristics of projects, including prevention of light spillover onto adjoining properties, and the County of Riverside Ordinance 655 (Regulation of Light Pollution), which minimizes regional nighttime glare and lighting impacts. In addition, future development would be required to undergo its own CEQA review, which may require mitigation measures to reduce aesthetic impacts. Because the General Plan and the City's Municipal Code would regulate design of the anticipated development of the project site, and the City design review would regulate the appearance of all future projects and the amount of light in the night sky, the proposed project would result in a less-than-significant impact to aesthetics when measured cumulatively with future development occurring in the City.

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FIGURE 4.1-1A Photometric Plan Vineyard III Retail Development Project

SOURCE: Architects Orange

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FIGURE 4.1-1B Photometric Plan Vineyard III Retail Development Project

SOURCE: Architects Orange

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4.2 Air Quality

This section describes the existing setting related to air quality, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). The air quality analysis is based on the Air Quality and Greenhouse Gas Emissions Analysis Technical Report prepared for the project (Appendix B of this Environmental Impact Report [EIR]).

4.2.1 Existing Conditions

Meteorological and Topographical Conditions

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. The South Coast Air Basin's (SCAB's) air pollution is a consequence of the combination of emissions from the nation's second largest urban area, meteorological conditions adverse to the dispersion of those emissions, and mountainous terrain surrounding the SCAB that traps pollutants as they are pushed inland with the sea breeze (SCAQMD 2017). Meteorological and topographical factors that affect air quality in the SCAB are described below.¹

Climate

The SCAB is characterized as having a Mediterranean climate (typified as semiarid with mild winters, warm summers, and moderate rainfall). The general region lies in the semipermanent high-pressure zone of the eastern Pacific; as a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution in the SCAB is a function of the area's natural physical characteristics (e.g., weather and topography) and of manufactured influences (e.g., development patterns and lifestyle). Moderate temperatures, comfortable humidity, and limited precipitation characterize the climate in the SCAB. The average annual temperature varies little throughout the SCAB, averaging 75°F. However, with a less-pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have recorded temperatures over 100°F in recent years. Although the SCAB has a semiarid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70% at the coast and 57% in the eastern part of the SCAB. Precipitation in the SCAB is typically 9 to 14 inches annually and is rarely in the form of snow or hail because of typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

In the City of Murrieta (City), the climate is typically warm during summer when temperatures tend to be in the 80s and cool during winter when temperatures tend to be in the 50s. The warmest month of the year is August, with an average maximum temperature of 98°F; whereas, the coldest month of the year is December, with an average minimum temperature of 34°F. The wettest month of the year is February, with an average rainfall of 2.86 inches (City of Murrieta 2011).

¹ The discussion of meteorological and topographical conditions of the SCAB is based on information provided in the Final 2016 Air Quality Management Plan (SCAQMD 2017).

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen $(NO_x)^2$) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind of the emission sources. Southern California has abundant sunshine, which drives the photochemical reactions that form pollutants such as ozone (O_3) and a substantial portion of fine particulate matter (less than or equal to 2.5 microns in diameter [PM_{2.5}]). In the SCAB, high concentrations of O_3 are normally recorded during the late spring, summer, and early autumn months, when more intense sunlight drives enhanced photochemical reactions. Due to the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet above mean sea level, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet above mean sea level, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours.

Mixing heights for inversions are lower in the summer and inversions are more persistent, being partly responsible for the high levels of O_3 observed during summer months in the SCAB. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight. The SCAB has a limited ability to disperse these pollutants due to typically low wind speeds and the surrounding mountain ranges.

As with other cities within the SCAB, the City is susceptible to air inversions, which trap a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources. Elevated particulate matter with a diameter less than or equal to 10 microns (PM₁₀) and PM_{2.5} concentrations can occur in the SCAB throughout the year, but occur most frequently in fall and winter. Although there are some changes in emissions by day of the week and season, the observed variations in pollutant concentrations are primarily the result of seasonal differences in weather conditions.

² NO_x is a general term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen.

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O₃, nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), PM₁₀, PM_{2.5}, and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.³ In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors—mainly NO_x and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).⁴ The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3 . Stratospheric, ("good") O_3 , occurs naturally in the upper atmosphere. Where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

 O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide and Oxides of Nitrogen. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3 . NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources of NO_x are transportation and stationary fuel combustion sources, such as electric utility and industrial boilers.

NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016b).

³ The descriptions of each of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's Criteria Air Pollutants (EPA 2016a) and the California Air Resources Board Glossary of Air Pollutant Terms (CARB 2016a).

⁴ The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, thereby reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

 SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

PM_{2.5} and PM₁₀ pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. PM₁₀ tends to collect in the upper portion of the respiratory system; whereas, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM₁₀ and PM_{2.5} (EPA 2009).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse

health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ system and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of PM_{2.5} (CARB 2016b). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1.3-butadiene (CARB 2016b). CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines, including on-road diesel engines of trucks, buses, and cars; and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of PM_{2.5}, DPM also contributes to the same noncancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to noncancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and is subjective. People may have different reactions to the same odor. For instance, an odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "valley fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils.

Valley fever is not considered highly endemic to Riverside County (County). Per the California Department of Public Health, the 8-year average (2011–2018) for coccidioidomycosis cases in the County is 5.6 cases per 100,000 people per year. For the zip code 92563, where the project site is located, incidence of coccidioidomycosis is too few to be reliably used to calculate a rate (Lopez, pers. comm. 2018). Statewide incidences in 2018 were 18.8 per 100,000 people (CDPH 2019).

Even if present at a site, earth-moving activities may not result in increased incidence of valley fever. Propagation of *Coccidioides immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *Coccidioides immitis* spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to *Coccidioides immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (these are often referred to as sensitive sites or sensitive land uses) (CARB 2005). The South Coast Air Quality Management District (SCAQMD) identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The closest off-site sensitive receptors to the project site include Vista Murrieta High School and residences located approximately 175 feet to the south.

Regional and Local Air Quality Conditions

South Coast Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved (see Section 4.2.2, Relevant Plans, Policies, and Ordinances, for additional information on NAAQS). Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on the California Ambient Air Quality Standards (CAAQS) rather than the NAAQS. Table 4.2-1 depicts the current attainment status of the project site with respect to the NAAQS and CAAQS, as well as the attainment classifications for the criteria pollutants.

Table 4.2-1. South	Coast Air Basin	Attainment	Classification
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	Designation/Classification		
Pollutant	National Standards	California Standards	
Ozone (O ₃) – 1 hour	No national standard	Nonattainment	
Ozone (O ₃) – 8 hour	Extreme nonattainment	Nonattainment	

	Designation/Classification		
Pollutant	National Standards	California Standards	
Nitrogen dioxide (NO ₂)	Unclassifiable/attainment	Attainment	
Carbon monoxide (CO)	Attainment/maintenance	Attainment	
Sulfur dioxide (SO ₂)	Unclassifiable/attainment	Attainment	
Coarse particulate matter (PM ₁₀)	Attainment/maintenance	Nonattainment	
Fine particulate matter (PM _{2.5})	Serious nonattainment	Nonattainment	
Lead	Nonattainment	Attainment	
Hydrogen sulfide	No national standard	Unclassified	
Sulfates	No national standard	Attainment	
Visibility-reducing particles	No national standard	Unclassified	
Vinyl chloride	No national standard	No designation	

Table 4.2-1. S	outh Coast Air	Basin Attainment	Classification
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Sources: EPA 2016c (national); CARB 2016c (California).

Notes: Bold text = not in attainment; Nonattainment = does not meet the standards; Extreme Nonattainment = has a design value of 0.163 parts per million and above; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data; Attainment = meets the standards; Attainment/Maintenance = achieve the standards after a nonattainment designation; Unclassified or Unclassifiable = insufficient data to classify.

In summary, the SCAB is designated as a nonattainment area for federal and state O_3 standards and federal and state $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment area for federal PM_{10} standards. The SCAB is designated as an attainment area for federal PM_{10} standards. The SCAB is designated as an attainment area for federal PM_{10} standards, and federal and state SO_2 standards. While the SCAB has been designated as nonattainment for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard (CARB 2016c; EPA 2016c).

Despite the current nonattainment status, air quality within the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly due to lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by the SCAQMD. This trend toward cleaner air has occurred in spite of continued population growth. Despite this growth, air quality has improved significantly over the years, primarily due to the impacts of the region's air quality control program. PM₁₀ levels have declined almost 50% since 1990, and PM_{2.5} levels have also declined 50% since measurements began in 1999 (SCAQMD 2013). Similar improvements are observed with O₃, although the rate of O₃ decline has slowed in recent years.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SCAQMD monitors local ambient air quality at the project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality data from 2016 to 2018 are presented in Table 4.2-2. The Lake Elsinore monitoring station, located at 506 West Flint Street, Lake Elsinore, California 92530, is the nearest air quality monitoring station to the project site, located approximately 10.3 miles northwest from the project site. The data collected at this station are considered representative of the air quality experienced in the project vicinity. Air quality data for CO, O₃, NO₂, CO, and PM₁₀ from the Lake Elsinore monitoring station, SO₂ measurements were taken from the Rubidoux monitoring station

(5888 Mission Boulevard, Rubidoux, California 92509, approximately 30 miles northwest from the project site), and PM_{2.5} measurements are taken from the Temecula monitoring station (12705 Pechanga Road, Temecula, California 92592, approximately 11.5 miles southeast from the project site). The number of days exceeding the ambient air quality standards are also shown in Table 4.2-2.

				Ambient Air	Measured Concentration by Year		Exceedances by Yea			
Monitoring Station ^a	Unit	Averaging Time	Agency/ Method	Quality Standard	2016	2017	2018	2016	2017	2018
Ozone (O3)										
Lake Elsinore	ppm	Maximum 1- hour concentration	California	0.09	0.124	0.121	0.116	15	23	23
	ppm	Maximum 8-	California	0.070	0.093	0.098	0.095	44	54	30
		hour concentration	National	0.070	0.093	0.098	0.095	44	54	30
Nitrogen Dic	xide (NO ₂)								
Lake	ppm	Maximum 1-	California	0.18	0.051	0.049	0.041	0	0	0
Elsinore		hour concentration	National	0.100	0.0513	0.049 0	0.041	0	0	0
	ppm	Annual	California	0.030	_	_	—	—	—	—
		concentration	National	0.053	0.008	0.008	0.009	—		_
Carbon Mon	oxide (CO)								
Lake	ppm	Maximum 1-	California	20				—	—	—
Elsinore		hour concentration	National	35	1.2	1.2	1.1	0	0	0
	ppm	Maximum 8-	California	9.0	_	-	—	—	_	—
		hour concentration	National	9	0.6	0.8	0.8	0	0	0
Sulfur Dioxid	le (SO ₂)									
Rubidoux	ppm	Maximum 1- hour concentration	National	0.075	0.056	0.020	0.017	_	_	_
	ppm	Maximum 24- hour concentration	National	0.14	0.0012	0.003	0.001	_	_	_
	ppm	Annual	National	0.030	0.0002	0.000 8	0.0005	—	-	—
Coarse Parti	culate Ma	atter (PM10)b		I			l	I	I	I
Lake	ug/m ³	Maximum 24-	California	50	_		_	[[
Elsinore	<i>мъ</i> / '''	hour	National	150			104	_		
		concentration	National	100	99	00	104	0	0	0
	µg/m³	Annual concentration	California	20	_	—	_	—	-	_

Table 4.2-2. Local Ambient Air Quality Data

Table 4.2-2. Local Ambient Air Quality Data

				Ambient Measured Concentration Air by Year		Exceedances by Year				
Monitoring Station ^a	Unit	Averaging Time	Agency/ Method	Quality Standard	2016	2017	2018	2016	2017	2018
Fine Particu	Fine Particulate Matter (PM _{2.5}) ^b									
Temecula	µg/m³	Maximum 24- hour concentration	National	35	18.9	16.7	_	_	_	_
	µg/m³	µg/m ³ Annual	California	12	9.8	6.5 ^b	—	_	—	—
		concentration	National	12.0	9.6 ^b	6.5 ^b	—	—	—	_

Sources: CARB 2017; EPA 2016d.

Notes: ppm = parts per million; - = not available; μ g/m³ = micrograms per cubic meter.

Data taken from CARB iADAM (CARB 2017) and EPA AirData (EPA 2016d) represent the highest concentrations experienced over a given year.

Exceedances of national and California standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O_3 , annual PM_{10} , or 24-hour SO_2 , nor is there a California 24-hour standard for $PM_{2.5}$.

^a Lake Elsinore Monitoring Station is located at 506 W Flint Street, Lake Elsinore, California 92530; Rubidoux Monitoring Station is located 5888 Mission Boulevard, Rubidoux, California 92509; Temecula Monitoring Station is located at 12705 Pechanga Road, Temecula, California 92592.

^b Measurements of PM₁₀ and PM_{2.5} are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O₃ protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O₃, NO₂, SO₂, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O₃, NO₂, SO₂, PM₁₀, and PM_{2.5} are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the NAAQS within mandated time frames. A more detailed discussion of the NAAQS, as well as the CAAQS (discussed below), is provided in Appendix B.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established the CAAQS, which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, PM_{2.5}, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health.

The NAAQS and CAAQS are presented in Table 4.2-3.

		California Standards ^a	National Standards ^b	
Pollutant	Averaging Time	Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
Ozone (O ₃)	1 hour	0.09 ppm (180 μg/m³)	-	Same as primary
	8 hours	0.070 ppm (137 μg/m ³)	0.070 ppm	standard ^f
			(137 µg/m ³) ^f	
Nitrogen	1 hour	0.18 ppm (339 μg/m ³)	0.100 ppm	Same as primary
Dioxide			(188 µg/m³)	standard
(NO ₂) ^g	Annual arithmetic	0.030 ppm (57 μg/m ³)	0.053 ppm	
	mean		(100 μg/m ³)	

Table 4.2-3. Ambient Air Quality Standards

Table 4.2-3. Ambient Air Quality Standards

		California Standards ^a	National Standards ^b	
Pollutant	Averaging Time	Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
Carbon	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	None
Monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	
Sulfur Dioxide	1 hour	0.25 ppm (655 μg/m ³)	0.075 ppm (196 μg/m³)	_
(SO ₂) ^h	3 hours	_	_	0.5 ppm (1,300 μg/m ³)
	24 hours	0.04 ppm (105 μg/m ³)	0.14 ppm (for certain areas) ^g	-
	Annual	_	0.030 ppm (for certain areas) ^g	-
Coarse	24 hours	50 μg/m ³	150 μg/m³	Same as primary
Particulate Matter (PM ₁₀) ⁱ	Annual arithmetic mean	20 μg/m ³	_	standard
Fine Particulate	24 hours	-	35 μg/m³	Same as primary standard
Matter (PM _{2.5}) ⁱ	Annual arithmetic mean	12 μg/m ³	12.0 μg/m ³	15.0 μg/m ³
Lead ^{j,k}	30-day average	1.5 μg/m ³	_	_
	Calendar quarter	-	1.5 μg/m³ (for certain areas) ^κ	Same as primary standard
	Rolling 3-month average	_	0.15 μg/m ³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)	_	-
Vinyl chloride ^j	24 hours	0.01 ppm (26 µg/m ³)	_	-
Sulfates	24 hours	25 µg/m ³	-	-
Visibility reducing particles	8 hour (10 a.m. to 6 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	_	_

Source: CARB 2016d.

Notes: ppm = parts per million by volume; $\mu g/m^3$ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; PST = Pacific Standard Time.

- ^a California standards for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, suspended particulate matter (PM₁₀, PM_{2.5}), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ^b National standards (other than O₃, NO₂, SO₂, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O₃ standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

- ^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ^d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ^f On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- ^h On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
- The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ^k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807. The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local

South Coast Air Quality Management District

The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SCAB, where the project is located. The SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's air quality management plans (AQMPs) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in the SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The most recent adopted AQMP is the Final 2016 Air Quality Management Plan (2016 AQMP) (SCAQMD 2017), which was adopted by the SCAQMD governing board on March 3, 2017. The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP represents a new approach, focusing on available, proven, and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017). Because mobile sources are the principal contributor to the SCAB's air quality challenges, the SCAQMD has been and will continue to be closely engaged with CARB and the EPA, who have primary responsibility for these sources. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality but also local businesses and the regional economy. These "win-win" scenarios are key to implementation of this 2016 AQMP with broad support from a wide range of stakeholders.

Applicable Rules

Emissions that would result from mobile, area, and stationary sources during construction and operation of the project are subject to the rules and regulations of the SCAQMD. The following SCAQMD rules may be applicable to the project:

- Rule 401 Visible Emissions. This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402 Nuisance.** This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.
- **Rule 403 Fugitive Dust.** This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.
- Rule 431.2 Sulfur Content of Liquid Fuels. The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile sources.
- Rule 461 Gasoline Transfer and Dispensing. This rule requires testing of vapor recovery systems for gasoline dispensing facilities from certified vapor recovery testing companies and contractors. This rule applies to the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or motor fuel tank.
- Rule 1110.2 Emissions from Gaseous- and Liquid-Fueled Engines. This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce NO_x, VOCs, and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.
- Rule 1113 Architectural Coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

With respect to air quality planning and other regional issues, SCAG has prepared the 2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future (2008 RCP) for the region (SCAG 2008). The 2008 RCP sets the policy context in which SCAG participates in and responds to the SCAQMD air quality plans and builds off the SCAQMD AQMP processes that are designed to meet health-based criteria pollutant standards in several ways (SCAG 2008). First, it complements AQMPs by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in AQMPs. Second, the 2008 RCP emphasizes the need for local initiatives that can reduce the region's greenhouse gas emissions that contribute to climate change, an issue that is largely outside the focus of local attainment plans. Third, the 2008 RCP emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On April 7, 2016, SCAG's Regional Council adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2016 RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The 2016 RTP/SCS was prepared through a collaborative, continuous, and comprehensive process with input

from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. In June 2016, SCAG received its conformity determination from the Federal Highway Administration and the Federal Transit Administration indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 Federal Transportation Improvement Program Consistency Amendment through Amendment 15-12 have been met (SCAG 2016). The SCAQMD 2016 AQMP applies the updated SCAG growth forecasts assumed in the 2016 RTP/SCS.

Murrieta General Plan 2035

The following goals and policies from the Murrieta General Plan 2035 (General Plan) Air Quality Element are relevant to the proposed project (City of Murrieta 2011):

- **Goal AQ-1** Improved air quality through participation in regional and local efforts.
- **Goal AQ-3** Reduced emissions during construction activities.
 - **Policy AQ-3.1** Ensure that construction activities follow current SCAQMD rules, regulations, and thresholds.
 - **Policy AQ-3.2** Ensure all applicable best management practices are used in accordance with the SCAQMD to reduce emitting criteria pollutants during construction.
 - Policy AQ-3.3 Require all construction equipment for public and private projects comply with CARB's vehicle standards. For projects that may exceed daily construction emissions established by the SCAQMD, Best Available Control Measures will be incorporated to reduce construction emissions to below daily emission standards established by the SCAQMD.
 - **Policy AQ-3.4** Require project proponents to prepare and implement a Construction Management Plan, which will include Best Available Control Measures among others. Appropriate control measures will be determined on a project by project basis, and should be specific to the pollutant for which the daily threshold is exceeded.
- **Goal AQ-5** Air quality is improved through an efficient circulation system, reduced traffic congestion, and reduced vehicle miles traveled.
 - Policy AQ-5.1 Encourage employers to implement transportation demand management (TDM) measures, such as the following programs to reduce trips and vehicle miles traveled:
 - Transit subsidies
 - Bicycle facilities
 - Alternating work schedules
 - Ridesharing
 - Telecommuting and work-at-home programs
 - Employee education
 - Preferential parking for carpools/vanpools

Vineyard III Retail Development Project

- **Policy AQ-5.2** Re-designate truck routes away from sensitive land uses including schools, hospitals, elder and childcare facilities, or residences, where feasible.
- Policy AQ-5.7 Reduce industrial truck idling by enforcing California's 5-minute maximum law, requiring warehouse and distribution facilities to provide adequate on site truck parking, and requiring refrigerated warehouses to provide generators for refrigerated trucks.
- **Goal AQ-6** Stationary source pollution (point source and area source) are minimized through existing and future regulations and new technology.
 - Policy AQ-6.7 During the design review process, encourage the use of measures to reduce indoor air quality impacts (i.e., air filtration systems, kitchen range top exhaust fans, and low-VOC paint and carpet for new developments and busy roadways with significant volumes of heavy truck traffic).
- **Goal AQ-7** Particulate matter and fugitive dust emissions are reduced throughout the City.
 - **Policy AQ-7.4** Consider the suspension of all grading operations, not including dust control actions, at construction projects when the source represents a public nuisance or potential safety hazard due to reduced visibility on streets surrounding the property.

The City has established a policy program that addresses air quality through new development and balanced growth, land use compatibility, and coordination and compliance with regulatory agencies and new regulations/requirements. The responsibility of implementing the goals and policies of the Air Quality Element are assigned to the City's Community Development Department, and in some instances, this authority is shared with the SCAQMD and the SCAG.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would (14 CCR 15000 et seq.):

- 1. Conflict with or obstruct implementation of the applicable air quality plan.
- 2. 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.
- 3. Expose sensitive receptors to substantial pollutant concentrations.
- 4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the project would have a significant impact on air quality.

The SCAQMD has established Air Quality Significance Thresholds, as revised in April 2019, which set forth quantitative emission significance thresholds below which a project would not have a significant impact on

ambient air quality under project-level and cumulative conditions. The quantitative air quality analysis provided herein applies the SCAQMD thresholds identified in Table 4.2-4 to determine the potential for the project to result in a significant impact under CEQA.

Criteria Pollutants Mass Daily Thresholds							
Pollutant	Construction (pounds per day)	Operation (pounds per day)					
VOCs	75	55					
NOx	100	55					
СО	550	550					
SOx	150	150					
PM10	150	150					
PM _{2.5}	55	55					
Lead ^a	3	3					
TACs and Odor Thresholds							
TACs ^b	Maximum incremental cancer risk \geq 10 in 1 million Cancer Burden >0.5 excess cancer cases (in areas \geq 1 in 1 million) Chronic and acute hazard index \geq 1.0 (project increment)						
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402						
Ambient Air Quality Standards for Cri	teria Pollutantsº						
NO2 1-hour average NO2 annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state) and 0.0534 ppm (federal)						
CO 1-hour average CO 8-hour average	 SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal) 						
PM_{10} 24-hour average PM_{10} annual average	 10.4 μg/m³ (construction)^d 2.5 μg/m³ (operation) 1.0 μg/m³ 						
PM _{2.5} 24-hour average	$10.4 \ \mu g/m^3 \ (construction)^d$ 2.5 $\ \mu g/m^3 \ (operation)$						

Table 4 2-4 South Coast Air (Juality Management Dist	rict Air Quality Significand	e Thresholds

Source: SCAQMD 2019.

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; TAC = toxic air contaminant; SCAQMD = South Coast Air Quality Management District; NO₂ = nitrogen dioxide; ppm = parts per million; μ g/m³ = micrograms per cubic meter.

Greenhouse gas emissions thresholds for industrial projects, as included in the April 2019 revision to the SCAQMD Air Quality Significance Thresholds, were not include included in this table as they are addressed within the greenhouse gas emissions analysis and not the air quality study.

- ^a The phaseout of leaded gasoline started in 1976. Since gasoline no longer contains lead, the project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.
- ^b TACs include carcinogens and noncarcinogens.
- c Ambient air quality standards for criteria pollutants are based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.
- ^d Ambient air quality threshold are based on SCAQMD Rule 403.

The assessment of the project's potential to expose sensitive receptors to substantial pollutant concentrations includes a localized significance threshold (LST) analysis, as recommended by the SCAQMD, to evaluate the

potential of localized air quality impacts to sensitive receptors in the immediate vicinity of the project from construction. For project sites of 5 acres or less, the SCAQMD's Final Localized Significance Threshold Methodology (SCAQMD 2009) includes lookup tables that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance criteria (i.e., the emissions would not cause an exceedance of the applicable concentration limits for NO₂, CO, PM₁₀, and PM_{2.5}) without performing project-specific dispersion modeling. Although the project site is greater than 5 acres (estimated to be 6.65 acres), the proposed project would disturb less than 5 acres in 1 day, so it is appropriate to use the lookup tables for the LST evaluation.

The LST significance thresholds for NO₂ and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards, while the threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The LST significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. The allowable emission rates depend on the following parameters:

- Source-receptor area (SRA) in which the project is located
- Size of the project site
- Distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals)

The project site is located in SRA 26 (Temecula Valley). The SCAQMD provides guidance for applying CalEEMod to the LSTs. LST pollutant screening level concentration data is currently published for 1-, 2-, and 5-acre sites for varying distances. The maximum number of acres disturbed on the peak day was estimated using the Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (SCAQMD 2011), which provides estimated acres per 8-hour day for crawler tractors, graders, rubber-tired dozers, and scrapers. Based on the SCAQMD guidance, and assuming an excavator can grade 0.5 acres per 8-hour day (similar to graders, dozers, and tractors), it was estimated that the maximum acres on the project site that would be disturbed by off-road equipment would be 4 acres per day (one excavator, one grader, one dozer, two tractors, and one loader during the grading phase). Because the total disturbed acreage would be 6.65 acres over approximately 64 days (0.1 acres graded per day), the estimate of 4 acres per day of disturbance is conservative. The SCAQMD lookup table value for a 4-acre site within SRA 26 was used.

The nearest sensitive-receptor land use (high school and residences) is located approximately 175 feet (53 meters) south of the project property boundary. As such, the LST receptor distance was assumed to be 164 feet (50 meters), which is the shortest distance provided by the SCAQMD lookup tables. The LST values from the SCAQMD lookup tables for SRA 26 (Temecula Valley) for an interpolated 4-acre project site and a receptor distance of 50 meters are shown in Table 4.2-5.

Table 4.2-5. Construction Localized Significance Thresholds for Source Receptor Area 26(Temecula Valley)

Pollutant	Threshold (pounds per day)
NO ₂	369
CO	2,333
PM10	33
PM _{2.5}	9

Source: SCAQMD 2009.

Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

Localized significance thresholds were determined based on the values for an interpolated 4-acre site at a distance of 50 meters from the nearest sensitive receptor.

4.2.4 Impacts Analysis

Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less-than-Significant Impact with Mitigation Incorporated. The project site is located within the SCAB, under the jurisdiction of the SCAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. The SCAQMD has established criteria for determining consistency with the AQMP, currently the 2016 AQMP, and in Chapter 12, Sections 12.2 and 12.3, in the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993). The criteria are as follows (SCAQMD 1993):

- Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP.
- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Consistency Criterion No. 1

The impact discussion below discusses the project's potential impacts regarding CEQA Guidelines Appendix G Threshold 2 (i.e., the project's potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation impact analysis). As discussed below, the project would potentially exceed the SCAQMD significance threshold for NO_x during construction. Therefore, the project would result in an increase in the frequency or severity of existing air quality violations. Because the project would result in an increase in the frequency and severity of existing air quality violations with mitigation, the project would conflict with Consistency Criterion No. 1 of the SCAOMD CEOA Air Quality Handbook.

Consistency Criterion No. 2

While striving to achieve the NAAQS for O₃ and PM_{2.5} and the CAAQS for O₃, PM₁₀, and PM_{2.5} through a variety of air quality control measures, the 2016 AOMP also accommodates planned growth in the SCAB. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook).

The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the SCAG for its Regional Transportation Plan/Sustainable Communities Strategy (SCAG 2016), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2017).⁵ The SCAG 2016 RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with local government plans. The City General Plan Land Use Map designates the project site as

Information necessary to produce the emission inventory for the SCAB is obtained from the SCAQMD and other governmental agencies, including CARB, California Department of Transportation, and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socioeconomic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into their Travel Demand Model for estimating/projecting vehicle miles traveled and driving speeds. SCAG's socioeconomic and transportation activities projections in their 2016 RTP/SCS are integrated in the 2016 AQMP (SCAQMD 2017).

Commercial (City of Murrieta 2011). The City's Zoning Map shows the site as being zoned Regional Commercial (City of Murrieta 2014). The project would be consistent with the current zoning and land use designation. Therefore, implementation of the project would not result in a conflict with, or obstruct implementation of, the applicable air quality plan (i.e., the 2016 AQMP). Accordingly, the project would meet Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook.

As described, the project would result in an increase in the frequency and severity of existing air quality violations and would conflict with Consistency Criterion No. 1. However, implementation of the project would not exceed the demographic growth forecasts in the SCAG 2016 RTP/SCS; therefore, the project would also be consistent with the SCAQMD 2016 AQMP, which based future emission estimates on the SCAG 2016 RTP/SCS. Thus, the project would not conflict with Consistency Criterion No. 2. The project would exceed the SCAQMD significance threshold for NO_x during construction, and it would conflict with Consistency Criterion No. 1; therefore, impacts related to the project's potential to conflict with or obstruct implementation of the applicable air quality plan would be potentially significant and require mitigation. With implementation of mitigation measures (**MM-AQ-1**), impacts would be less than significant.

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less-than-Significant Impact with Mitigation Incorporated. To evaluate the potential for the project to violate any federal or state ambient air quality standard or contribute substantially to an existing or projected air quality violation, this analysis applies the SCAQMD's construction and operational criteria pollutants mass daily thresholds, as shown in Table 4.2-4, South Coast Air Quality Management District Air Quality Significance Thresholds. A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O_3 , which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 4.2-4. These emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur). This approach is used because O_3 is not emitted directly (see the discussion of O_3 and its sources in Section 4.2.1, Existing Conditions), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

Construction Emissions

Less-than-Significant Impact with Mitigation Incorporated. Construction of the proposed project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, rock crushing, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Criteria air pollutant emissions associated with temporary construction activity were quantified using the California Emissions Estimator Model (CalEEMod). Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during each year of construction (2020). Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the project applicant and is intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed project information was not available.

Implementation of the project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. The project would implement various dust control strategies as a standard condition (**SC-AQ-1**) and would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads three times per day depending on weather conditions, and restricting vehicle speed on unpaved roads to 15 mph. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM₁₀, and PM_{2.5}. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings).

Emissions associated with rock crushing and associated diesel-fuelled generators were quantified in a separate calculation, since CalEEMod does not account for rock crushing.

Table 4.2-6 presents the estimated maximum daily construction emissions generated during construction of the project. The values shown are the maximum summer or winter daily emissions results from CalEEMod and include estimated emissions from rock-crushing activities, which were estimated outside of CalEEMod. Details of the emission calculations are provided in Appendix B.

	VOC	NOx	CO	SOx	PM ₁₀	PM2.5		
Year	pounds per a	pounds per day						
Construction	Construction							
2021	34.33	74.82	46.13	0.21	5.11	2.28		
Rock Crushing	Rock Crushing							
2021	2.85	27.71	18.70	0.06	2.00	1.17		
Total	Total							
2021	37.19	102.53	64.83	0.27	7.11	3.45		
SCAQMD Threshold	75	100	550	150	150	55		
Threshold Exceeded?	No	Yes	No	No	No	No		

Table 4.2-6. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District. See Appendix B for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod, including rock-crushing activities estimated outside of CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 1113 (Architectural Coatings) and implementation of the project's fugitive dust control strategies, including watering of the project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 mph.

As shown in Table 4.2-6, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, CO, SO_x, PM₁₀, or PM_{2.5} during construction. However, the daily construction emissions would exceed the SCAQMD significance thresholds for NO_x. Although construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions, impacts would be potentially significant and require mitigation. With implementation of mitigation measures (**MM-AQ-1**), impacts associated with construction emissions would be to **less than significant**.

Operational Emissions

Less-than-Significant Impact. The project proposes development of a new retail development. Operation of the project would generate VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from mobile sources, including vehicle trips from visitors, employees, and delivery trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; and energy sources, including combustion of fuels used for space and water heating and cooking appliances. Pollutant emissions associated with long-term operations were quantified using CalEEMod. Project-generated mobile source emissions were estimated in a spreadsheet using EMFAC2017 based on project-specific trip rates. CalEEMod default values were used to estimate emissions from the project area and energy sources. The project would implement **SC-AQ/GHG-1** to reduce operational impacts; however, quantified reductions were not taken.

Table 4.2-7 presents the maximum daily area, energy, and mobile source emissions associated with operation (year 2021) of the project. Operational year 2021 was assumed upon completion of construction. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix B.

	VOC NO _x		CO	SOx	PM10	PM _{2.5}
Emission Source	pounds per da	ay				
Area	0.83	<0.01	0.02	0.00	<0.01	<0.01
Energy	0.08	0.70	0.59	<0.01	0.05	0.05
Mobile	5.66	18.09	115.51	0.32	30.42	7.63
Totala	6.57	18.79	116.12	0.32	30.47	7.68
SCAQMD Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Table 4.2-7. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions - Unmitigated

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SCAQMD = South Coast Air Quality Management District. See Appendix B for complete results.

The values shown are the maximum summer or winter daily emissions results from the California Emissions Estimator Model (CalEEMod). These emissions operational year 2021.

^a Totals may not sum due to rounding.

As shown in Table 4.2-7, the combined daily area, energy, and mobile source emissions would not exceed the SCAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Thus, impacts associated with project-generated operational criteria air pollutant emissions would be **less than significant**.

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

In considering cumulative impacts from the project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SCAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the SCAB. The basis for analyzing the

project's cumulatively considerable contribution is if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact because it would exceed the SCAQMD significance thresholds) and consistency with the SCAQMD 2016 AQMP, which addresses the cumulative emissions in the SCAB.

As discussed in Section 4.2.1, the SCAB has been designated as a national nonattainment area for O_3 and PM_{2.5} and a California nonattainment area for O_3 , PM₁₀, and PM_{2.5}. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction and operation of the proposed project would generate VOC and NO_x emissions (which are precursors to O_3) and emissions of PM₁₀ and PM_{2.5}. As indicated in Table 4.2-6, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated, project-generated construction emissions would exceed the SCAQMD emission-based significance thresholds for NO_x. However, as demonstrated in Table 4.2-7, Estimated Maximum Daily Operational Criteria Air Pollutant Emissions-based significance thresholds. As discussed in the analysis of the project's potential to conflict with or obstruct implementation of the applicable air quality plan), the project would not conflict with the SCAQMD 2016 AQMP with mitigation.

Based on the project-generated construction emissions of NO_x, the project would result in a cumulatively considerable increase in emissions of nonattainment pollutants. Impacts would be potentially significant and thus require mitigation. With implementation of mitigation measures (**MM-AQ-1**), the project would not 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, and impacts would be less than significant.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Thresholds Analysis

Less-than-Significant Impact. Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The closest off-site sensitive receptors to the project site include Vista Murrieta High School and residences located approximately 175 feet to the south while prevailing winds are to the northeast direction (opposite direction).

An LST analysis has been prepared to determine potential impacts to nearby sensitive receptors during construction of the project. As indicated in the discussion of the thresholds of significance (Section 4.2.3), the SCAQMD also recommends the evaluation of localized NO₂, CO, PM₁₀, and PM_{2.5} impacts as a result of construction activities to sensitive receptors in the immediate vicinity of the project site. The impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology (SCAQMD 2009). According to the Final Localized Significance Threshold Methodology, "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2009). Hauling of soils and construction materials associated with the project construction are not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways. Localized emissions from the trucks would be relatively brief in nature and would cease once the trucks pass through the main streets.

Construction activities associated with the project would result in temporary sources of on-site fugitive dust and construction equipment emissions. As discussed above, off-site emissions from vendor trucks, haul trucks, and worker vehicle trips are not included in the LST analysis. The maximum allowable daily emissions that would satisfy the SCAQMD localized significance criteria for SRA 26 are presented in Table 4.2-8 and compared to the maximum daily on-site construction emissions generated during the project.

	NO ₂	СО	PM10	PM _{2.5}
Maximum On-Site Emissions	Pounds per Day			
Construction Emissions	28.80	32.26	2.10	1.21
SCAQMD LST	369	2,333	33	9
LST Exceeded?	No	No	No	No

Table 4.2-8. Localized Significance Thresholds Analysis for Project Construction

Source: SCAQMD 2009.

Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.

See Appendix B for complete results.

Localized significance thresholds are shown for an interpolated 4-acre project sites corresponding to a distance to a sensitive receptor of 50 meters.

These estimates factor in implementation of the project's fugitive dust control strategies, including watering of the project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 mph.

Greatest on-site NO₂, CO, PM_{10} , and $PM_{2.5}$ emissions are associated with the overlap between the grading and rock-crushing phases from February 2021 through September 2021.

As shown in Table 4.2-8, construction activities would not generate emissions in excess of site-specific LSTs; therefore, localized construction impacts during construction of the project would be **less than significant**.

Valley Fever

Less-than-Significant Impact. As discussed in Section 4.2.1, valley fever is not highly endemic to the County, and within the County, the incidence rate in the project site is below the County average and the statewide average. Construction of the project would include standard conditions (SC-AQ-1) to comply with SCAQMD Rule 403 (Fugitive Dust), which requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. The closest off-site sensitive receptors to the project site include Vista Murrieta High School and residences located approximately 175 feet to the south in the opposite direction of prevailing winds. Based on the low incidence rate of coccidioidomycosis on the project site and in the County, and with the project's implementation of dust control strategies included in SC-AQ-1, it is not anticipated that earth-moving activities during project construction would result in exposure of nearby sensitive receptors to valley fever. Therefore, the project would have a **less-than-significant** impact with respect to valley fever exposure for sensitive receptors.

Health Impacts of Carbon Monoxide

Less-than-Significant Impact. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted based on the results of the project-specific Traffic Impact Analysis (TIA) prepared by Trames Solutions Inc. (Appendix I of this EIR), and on the California Department of Transportation's Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) (Caltrans 1997).

The TIA evaluated eight intersections and determined that the McElwain Road and Clinton Keith Road and Whitewood Road and Clinton Keith Road intersections under the Cumulative Year (2021) would deteriorate from level of service C to D as a result of the proposed project, and therefore require a CO hotspot analysis per SCAQMD recommendation (Appendix I).

Operational 2021 year was assumed for the TIA; thus, the CO analysis was prepared for the operational year consistent with the TIA. The potential impact of the project on local CO levels was assessed at this intersection with the California Department of Transportation CL4 interface based on the California LINE Source Dispersion Model (CALINE4), which allows microscale CO concentrations to be estimated along each roadway corridor or near intersections (Caltrans 1998a).

The emissions factor represents the weighted average emissions rate of the local SCAB vehicle fleet expressed in grams per mile per vehicle. Consistent with the TIA, emissions factors for 2021 were used for the analysis, consistent with buildout year specified in the TIA. Emissions factors for 2021 were predicted by EMFAC2017 based on a 5 mph average speed for all of the intersections for approach and departure segments. The hourly traffic volume anticipated to travel on each link, in units of vehicles per hour, was based on the TIA. Modeling assumptions are outlined in Appendix B.

Four receptor locations at the McElwain Road and Clinton Keith Road intersection were modeled to determine CO ambient concentrations. A receptor was assumed on the sidewalk at each corner of the modeled intersections, for a total of four receptors adjacent to the intersection, to represent the future possibility of extended outdoor exposure. CO concentrations were modeled at these locations to assess the maximum potential CO exposure that could occur in 2021. A receptor height of 5.9 feet (1.8 meters) was used in accordance with California Department of Transportation recommendations for all receptor locations (Caltrans 1998b).

The SCAQMD provides projected future concentrations of CO emissions to assist the CEQA practitioner with a CO hotspots analysis. The projected future 1-hour CO background concentration of 5.1 parts per million (ppm) for 2020 for the Lake Elsinore monitoring station was assumed in the CALINE4 model for 2021 (SCAQMD 2002). The maximum CO concentration measured at the Lake Elsinore monitoring station over the last 3 years was 1.2 ppm, which was measured in 2016 and 2017 (see Table 4.2-2, Local Ambient Air Quality Data); as such, the SCAQMD projected 1-hour CO ambient concentration of 5.1 ppm is a conservative assumption. The 8-hour average CO concentration was added to the SCAQMD projected 8-hour CO ambient concentration of 3.2 ppm for 2021 from the Lake Elsinore monitoring station to compare to the CAAQS (SCAQMD 2002).

The CALINE4 predicted CO concentrations are shown in Table 4.2-9. Model input and output data are provided in Appendix B.

Table 4.2-9	. CALINE4 Predict	ted Carbon Monox	ide Concentrations
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	Maximum Modeled Carbon Monoxide Impact (ppm)				
Intersection	1-hour Concentration	8-hour Concentration			
McElwain Road & Clinton Keith Road	5.9	4.13			
Whitewood Road & Clinton Keith Road	5.5	7.75			

Source: Caltrans 1998a (CALINE4). **Notes:** ppm = parts per million.

As shown in Table 4.2-9, the maximum CO concentration predicted for the 1-hour averaging period at the studied intersections would be 5.9 ppm, which is below the 1-hour CO CAAQS of 20 ppm (CARB 2016d). The maximum predicted 8-hour CO concentration of 4.13 ppm at the studied intersections would be below the 8-hour CO CAAQS of 9.0 ppm (CARB 2016d). Neither the 1-hour nor 8-hour CAAQS would be equaled or exceeded at any of the intersections studied. Accordingly, the project would not cause or contribute to violations of the CAAQS, and would not result in exposure of sensitive receptors to localized high concentrations of CO. As such, impacts would be less than significant to sensitive receptors with regard to potential CO hotspots resulting from the project or its contribution to cumulative traffic-related CO impacts, and no mitigation is required.

Health Impacts of Toxic Air Contaminants

Less-than-Significant Impact. A health risk assessment was performed to estimate the maximum individual cancer risk and the chronic hazard index for residential receptors as a result of proposed project construction (the health risk assessment is included in Appendix B of this EIR). The construction health risk assessment applies the SCAQMD risk thresholds presented in Table 4.2-4, which are a maximum incremental cancer risk greater than or equal to 10 in 1 million and a chronic hazard index greater than or equal to 1.0 (project increment). Results of the construction health risk assessment are presented in Table 4.2-10.

Table 4.2-10. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	2.90	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.005	1.0	Less than Significant

Source: SCAQMD 2015.

Notes: CEQA = California Environmental Quality Act. See Appendix B.

As shown in Table 4.2-10, project construction activities would result in a residential maximum individual cancer risk of 2.90 in 1 million, which is below the significance threshold of 10 in 1 million. Project construction would also result in a residential chronic hazard index of 0.005, which is below the 1.0 significance threshold. Therefore, the project construction TAC health risk impacts would be **less than significant**.

Although the cancer risk and chronic hazard index are below SCAQMD significance thresholds from project construction, the health risk assessment results from the mitigated scenario are also included. With implementation of **MM-AQ-1**, mitigated project construction would result in potential cancer risk and chronic health risk at the maximally exposed residential receptor would be 0.17 in 1 million and 0.0003, respectively, which are below the applicable SCAQMD thresholds.

Health Effects of Other Criteria Air Pollutants

Less-than-Significant Impact with Mitigation Incorporated. Construction of the proposed project would result in emissions that would exceed the SCAQMD threshold for NO_x. Project construction and operation would not exceed SCAQMD thresholds for VOC, CO, SO_x, PM₁₀, or PM_{2.5} and NO_x for operation.

The California Supreme Court decision on December 24, 2018, in *Sierra Club v. County of Fresno*,⁶ requires projects with significant air quality impacts to "relate the expected adverse air quality impacts to likely health consequences or explain why it is not feasible at the time of drafting to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of the project" (p. 6).

In requiring a health risk type analysis for criteria air pollutants, it is important to understand how O₃ is formed, dispersed, and regulated. Ground level O₃ (smog) is not directly emitted into the air, but instead is formed when precursor pollutants such as VOCs or NO_x are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight (SJVAPCD Brief). ⁷ Once formed, O₃ can be transported long distances by wind (EPA 2020). Because of the complexity of O₃ formation, a specific tonnage amount of VOCs or NO_x emitted in a particular area does not equate to a particular concentration of O₃ in that area (SJVAPCD Brief). In fact, even rural areas that have relatively low tonnages of emissions of VOCs or NO_x can have high levels of O₃ concentrations simply due to wind transport and other meteorological conditions such as temperature inversion and high-pressure systems. Conversely, areas that have substantially more VOCs or NO_x emissions could experience lower concentrations of O₃ simply because sea breezes disperse the emissions (SJVAPCD 2007).

The lack of link between the tonnage of precursor pollutants and the concentration of O_3 formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects (SJVAPCD Brief). Indeed, the ambient air quality standards, which are statutorily required to be set by the EPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and not as tonnages of their precursor pollutants (EPA 2018). Because the ambient air quality standards are focused on achieving a particular concentration region-wide, the tools and plans for attaining the ambient air quality standards are regional in nature.

The computer models (e.g., Community Multiscale Air Quality modeling platform)⁸ used to simulate and predict an attainment date for O_3 are based on regional inventories of precursor pollutants and meteorology within an air basin. At a very basic level, the models simulate future O_3 levels based on predicted changes in precursor emissions basin-wide. These computer models are not designed to determine whether the emissions generated by an individual development project will affect the date that the air basin attains the ambient air quality standards. Instead, the models help inform regional planning strategies based on the extent that all of the emission-generating sources within the air basin must be controlled in order to reach attainment (SJVAPCD Brief).

The SCAQMD and the San Joaquin Valley Air Pollution Control District have indicated that it is not feasible to quantify project-level health impacts based on existing modeling (SCAQMD 2015; SJVAPCD Brief). Even if a metric could be calculated, it would not be reliable because the models are equipped to model the impact of all emission sources in an air basin on attainment and would likely not yield meaningful information or a measurable increase in O₃ concentrations sufficient to accurately quantify O₃-related health imacts for an individual project.

⁶ Sierra Club (Sierra Club et al., Plaintiffs and Appellants) v. County of Fresno (County of Fresno et al., Defendants and Respondents), (Cal.App. 5 Dist., 2018); Case No. S219783.

⁷ Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P., Sierra Club, Revive the San Joaquin, and League of Women Voters (Plaintiffs and Appellants) v. County of Fresno (Defendant and Respondent) and Friant Ranch L.P. (Real Party in Interest and Respondent). Case No. S219783 (filed April 13, 2015). (SJVAPCD Brief).

⁸ The SCAQMD 2016 AQMP ozone attainment demonstration was developed using the EPA-recommended Community Multiscale Air Quality (version 5.0.2) modeling platform with SAPRC07 chemistry, and the Weather Research and Forecasting Model (version 3.6) meteorological fields.

In the case of the proposed project, regional construction emissions would exceed the SCAQMD's recommended daily significance thresholds for NO_X during construction, even with implementation of **MM-AQ-1**. However, this does not mean that one can determine the concentration of O_3 that will be created at or near the project site on a particular day or month of the year, or the specific human health impacts that may occur from such exceedance. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentrations and locations of O_3 .

In addition, it would not be feasible to model the impact on attainment of the ambient air quality standards that these over-regional thresholds emissions from the project may have with any degree of reliability or certainty. As discussed above, the currently available tools are equipped to model the impact of all emission sources in an air basin on attainment. According to the most recent EPA-approved SCAOMD basin-wide emissions inventory, the VOC inventory is 162.4 tons per day (324,800 pounds), with 293.1 tons per day (586,200 pounds) of NOx emissions for the baseline year of 2012 (Figure 3-1 in SCAQMD 2017). From a scientific standpoint, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O₃ levels over an entire region. As an example, the SCAOMD's 2012 AOMP showed that reducing baseline year 2008 NOx by 432 tons per day and reducing VOC by 187 tons per day would only reduce O₃ levels at the SCAQMD's monitor site with the highest levels by 9 parts per billion (Appendix V in SCAQMD 2013). SCAQMD also conducted pollutant modeling for proposed Rule 1315, in which the CEQA analysis accounted for essentially all of the increases in emisssions due to new or modified sources in the SCAQMD between 2010 and 2030, or approximately 6,620 pounds per day of NOx and 89,947 pounds per day of VOC. The results of the analysis showed that this increase of regional pollutant emissions would contribute to a small increase in the air basin-wide O₃ concentrations in 2030 by 2.6 parts per billion and less than 1 part per billion of NO₂ (SCAQMD 2011, pp. 1-11). Based on these results, current modeling methods are only able to provide results on a large scale and lack the resolution to model smaller sources such as individual projects. Therefore, O₃ modeling for individual projects would not be feasible or provide meaningful data to assess health impacts.

Based on the above information, at the project level, the project would represent a relatively small project, since peak daily construction regional NO_X emissions of 102 pounds per day are more than the SCAQMD's significance threshold. This represents approximately 102% of the emissions analyzed by SCAQMD related to Rule 1315. Furthermore, approximately 58% of the project's peak daily construction NO_X emissions would be regional (e.g., emitted by mobile sources distributed across the region's roadway network), making them different from the identified stationary sources as modeled in SCAQMD's analysis of Rule 1315, which would add to the difficulties of modeling project-related emissions.

Running the regional-scale photochemical grid model used for predicting O_3 attainment with the emissions from the proposed project (which equates to approximately a very small fraction of the VOC and NO_X in the air basin) is not likely to yield meaningful information regarding a measurable increase in O_3 concentrations sufficient to accurately quantify the project's O_3 -related health impacts. Any identified modeled increase in O_3 concentrations would not be accurate, as it would be well within the error margins of such models. Similarly, it would also not be feasible to identify the project's impact on the days of nonattainment per year. Based on this information, a general description of the adverse health impacts resulting from the pollutants at issue is all that can be meaningfully provided at this time. Please see the description of general adverse health impacts resulting from NO_X and VOCs presented in Section 4.2.1.

CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots were discussed previously and are determined to be a less-than-significant impact. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the project would also not exceed regional thresholds for PM₁₀ or PM_{2.5}, would not contribute to exceedances of the NAAQS and CAAQS for particulate matter, and would not obstruct the SCAB from coming into attainment for these pollutants. The project would also not result in substantial DPM emissions during construction and operation, and therefore, would not result in significant health effects related to DPM exposure. Additionally, the project would implement dust control strategies as a standard condition (**SC-AQ-1**) and be required to comply with SCAQMD Rule 403, which limits the amount of fugitive dust generated during construction. Due to the minimal contribution of particulate matter during construction and operation, the project is not anticipated to result in health effects associated with PM₁₀ or PM_{2.5}.

In summary, construction of the proposed project would not exceed the SCAQMD significance threshold for VOC, PM_{10} , $PM_{2.5}$, CO, and NO_x with implementation of **MM-AQ-1**, thus, the potential health effects associated with criteria air pollutants, specifically O_3 , are considered **less than significant**.

Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact. The potential for the project to result in other emissions, specifically an odor impact, is based on the project's land use type and anticipated construction activity, and the potential for the project to create an odor nuisance pursuant to SCAQMD Rule 402.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

The proposed project could generate odors from vehicles and equipment exhaust emissions during project construction. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The project entails retail buildings and associated parking, and would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would result in a **less-than-significant impact** associated with other emissions (such as those leading to odors).

4.2.5 Mitigation Measures

The project would have a potential to generate NOx emissions during construction in excess of the SCAQMD threshold; therefore, the project would implement **MM-AQ-1** to reduce construction emissions to the extent feasible.

- **MM-AQ-1** *Off-Road Construction Equipment:* To reduce the potential for criteria air pollutants, specifically oxides of nitrogen, as a result of construction of the project, prior to the start of construction activities, the project applicant, or its designee shall:
 - Ensure that all 75-horsepower or greater diesel-powered equipment are powered with California Air Resources Board-certified Tier 4 Interim engines, except where the project

applicant establishes to the satisfaction of the City of Murrieta (City) that Tier 4 Interim equipment is not available.

• An exemption from these requirements may be granted by the City in the event that the City is provided with sufficient evidence that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the project applicant shall: (1) be required to demonstrate that two construction fleet owners/operators in Riverside County were contacted and that those owners/operators confirmed Tier 4 Interim equipment could not be located within the Riverside County, and (2) the proposed replacement equipment has been evaluated using the California Emissions Estimator Model or other industry standard emission estimation method and documentation provided to the City to confirm the project-generated emissions do not exceed applicable South Coast Air Quality Management District mass daily thresholds of significance and localized significance thresholds.

Standard Conditions

The following standard conditions (SCs) would be incorporated into the project:

- SC-AQ/GHG-1 To reduce construction and operational emissions to the extent feasible, the project would incorporate the following:
 - Operational landscaping maintenance equipment shall be electric, operated with plugs on exteriors of each building to allow for recharging.
 - Each tenant shall be provided a recycling bin slot in their trash enclosure areas for recycling.
 - Solar shall be installed on building rooftops totaling 2,100 square feet, which would generate a system output of 52,444 kilowatt-hours per year.
 - The remaining rooftops shall be designed to accommodate the additional structural load of the solar panels to allow for the flexibility for possible future installation.
 - A total of 10 electric vehicle-charging stations shall be installed in the parking lot: 8 electric vehicle-charging stations and 2 Americans with Disabilities Act-compliant electric vehicle-charging stations, with 4 connected to a solar-powered source.
 - Six parking spaces shall be marked for electric vehicle/clean air/van pool parking only, and two Americans with Disabilities Act-compliant parking spaces shall be marked for electric vehicle/clean air/van pool parking only.
 - The project shall install drought-tolerant vegetation and water-efficient irrigation systems.
 - Non-potable irrigation lines shall be installed in preparation for future recycled water.
- **SC-AQ-1** The project would include various construction dust control strategies as a standard condition. Compliance with these dust control measures would be identified on grading plan approvals. The following dust control strategies are proposed:
 - During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.

- During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 mph during active operations. Watering of active disturbance areas, including active grading areas and unpaved roads, would occur approximately every 2 hours of active operations, approximately three times per work day (at a minimum).
- As a surrogate for watering unpaved road three times per day, the soil stabilizer shall be applied to prevent dust.
- Speeds on unpaved roads shall be reduced to less than 15 mph.
- All grading and excavation operations shall be halted when wind speeds exceed 25 mph.
- Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.
- All trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.

4.2.6 Level of Significance After Mitigation

As discussed in Section 4.2.4, the proposed project would conflict with established criteria for determining consistency with the 2016 AQMP, resulting in a potentially significant impact. With implementation of **MM-AQ-1**, construction emissions would be reduced to below SCAQMD's thresholds, and impacts would be less than significant.

As discussed in Section 4.2.4, the project would produce potentially significant emissions of NO_x during construction. Emissions associated with construction would be temporary, lasting approximately 8 months. As shown in Table 4.2-11, emissions would be reduced to below SCAQMD's threshold for NO_x following implementation of **MM-AQ-1**.

4.30	1.38						
Rock Crushing							
2.00	1.17						
6.30	2.55						
150	55						
No	No						
	4.30 2.00 6.30 150 No						

Table 4	1.2-11.	Estimated	Maximum	Dailv	Construction	Criteria	Air Po	llutant E	Emissions -	- Mitigat	ted
		Lotiniatoa	I WIGHT MITT	Dany	0011001000101			ind conners		- THE BOA	

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SCAQMD = South Coast Air Quality Management District; CalEEMod = California Emissions Estimator Model.

See Appendix B for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod including rock-crushing activities estimated outside of CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 1113 (Architectural Coatings) implementation of the project's fugitive dust control strategies (SC-AQ-1), including watering of the project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 mph; and implementation of MM-AQ-1, which requires equipment over 75 horsepower to meet specific engine emission standards (Tier 4 Interim).

As shown in Table 4.2-11, following implementation of **MM-AQ-1**, project-generated NO_x emissions during construction would be reduced to below the SCAQMD's NO_x construction threshold. As such, impacts regarding NO_x emissions during construction activities would be mitigated to a less-than-significant level.

As discussed in Section 4.2.4, the proposed project's potential to expose sensitive receptors to substantial pollutant concentrations during construction would be less than significant and would not require mitigation.

Finally, project impacts associated with other emissions (such as those leading to odors) with the potential to adversely affect a substantial number of people would be less than significant and would not require mitigation.

4.2.7 Cumulative Impacts

Air pollution by nature is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used by the SCAQMD to determine whether a project's individual emissions would have a cumulatively significant impact on air quality. The potential for the project to result in a cumulatively considerable impact, specifically a cumulatively considerable new increase of any criteria pollutant for which the project region is nonattainment under an applicable NAAQS and/or CAAQS, is addressed in Section 4.2.4. As set forth therein, because the project would exceed the project-level thresholds for regional NO_x emissions during construction, the project's cumulative impacts with respect to such emissions would be considerable and significant. The project construction LST significance thresholds, and would not create a CO hotspot; therefore, the project's cumulative impacts with respect to impacts of TACs is less than significant. Furthermore, the project's construction odor impacts would be short term in nature and disperse rapidly. Therefore, project construction would result in an odor cumulative impact that is less than significant.

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4.3 Biological Resources

This section describes the existing biological resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). As part of the analysis, this section describes the potentially adverse impacts to special-status species as identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS), resulting from implementation of the proposed project.

The information and analysis contained in this section are based on the June 2020 Biological Resources Letter Report and MSHCP Consistency for the Vineyard III Retail Development Project, City of Murrieta, California, prepared by Dudek for the project, and provided as Appendix C of this Environmental Impact Report. The Biological Resources Letter Report included a literature review and field reconnaissance, as well as a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis. To meet the requirements of the Western Riverside County MSHCP, a habitat assessment was conducted to identify suitable habitat for burrowing owl (*Athene cunicularia*) within the project site and natural habitat within a 500-foot buffer (the study area). In addition, a habitat assessment was conducted to identify suitable habitat for the following narrow endemic plant species: San Diego ambrosia (*Ambrosia pumila*), manystemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*), California Orcutt grass (*Orcuttia californica*), and Munz's onion (*Allium munzii*).

For this analysis, "special-status" species are those that are (1) listed, proposed for listing, or candidates for listing under the federal Endangered Species Act (FESA) as threatened or endangered ("listed species"); (2) listed or candidates for listing under the California Endangered Species Act (CESA) as threatened or endangered ("listed species"); (3) a state fully protected species; (4) a CDFW Species of Special Concern ("non-listed special status species"); or (5) a species listed on the California Native Plant Society Inventory of Rare and Endangered Plants with a California Rare Plant Rank (CRPR) of 1B or 2B ("non-listed special status species") (Appendix C). "Listed species" refer to species that fall into category 1 or 2 from the above definition. They are listed, proposed for listing, or candidates for listing as threatened or endangered under FESA or CESA. "Non-listed species" refer to all other categories of special-status species from the above definition.

4.3.1 Existing Conditions

Vegetation Communities and Land Covers

The project site is characterized by five vegetation communities and two non-natural land cover types: chamise-black sage, chamise-California buckwheat, disturbed California buckwheat, non-native grassland, disturbed land, and developed land. Figure 4.3-1, Biological Resources Map, illustrates the distribution of vegetation communities and land covers within the study area. Table 4.3-1 provides a summary of each land cover's extent within the study area.

Table 4.3-1. Vegetation Communities and Land Covers within the Project Site and Natural Habitat within Associated 500-foot Buffer (Study Area)

Vegetation Community/Land Cover	Acreage
Chamise-Black Sage	0.32
Chamise-California Buckwheat Association	0.94
Disturbed California Buckwheat	0.87
California Buckwheat	3.74
Vinevard III Retail Development Project	10773

Table 4.3-1. Vegetation Communities and Land Covers within the Project Site and Natural Habitat within Associated 500-foot Buffer (Study Area)

Vegetation Community/Land Cover	Acreage
Non-Native Grassland	3.45
Disturbed Land	17.13
Developed Land	16.36*
Total	42.81

Source: Appendix C.

Note:

Chamise-Black Sage

The chamise-black sage vegetation community is co-dominated by chamise (*Adenostoma fasciculatum*) and black sage (*Salvia mellifera*) with an intermittent to continuous canopy within the shrub layer. The shrub layer may occur in two separate strata—low shrubs at 0.5 to 2 meters tall and taller shrubs at 1 to 5 meters tall (Klein and Evens 2006).

Within the study area, this vegetation community is located in the southern portion of the project site. It is comprised primarily of chamise and black sage, but also contains some California buckwheat (*Eriogonum fasciculatum*), as well as a sparse understory of non-native grasses.

Chamise–California Buckwheat Association

The chamise–California buckwheat vegetation association is either dominated or co-dominated by chamise and California buckwheat, with a shrub layer of open to continuous canopy. The shrub layer may occur in two separate strata–low shrubs at 0 to 2 meters tall and taller shrubs at 0.5 to 5 meters tall. Trees may occur at trace cover and the herbaceous layer typically remains open to intermittent cover (Klein and Evens 2006).

Within the study area, this association occurs in the northern portion of the project site and the very southern end of the project site. It is comprised primarily of chamise, but is also co-dominated by a continuous presence of California buckwheat. The herbaceous layer is comprised of non-native grasses.

California Buckwheat

The California buckwheat vegetation association is an open to continuous shrub layer where California buckwheat typically dominates. The shrub layer often occurs in two separate strata—ow shrubs at 0 to 2 meters tall and tall shrubs at 1 to 5 meters tall. A variety of native or non-native species may make up the herb layer, and emergent trees occur infrequently (Klein and Evens 2006).

Within the study area, California buckwheat scrub is located in the northeastern portion of the study area on the eastern side of Antelope Road outside of the project site.

Within the study area and project site, a disturbed form of this association occurs on steep slopes on the west side of Antelope Road. Additionally, disturbed California buckwheat occurs along the southern slope of the project site north of Clinton Keith Road. The community on the west side of the road and southern boundary of the

^{* 42.81} acres represents the project parcel and natural habitat within a 500-foot buffer (i.e., the associated study area). The proposed project includes the 6.65-acre project site.

project site is also heavily incised and disturbed, likely due to the grading of Antelope Road. Scattered California buckwheat occurs along the slopes in addition to intermittent black sage. The herbaceous layer contains some non-native grasses, but is mostly comprised of bare ground.

Non-Native Grassland

As defined by Klein and Evens (2006), California annual grassland is usually dominated by annual grasses and herbs of various assortments that are in upland habitats. Specifically, red brome (*Bromus rubens*) or ripgut brome (*B. diandrus*) are abundant with other non-native and native species.

The majority of the site is non-native grassland comprised primarily of weedy species including, but not limited to, Brome species (*Bromus* sp.), shortpod mustard (*Hirschfeldia incana*), common Mediterranean grass (*Schismus barbatus*), dove weed (*Croton setiger*), prickly lettuce (*Lactuca serriola*), and Clearwater cryptantha (*Cryptantha intermedia*). A single blue elderberry (*Sambucus nigra* ssp. *caerulea*) is located on the southwestern side of the project site and several Peruvian peppertrees (*Schinus molle*) are clustered at the northwestern edge of the project site; however, neither of these trees warranted their own vegetation community due to the small scale of their cover.

Disturbed Land

The classification of disturbed land is due to the predominance of bare ground and compacted soils with a sparse covering of non-native plant species, and other disturbance-tolerant plant species. Oberbauer et al. (2008) describes disturbed habitat as areas that have been physically disturbed by previous human activity and are no longer recognizable as a native or naturalized vegetation association, but that continue to retain a soil substrate.

Within the study area, disturbed habitat lies on the eastern side of the project site in the form of a dirt access road. Within the study area, disturbed habitat lies west of the project site in the area between Interstate (1) 215 and Antelope Road. Disturbed habitat also lies in the eastern portion of the study area where a mass grading operations previously occurred.

Developed Land

Although not recognized by the Natural Communities List (CDFG 2010), "developed land" refers to areas that have been constructed on or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials.

The portions of the study area mapped as developed include the associated roads, freeway, and surrounding residential development.

Plants and Wildlife

Floral Diversity

A total of 16 species of native or naturalized plants—10 native (63%) and 6 non-native (38%)—were recorded within the study area. This low plant diversity reflects the study area's disturbed environment and its proximity to adjacent developed areas. Plant species observed within the study area are listed in Appendix C.

Wildlife

A total of four bird species were detected within the study area: house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), Say's phoebe (*Sayornis saya*), and California towhee (*Melozone crissalis*). No active bird nests were observed within the study area during the reconnaissance survey; however, the vegetation throughout the project site could support nesting birds. No amphibian species were observed and none are expected to occur due to the lack of aquatic habitat. One reptile species was observed during the survey, a western fence lizard (*Sceloporus occidentalis*). Scat from one mammal species—a coyote (*Canis latrans*)—was observed during the survey. The low wildlife diversity reflects the relatively disturbed nature of the study area, as well as the lack of contiguous habitat. Wildlife species observed within the study area are listed in Appendix C.

Special-Status Plant Species

No plant species listed or proposed for listing as rare, threatened, or endangered by either CDFW or the USFWS were detected within the study area. No plant species considered sensitive by the California Native Plant Society were observed. The study area is not within critical habitat for any special-status plant species (USFWS 2020).

Based on the results of the literature review and database searches (see Appendix C), 59 special-status plant species have been documented within the region. All of these species were evaluated for potential to occur within the study area. Criteria used include soils, current disturbance levels, vegetation communities present, elevation ranges, and previous known locations based on the California Natural Diversity Database, California Native Plant Society, and Calflora records. One species, intermediate mariposa lily (*Calochortus weedii var. intermedius*) was determined to have high potential to occur and is described further below. Two species, smooth tarplant (*Centromadia pungens* ssp. *laevis*) and Parry's spineflower (*Chorizanthe parryi var. parryi*), were determined to have moderate potential to occur and are described further below. The remaining species were determined to either have low potential to occur or were not expected within the study area. A list and determination of potential to occur for these species can be found in Appendix C.

Intermediate Mariposa Lily

Intermediate mariposa lily is a CRPR 1B.2 species, indicating that it is a rare, threatened, or endangered species within California with a moderate degree/immediacy of threat. It is a covered species under the Western Riverside County MSHCP. This species is a perennial, bulbiferous herb that typically occurs in rocky and/or calcerous soils at elevations between 340 and 2,805 feet above mean sea level. Characteristic vegetation associations include chaparral, coastal scrub, and valley and foothill grasslands.

Within the project site, there is high potential for this species to occur. The project site is within the appropriate elevation range, has rocky loam substrate, and contains chaparral and grassland vegetation communities. This species has been documented as occurring directly west of the project site and the I-215 interchange with Clinton Keith Road (CDFW 2018). This plant species was not observed within the study area; however, the reconnaissance survey was conducted outside of its blooming period.

Smooth Tarplant

Smooth tarplant is a CRPR 1B.1 species, indicating that it is a rare, threatened, or endangered species within California with a high degree/immediacy of threat. It is a covered species under the Western Riverside County MSHCP.

This species is an annual herb that typically occurs in alkaline soils at elevations between 0 and 2,100 feet above mean sea level. Characteristic vegetation associations include chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland.

Within the project site, there is moderate potential for this species to occur. The project site contains suitable grassland habitat for this species and is within the appropriate elevation range. Additionally, smooth tarplant is known to occur in disturbed habitat. According to Calflora (2018), numerous collections of smooth tarplant have been made around Murrieta and near the study area. This plant species was not observed within the study area; however, the reconnaissance survey was conducted outside of its blooming period.

Parry's Spineflower

Parry's spineflower is a CRPR 1B.1 species, indicating that it is a rare, threatened, or endangered species within California with a high degree/immediacy of threat. Parry's spineflower was conditionally covered under the Western Riverside County MSHCP; however, as of 2018 MSHCP Annual Report, this species has had its conservation objectives met, as listed in Table 9-2 of the Western Riverside County MSHCP (County of Riverside 2003). Parry's spineflower is now considered a fully covered species under the Western Riverside County MSHCP (RCA 2018). This species is an annual herb that typically occurs in sandy or rocky soils at elevations between 900 and 4,005 feet above mean sea level. Characteristic vegetation associations include chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.

Within the project site, there is moderate potential for this species to occur. The project site is within the appropriate elevation range and supports chaparral and grassland vegetation communities. The survey area also consists of the appropriate sandy soils. This species withstands disturbance like that seen within the study area. According to Calflora (2018), Parry's spineflower is most likely to occur in western Riverside County and populations are documented near the study area. This plant species was not observed within the study area; however, the reconnaissance survey was conducted outside of its blooming period.

Special-Status Wildlife Species

No wildlife species listed or proposed for listing as rare, threatened, or endangered by either CDFW or the USFWS were detected within the study area. The study area is not within critical habitat for any special-status plant species (USFWS 2020)

Appendix C lists 43 special-status wildlife species that are known to occur in the U.S. Geological Survey 7.5minute Murrieta quadrangle and the eight surrounding quadrangles (CDFW 2018). For each species listed, a determination was made regarding potential use of the study area by the species based on information gathered during the field reconnaissance, known habitat preferences, and knowledge of the species' relative distributions in the area.

Four special-status wildlife species—red diamond rattlesnake (*Crotalus ruber*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), loggerhead shrike (*Lanius ludovicianus*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)—were determined to have moderate potential to occur within the study area. The remainder of the species were determined to either have low potential to occur or were not expected at the study area. None of these species were observed within the study area during the reconnaissance survey.

Burrowing Owl Habitat Assessment

The project site is located within the MSHCP Burrowing Owl Habitat Assessment Area. In accordance with the Western Riverside County MSHCP, a habitat assessment must be conducted for this species and focused surveys completed if suitable habitat is present.

The burrowing owl is a California Species of Special Concern. With a relatively wide-ranging distribution throughout the west, burrowing owl is considered to be a habitat generalist (Lantz et al. 2004). In California, burrowing owl is a yearlong resident of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon–juniper and ponderosa pine habitats (Zeiner et al. 1990). Preferred habitat is generally typified by short, sparse vegetation with few shrubs; level to gently sloping topography; and well-drained soils (Haug et al. 1993).

The presence of burrows is the most essential component of burrowing owl habitat, as they are required for nesting, roosting, cover, and caching prey. In California, western burrowing owl most commonly lives in burrows created by California ground squirrels (*Spermophilus [Otospermophilus] beecheyi*). Burrowing owl may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse), useable burrows are available, and foraging habitat is close (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can also be used for nesting and roosting.

The nearest documented occurrence of burrowing owl is approximately 2.7 miles southeast of the study area. This occurrence was documented in 2003 (CDFW 2018). The project site contains chaparral and annual grassland throughout; however, no California ground squirrels or burrows 4 inches or greater in diameter were observed within the study area. One rock pile with marginal interstitial space was located on the northwestern side of the project site that could be used as a perching site for burrowing owl; however, no burrowing owl sign or burrows were observed within these features. This, in combination with the developed nature of the surrounding environment, makes the potential low for this species to occur.

Nesting Birds

The project site provides potential nesting habitat for commonly occurring birds such as Anna's hummingbird or house finches. The project site did not contain large trees suitable for raptor nesting. No nests were observed within the study area during the survey; however, the reconnaissance survey was conducted outside the nesting season for most species.

Jurisdictional Waters and Significant Drainage Courses

A concrete, roadside ditch is located along the northwestern boundary of the project site. This feature lies in a topographic low-point and appears to convey freeway runoff from the south, which then sheet flows into an area just north of the project site. There is no further evidence of ponding or surface flows, and runoff conveyed by this ditch is assumed to percolate or evaporate. This feature would not be considered jurisdictional by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, or CDFW. Figure 4.3-1 illustrates the location of this roadside ditch.

No other potential jurisdictional features were observed within the study area.

Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal. Wildlife movement through the project site is unlikely due to the developed nature of the surrounding area. A former sand and gravel operation existed to the east, I-215 lies to the west and north, and a small subdivision and a high school exists to the south. Therefore, the study area has limited to no value as a potential wildlife corridor or habitat linkage.

Western Riverside County MSHCP Consistency Analysis

The project site is located in the MSHCP Southwest Area Plan and is not within an MSHCP Criteria Cell (Figure 4.3-2 in County of Riverside 2003). Therefore, no Reserve Assembly requirements would apply to the project site. The project's compliance with the relevant sections of the Western Riverside County MSHCP is discussed below.

MSHCP Section 6.1.2 Riparian/Riverine Resources

The Western Riverside County MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." The Western Riverside County MSHCP further clarifies those areas "demonstrating characteristics as described above which are artificially created are not included in these definitions" (County of Riverside 2003).

The study area contains an unvegetated roadside ditch on the northwestern side of the project site that appears to be used to manage road runoff associated with I-215. The majority of the ditch is concrete lined and runoff conveyed by the ditch sheet flows and dissipates into undeveloped areas within the study area. This feature is artificially created, does not rely on a fresh water source, and does not convey flows to downstream riverine resources; therefore, it is not a riverine resource as defined by the Western Riverside County MSHCP.

A storm drain inlet is located at the southern end of the project site at the southern terminus of Antelope Road. This storm drain appears to drain runoff from the associated roadways into underground pipes that travel east into residential development on the other east side of the former mass grading area (Smith 2019). The project site does not contain riparian or riverine features that lead to the storm drain.

The project site does not contain riparian vegetation and therefore does not contain habitat for riparian bird species.

Vernal Pool and Fairy Shrimp Habitat

No indicators of ponding were observed during the site visit. No topographic low points or indicators of ponding were observed within the study area and are not present on historic aerials or topographic maps. The project site does not contain clay soils, bedrock, or other poorly drained soils typically associated with vernal pools. Furthermore, upon surveying, there are no areas that would likely hold water for an extended amount of time, and therefore the site does not support any vernal pools or other potential fairy shrimp habitat.

MSHCP Section 6.1.3 Narrow Endemic Plant Species Survey Area

The project is located within the Narrow Endemic Plant Species Survey Area 4. In accordance with the Western Riverside County MSHCP, a habitat assessment must be conducted for these species and focused surveys completed if suitable habitat is present. The target narrow endemic plants are San Diego ambrosia, many-stemmed dudleya, spreading navarretia, Wright's trichocoronis, California Orcutt grass, and Munz's onion. Details regarding the habitat requirements for each of these is provided in Appendix C.

San Diego ambrosia, spreading navarretia, California Orcutt grass, and Wright's trichocoronis are not expected to occur within the study area. These species are commonly found in association with vernal pools and an evaluation of the study area did not yield conditions suitable for vernal pools (see discussion on vernal pools above). Munz's onion and many-stemmed dudleya are also not expected to occur within the study area as the study area lacks clay soils with which these species are associated. Because the habitat assessment for narrow endemic plant species did not identify habitat characteristics associated with these species, focused rare plant surveys are not required.

MSHCP Section 6.3.2 Criteria Area Species Survey Area

The Western Riverside County MSHCP establishes habitat assessment requirements for certain species of plants, birds, mammals, and amphibians. The project site is in a required habitat assessment area for burrowing owl. As discussed under Special-Status Wildlife Species earlier in this section, the habitat assessment did not identify potential burrowing owl habitat or suitable burrow features; therefore, focused surveys are not required.

MSHCP Section 6.1.4 Urban/Wildlife Interface Guidelines

According to the Western Riverside County MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area (County of Riverside 2003, p. 6-42). The project site is not within or adjacent to any conserved areas (Figure 4.3-2, Western Riverside County MSHCP) and the Urban/Wildlife Interface Guidelines are not applicable.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

FESA of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS for most plant and animal species, and by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and to provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to "take" any listed species, and "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC 1531 et seq.).

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others. The act protects more than 800 species of birds (including their parts, eggs, and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted.

State

State of California Endangered Species Act

CESA (California Fish and Game Code, Section 2050 et seq.) provides protection and prohibits the take of plant, fish, or wildlife species listed by the State of California. Unlike under FESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by project applicants from CDFW under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers must consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

Other Sections from the California Fish and Game Code

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protections for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. To that end, CDFW has designated certain vertebrate species as Species of Special Concern because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the Fish and Game Code. To align with federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals to threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and project applicants.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under FESA, CESA, and other Fish and Game Code provisions, and includes lists developed by other organizations, including, for example, Audubon Watch List Species. Guidance prepared by other agencies, including the Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on the CDFW Special Species list. Additionally, CDFW has concluded that plant species included on the California Native Plant Society's California Rare Plant Rank List 1 and 2, and potentially some List 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and [Wildlife] or the U.S. Fish and Wildlife Service."

Local

Murrieta General Plan 2035

The Murrieta General Plan 2035 (General Plan) (City of Murrieta 2011) establishes a "blueprint" for the City of Murrieta (City) to help guide land use decisions. Several elements within the General Plan were established to address potential impacts to biological resources. Specifically, the Land Use, Conservation, and Recreation and Open Space Elements each have goals and policies that address potential impacts to candidate, sensitive, or special-status species and their habitats.

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multijurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in western Riverside County (County). The Western Riverside County MSHCP is one of several large, multijurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The Western Riverside County MSHCP allows the County and its cities, including the City of Murrieta, to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of CESA and FESA (County of Riverside 2003).

The Western Riverside County MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of FESA (16 USC 1531 et seq.), and a Natural Communities Conservation Plan under the Natural Community Conservation Planning Act of 2001 (Fish and Game Code Section 2800 et seq.). The Western Riverside County MSHCP allows the participating jurisdictions to authorize "take" of plant and wildlife species identified within the plan area. USFWS and CDFW have authority to regulate the take of threatened, endangered, and rare species. Under the Western Riverside County MSHCP, the Wildlife Agencies (i.e., USFWS and CDFW) have granted "take authorization" for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP Conservation Area, in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

The Western Riverside County MSHCP is a "criteria-based plan" and does not rely on a hardline preserve map. Instead, within the MSHCP Plan Area, the MSHCP Reserve is assembled over time from a smaller subset of the plan area referred to as the Criteria Area. The Criteria Area consists of Criteria Cells (Cells) and Cell Groupings, and flexible guidelines (Criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-Contiguous Habitat Blocks (County of Riverside 2003).

Western Riverside County MSHCP Mitigation Fee

To implement the goals and objectives of the Western Riverside County MSHCP and to mitigate the impacts caused by new development, lands supporting species covered by the Western Riverside County MSHCP must be acquired and conserved. A Development Mitigation Fee is necessary to supplement the financing of the acquisition of lands supporting species covered by the Western Riverside County MSHCP and to pay for a new development's fair share of this cost. The Development Mitigation Fee assists in the maintenance of biological diversity and protects vegetation communities that are known to support threatened, endangered, or sensitive populations of plant and wildlife species (County of Riverside 2003).

Stephens' Kangaroo Rat Habitat Conservation Plan

The Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County (SKR HCP) was prepared by the Riverside County Habitat Conservation Agency, and approved by USFWS in agreement with the California Department of Fish and Game (now CDFW) on May 6, 1996. The agreement creates a network of reserves within western Riverside County occupied by and to be managed for Stephens' kangaroo rat (*Dipodomys stephensi*). A total of 30,000 acres included as reserves are occupied by Stephens' kangaroo rat. The SKR HCP authorizes incidental take of Stephens' kangaroo rat and describes the conservation, mitigation, and monitoring measures that are applied under the Section 10(a) permit issued by USFWS and Management Authorization issued by CDFW. The SKR HCP describes the proposed conservation, mitigation, and monitoring measures to be implemented for the preservation of the federally endangered Stephens' kangaroo rat. The SKR HCP establishes a regional system of Core Reserves throughout western Riverside County for the specific conservation of Stephens' kangaroo rat and the ecosystem upon which it depends. A standard fee, known as the Development Mitigation Fee, is paid to the City prior to construction, to supplement the financing of Core Reserve management for the SKR HCP and to pay for a new development's fair share of this cost (RCHCA 1996).

Tree Ordinance

The City of Murrieta Development Code, Article III, Section 16.42, Tree Preservation, identifies the following as protected trees (City of Murrieta 2019):

• Native oak with a diameter at standard height of 4 inches or greater (smaller trees may also be protected under special circumstances as determined by the director)

- Trees of historical or cultural significance as identified by council resolution
- Significant groves or stands of trees
- Mature trees located on a parcel of 1 acre or more (smaller trees may also be protected under special circumstances as determined by the director)
- Any tree required to be planted or preserved as environmental mitigation for a discretionary permit

There are no resources on the project site that meet the above criteria; therefore, a tree removal permit in accordance with the City's Development Code is not required. There are no other local ordinances applicable to the project.

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if the project would:

- 1. 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.
- 2. 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.
- 3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 4. 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.
- 5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.3.4 Impacts Analysis

This section addresses potential impacts to special-status biological resources that could result from implementation of the proposed project. This section follows the CEQA checklist for biological resources. For the purposes of this biological analysis, it is assumed that the entire project site would be permanently impacted by the proposed project's construction and operation (Figure 4.3-3, Impacts Map).

Would the project 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?

Less-than-Significant Impact with Mitigation Incorporated. The following analysis addresses impacts to specialstatus biological resources that could result from implementation of the proposed project.

Sensitive Natural Communities

No sensitive natural communities occur on the project site; therefore, no potential impacts to sensitive natural communities would occur with project implementation. Table 4.3-2 lists impacts to the vegetation communities and land covers found on the project site.

Vegetation Community/Land Cover	Acreage
Chamise-Black Sage	0.32
Chamise-California Buckwheat Association	0.94
Disturbed California Buckwheat	0.60
Non-Native Grassland	2.17
Disturbed Land	0.67
Developed Land	1.96
Total	6.65

Table 4.3-2. Impacts to Vegetation Communities and Land Covers within the Project Site

Source: Appendix C.

Special-Status Plants

One special-status plant, intermediate mariposa lily, has high potential to occur on the project site and two specialstatus plants, smooth tarplant and Parry's spineflower, have moderate potential to occur within the project site. These species were not observed within the study area; however, the reconnaissance survey was conducted outside of their blooming period. Intermediate mariposa lily and smooth tarplant are both fully covered under the Western Riverside County MSHCP. Parry's spineflower was conditionally covered under the Western Riverside County MSHCP; however, as of 2018 MSHCP Annual Report (RCA 2018), this species has had its conservation objectives met, as listed in Table 9-2 of the Western Riverside County MSHCP. Parry's Spineflower is now considered a fully covered species under the Western Riverside County MSHCP (RCA 2018). Given that all three species are fully covered under the Western Riverside County MSHCP, compliance with the MSHCP, including payment of the MSHCP Development Mitigation Fee, means there would be no impacts to special-status plant species.

Special-Status Wildlife

Three special-status wildlife species—red diamondback rattlesnake, loggerhead shrike, and San Diego blacktailed jackrabbit—have moderate potential to occur on the project site and are covered under the Western Riverside County MSHCP. Therefore, with compliance with the Western Riverside County MSHCP, including payment of the MSHCP Development Mitigation Fee, there would be no significant impacts to these species.

One species, coast patch-nosed snake, has moderate potential to occur on the project site and is not covered under the Western Riverside County MSHCP. This species was not observed within the study area. Although this species is not covered by the Western Riverside County MSHCP, the MSHCP conserves habitat also suitable for this species. The removal of 1.86 acres of potentially suitable habitat for this species would be less than significant in the context of higher quality habitat conserved within the region. Individuals of this species, if present, would be able to move away during construction activities within the site. If some individuals were directly impacted during construction, impacts would be less than significant in the context of the regional population of this species.

Burrowing Owl

The burrowing owl habitat assessment did not yield suitable habitat, burrowing owl, or signs of burrowing owl within the study area (see Appendix C); therefore, focused surveys were not conducted. However, project site conditions could change between the time of the reconnaissance survey and the time of project implementation. If burrowing owl should occupy the site prior to initiation of construction activities, direct impacts to burrowing owl would be significant. Additionally, if burrowing owl occupy surrounding habitat within 500 feet of construction activities, indirect impacts could be significant. To avoid potential for significant impacts to burrowing owl during proposed construction activities, a pre-construction burrowing owl survey should be conducted and avoidance measures implemented if burrowing owl are present (**MM-BIO-1**).

Nesting Birds

Project construction could result in direct and indirect impacts to nesting birds, including the loss of nests, eggs, and fledglings if vegetation clearing and ground-disturbing activities occur during the avian nesting season (typically March 1 through August 31). If the nesting bird season cannot be avoided, a nesting bird survey should be conducted within the impact footprint or within 300 feet of the impact footprint (**MM-BIO-2**).

Would the project 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 Western Riverside County MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." The Western Riverside County MSHCP further clarifies those areas "demonstrating characteristics as described above which are artificially created are not included in these definitions" (County of Riverside 2003).

As discussed under Western Riverside County MSHCP Consistency Analysis in Section 4.3.1, Existing Conditions, the study area contains an unvegetated roadside ditch on the northwestern side of the project site that appears to be used to manage road runoff associated with I-215. The majority of the ditch is concrete lined and runoff conveyed by the ditch sheet flows and dissipates into undeveloped areas within the study area. This feature is artificially created, does not rely on a fresh water source, and does not convey flows to downstream riverine resources; therefore, it is not a riverine resource as defined by the Western Riverside County MSHCP.

Given that the project site does not support any MSHCP-defined riparian resources, MSHCP-defined riverine resources, or other sensitive natural communities, no impacts would occur.

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

No Impact. As discussed under Jurisdictional Waters and Significant Drainage Courses in Section 4.3.1, the project site does not contain jurisdictional waters; therefore, no impacts to federal protected wetlands would occur.
Would the project 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. As discussed under Wildlife Corridors and Habitat Linkages in Section 4.3.1, the project site does not function as a wildlife corridor and does not support any wildlife nursery sites; therefore, no impacts to these resources would occur.

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. As outlined in Section 4.3.2, the City's Development Code, Article III, Section 16.42, Tree Preservation, identifies the following as protected trees (City of Murrieta 2019):

- Native oak with a diameter at standard height of 4 inches or greater (smaller trees may also be protected under special circumstances as determined by the director)
- Trees of historical or cultural significance as identified by council resolution
- Significant groves or stands of trees
- Mature trees located on a parcel of 1 acre or more (smaller trees may also be protected under special circumstances as determined by the director)
- Any tree required to be planted or preserved as environmental mitigation for a discretionary permit

There are no resources on the project site that meet the above criteria; therefore, a tree removal permit in accordance with the City's Development Code is not required. There are no other local ordinances applicable to the project. As a result, implementation of the project would result in no impacts to these resources.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less-than-Significant Impact. The project site is within the MSHCP Plan Area (County of Riverside 2003). As discussed below and within Table 4.3-3, the project is consistent with the Western Riverside County MSHCP.

The project site is within the MSHCP Plan Area. As described under Western Riverside County MSHCP Consistency Analysis in Section 4.3.1, the project site does not support riparian/riverine resources, vernal pools or fairy shrimp habitat, narrow endemic plant habitat, or Criteria Area species habitat; therefore, there are no requirements under the Western Riverside County MSHCP for these resources. The project site is also not adjacent to MSHCP Conservation Areas. Additionally, the project site does not support burrowing owl habitat; however, burrowing owls have the potential to occupy the site in the future. With implementation of the burrowing owl pre-construction surveys and implementation of avoidance and minimization measures, if applicable, the project would be consistent with the Western Riverside County MSHCP burrowing owl requirements. With implementation of **MM-BIO-1** and payment of the MSHCP Development Mitigation Fee, the project would be consistent with Western Riverside County MSHCP.

The project site is within the SKR HCP plan boundary. With payment of the SKR HCP Development Mitigation Fee, the proposed project would be consistent with the SKR HCP.

Policy	Discussion	Consistency
MSHCP Section 6.1.2 Riparian/Riverine, Vernal Pool and Fairy Shrimp Requirements	Riparian/Riverine Resources The study area contains an unvegetated roadside ditch on the northwestern side of the project site that appears to be used to manage road runoff associated with Interstate 215. The majority of the ditch is concrete lined and runoff conveyed by the ditch sheet flows and dissipates into undeveloped areas within the study area. This feature is artificially created, does not rely on a fresh water source, and does not convey flows to downstream riverine resources; therefore, it is not a riverine resource as defined by the Western Riverside County MSHCP.	Consistent
	The project site does not contain riparian vegetation and therefore does not contain habitat for riparian bird species (see Appendix C).	
	No indicators of ponding were observed during the site visit. No topographic low points or indicators of ponding were observed within the study area and are not present on historic aerials or topographic maps. The project site does not contain clay soils, bedrock, or other poorly drained soils typically associated with vernal poos. Furthermore, upon surveying, there are no areas that would likely hold water for an extended amount of time, and therefore the site does not support any vernal pools or other potential fairy shrimp habitat (see Appendix C).	
MSHCP Section 6.1.3 Narrow Endemic Plant Species Survey Requirements	The project site is located within the Narrow Endemic Plant Species Survey Area 4 of the MSHCP area. Dudek conducted a habitat assessment for narrow endemic plant species and did not identify habitat characteristics associated with these species (see Appendix C). Focused narrow endemic plant species surveys are not required.	Consistent
MSHCP Section 6.1.4 Urban/Wildlands Interface Guidelines	The project site is not within or adjacent to any conserved areas; therefore, the Urban/Wildlife Interface Guidelines are not applicable.	Not applicable
MSHCP Section 6.3.2 Criteria Area Species Survey Requirements	The project site is in a required habitat assessment area for burrowing owl. The habitat assessment did not identify potential burrowing owl habitat or suitable burrows features (see Appendix C); therefore, focused surveys are not required. However, site conditions can change prior to development, creating suitable habitat for burrowing owl. To avoid potential for significant impacts to burrowing owl during construction activities, MM-BIO-2 would be required.	Consistent with mitigation incorporated

Table 4.3-3. Western Riverside County MSHCP Consistency Analysis Summary

Note: MSHCP = Multiple Species Habitat Conservation Plan.

4.3.5 Mitigation Measures

The following mitigation measures address the project's significant impacts on special-status plant/wildlife species. With implementation of these mitigation measures, all significant impacts would be reduced to less than significant.

MM-BIO-1 *Pre-Construction Burrowing Owl Surveys:* Prior to initiation of construction activities, a burrowing owl preconstruction survey shall be conducted in accordance with Western Riverside County Regional Conservation Authority's 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area. In accordance with these instructions, the survey shall occur within 30 days prior to ground-disturbance activities. A minimum of one survey site visit within the described timeframe prior to disturbance shall be required to confirm presence or absence of burrowing owl on the site. Pre-construction surveys shall be conducted by a qualified biologist.

If surveys confirm occupied burrowing owl habitat is located within the project site or within 500 feet of the projects site, avoidance measures shall be implemented consistent with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan.

MM-BIO-2 *Pre-Construction Nesting Bird Survey:* To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground disturbance and/or vegetation clearance activities are scheduled to occur during the avian nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist within the project footprint and a 300-foot buffer around the project footprint. Surveys shall be conducted within 3 days prior to initiation of activity and be conducted between dawn and noon.

If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist. The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for topography, ambient conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed, or it is confirmed that the nest has been unsuccessful or abandoned.

Standard Conditions

In addition, it is recommended that the following standard condition (SC) be implemented to avoid and minimize potential environmental impacts from resulting from the commercial construction:

SC-BIO-1 The applicant shall avoid the use of any invasive, non-native plant species rated as "high" or "moderate" by the California Invasive Plant Council's Invasive Plant Inventory for future landscaping of the site.

4.3.6 Level of Significance After Mitigation

Compliance with **MM-BIO-1** and **MM-BIO-2**, listed in Section 4.3.5, Mitigation Measures, would reduce potential impacts to biological resources to a less-than-significant level.

4.3.7 Cumulative Impacts

A significant adverse impact to cumulative biological resources would occur when construction or operation of the cumulative projects would encroach into areas containing sensitive biological resources, affect the movement of wildlife species, or affect the functionality of a planned conservation area. The proposed project has the potential to result in significant impacts to special-status plants and special-status wildlife. Compliance with mitigation measures identified in Section 4.3.5 would reduce potentially significant impacts to less than significant.

If cumulative projects are located within an MSHCP Plan Area, they would be required to comply with the policies and regulations therein. Consistency with the Western Riverside County MSHCP would result in the ability of a project to rely on the Western Riverside County MSHCP for mitigation related to cumulative biological impacts. Thus, impacts would not be cumulatively considerable.

Cumulative projects that would occur on previously undeveloped land would be required to identify and mitigate any potentially significant impacts to biological resources. Projects that would occur on previously developed land or in a highly urbanized area would have less potential to significantly impact biological resources; however, there is a potential for nesting birds to be present in vegetation. The combined construction of projects within the vicinity of the project could deprive some species of a significant amount of habitable space. However, it is anticipated that species that are potentially affected by cumulative projects would be subject to the same requirements of CEQA as the project. These determinations would be made on a case-by-case basis, and the effects of cumulative projects on nesting birds would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements.

Therefore, for the reasons described above, cumulative effects on biological resources would be less than significant.

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SOURCE: DigitalGlobe 2018

FIGURE 4.3-1 **Biological Resources Map**



Vineyard III Retail Development Project

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SOURCE: SOURCE: Western Riverside County Regional Conservation Authority 2015; County of Riverside 2015

DUDEK & 12,500 25,000 Feet FIGURE 4.3-2 Western Riverside County MSHCP

Vineyard III Retail Development Project

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SOURCE: DigitalGlobe 2018

FIGURE 4.3-3

Impacts Map



Vineyard III Retail Development Project

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4.4 Cultural Resources

This section describes the existing cultural resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). The following analysis is based, in part, on the Cultural Resources Inventory Report, included as Appendix D of this Environmental Impact Report (EIR).

4.4.1 Existing Conditions

Eastern Information Center Records Search

On January 10, 2018, a California Historical Resources Information System (CHRIS) records search was conducted of the project site and a 1.0-mile (1,608-meter) records search buffer (study area), from the Eastern Information Center, which houses cultural resources records for Riverside County. This search included their collections of mapped prehistoric, historic, and built environment resources; Department of Parks and Recreation Site Records; technical reports; and ethnographic references. Additional consulted sources included historical maps of the study area, the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historic Property Data File, the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility.

Previously Conducted Cultural Resource Studies

The Eastern Information Center records indicate that 60 previous cultural resources technical investigations have been conducted within 1.0 mile (1,608 meters) of the project site between 1948 and 2016. Of these, 2 previous studies overlap with the project site while the remaining 58 are within the records search buffer. Table 4.4-1 summarizes all 60 previous cultural resource studies followed by a brief summary of each overlapping study.

EIC Report Number (RI-)	Authors	Year	Title	Proximity to Project Site
00004	B.E. McGown	1948	Report of Archaeological Survey: Temecula Flood Control Basin, Temecula, California	Outside
00210	Francis C. Berg	1977	Environmental Impact Evaluation: Archaeological Assessment of a Portion of the E 1/2 of the NE 1/4 of Section 35, T6S, R3W, USGS Murrieta 7.5 Series Quadrangle, Riverside County, California	Outside
00232	Kenneth Daly	1977	Environmental Impact Evaluation: Archaeological Assessment of a Portion of the NW 1/4 of the SE 1/4 of Section 35, T6S, R3W, Murrieta 7.5' Quadrangle, Riverside County, California	Outside
00233	Kenneth Daly	1977	Environmental Impact Evaluation: Archaeological Assessment of the Hachten Property, located in a Portion of the S 1/2 of Section 35, T6S, R3W, Murrieta 7.5' Quadrangle, Riverside County, California	Outside

Table 4.4-1. Previously	Conducted	Cultural Resour	ce Studies with	nin 1.0 Mile o	of the Project Site
					5

Table 4.4-1. Previously Conducted	Cultural Resource Stu	dies within 1.0 Mile (of the Project Site

EIC Report Number				Proximity to
(RI-)	Authors	Year	Title	Project Site
00294	James Baldwin	1978	Environmental Impact Evaluation: Archaeological Assessment of Tentative Parcel Map 11830, Near Rancho California, Riverside County, California	Outside
00383	Christopher E. Dover	1978	Environmental Impact Evaluation: Archaeological Assessment of Tentative Parcel Map 12030, Near Murrieta, Riverside County, California	Outside
00445	James McManus	1978	Environmental Impact Evaluation: An Archaeological Assessment of Tentative Parcel 13335, South of Keller Road, Riverside County, California	Outside
00531	James P. Barker	1979	Environmental Impact Evaluation: An Archaeological Assessment of Tentative Parcel 14725, Northwest of the Hogbacks, Southwestern Riverside County, California	Outside
00627	Renee Giansanti	1979	Environmental Impact Evaluation: An Archaeological Assessment of Tentative Parcels 15142, 15203, 15096, and Tentative Tract 14851, Paloma Valley Area of Riverside County, California	Outside
00638	Renee Giansanti	1979	Environmental Impact Evaluation: An Archaeological Assessment of 60 Acres of Land in the Paloma Valley Area of Riverside. The Exact Location Being the SW 1/4 of Section 35, T6S, R3W, SBBM, Murrieta 7.5' Series USGS Quadrangle.	Outside
01243	Roger J. Desautels	1981	An Archaeological Assessment of TPM 17760	Outside
01258	Roger J. Desautels	1981	An Archaeological Assessment of TPM 17629	Outside
01360	Jean A. Salpas	1981	An Archaeological Assessment of Parcel 17419	Outside
01366	Christopher E. Drover	1981	Environmental Impact Evaluation: Archaeological Assessment of Tentative Parcel Map 18079	Outside
01395	Bouscaren, Stephen and Alan Davis	1982	An Archaeological Assessment of Tentative Parcel 17508, Northwest of Murrieta in Riverside County, California	Outside
01639	Scientific Resources Surveys, Inc.	1983	An Archaeological Assessment of TPM 18958	Outside
01844	Freeman, Trevor A. and David Van Horn	1987	Archaeological Survey Report: The Rose Hills Property, Paloma Valley, Riverside County, California	Outside
01845	Beth Padon	1992	Cultural Resource Assessment: Murrieta Hills, City of Murrieta, California	Outside
02059	Joan Oxendine	1983	The Luiseno Village During the Late Prehistoric Era: A Dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy in Anthropology	Outside
02117	Victor DeMunck	1987	Archaeological Assessment of Tentative Parcel 22151 near Murrieta in Riverside County, California	Outside

Table 4.4-1. Previously Conducted	Cultural Resource Studies	within 1.0 Mile of t	ne Proiect Site
			10110,000 0100

EIC Report Number (RL)	Authors	Vear	Title	Proximity to
02119	Riscoll Ronald M	1002	Cultural Pasources Peconnaissance of the Hamilton	Outside
02118		1992	Property, Approximately 273 Acres in Riverside County, California	Outside
02119	Mary Robbins- Wade and Timothy G. Gross	1999	Archaeological Resources Inventory and Evaluation for the Murrieta Oaks Project, Murrieta, Riverside County, California.	Outside
02344	Christopher E. Drover and Daniel McCarthy	1988	Rancho California Masterplan: A Cultural Resources Overview- Rancho California Development Company, The Bedford Group	Outside
02506	Drover, C.E.	1989	Environmental Impact Evaluation: An Archaeological Assessment of the Greer Ranch Project Riverside County, California	Outside
02780	Christopher E. Drover	1990	A Cultural Resource Assessment: Adobe Springs II Vesting Tentative Tract 25135 near Murrieta Hot Springs, California	Outside
03117	Drover, Christopher E.	1990	Environmental Impact Evaluation: An Archaeological Assessment of Tentative Tract 26262, Murrieta, California	Outside
03118	Jean A. Keller	1995	A Phase I Cultural Resources Assessment of the Western Half of Tentative Tract Map 26262, +/- 14.5 Acres of Land in Murrieta, Riverside County, California	Outside
03119	Jean A. Keller	1995	Phase IV Archaeological Monitoring Of Demolition of the James Place Structures, Tentative Tract Map 26262, Murrieta, Riverside County, California	Outside
03584	Carolyn E. Kyle, Petei McHenry, and Dennis R. Gallegos	1993	Cultural Resource Survey Report for the California Oaks Reservoir Project Rancho California Water District, County Of Riverside, California.	Outside
03604	Carleton S. Jones	1992	The Development of Cultural Complexity Among the Luiseno: A Thesis Presented to the Department of Anthropology, California State University, Long Beach in Partial Fulfillment of the Requirements for the Degree, Master of Arts	Outside
04121	Mason, Roger, Philippe Lapin, and Wayne H. Bonner	1998	Cultural Resources Records Search and Survey Report For a Pacific Bell Mobile Services Telecommunications Facility: CM122-01, City of Murrieta, California	Outside
04207	Jean A. Keller	1998	A Phase I Cultural Resources Assessment of Murrieta Crossing (Plot Plan 98-030) +57.0 Acres of Land in Murrieta, Riverside County, California	Outside
04638	Jean A. Keller	2000	A Phase I Cultural Resources Assessment of Lincoln Ranch (TTM 29217), 245.0 Acres of Land in the City Of Murrieta, Riverside County, California	Outside
04640	Jean A. Keller	2001	A Phase I Cultural Resources Assessment of Vesting Tentative Tract Map 30280, 10.0 Acres of Land in the City of Murrieta, Riverside County, California	Outside

EIC Report Number				Proximity to
(RI-)	Authors	Year	Title	Project Site
05113	Horne, Melinda C.	2002	Negative Archaeological Survey Report Route 215, Post Mile 08-RIV-215-KP, Murrieta, Riverside County, California	Outside
05197	Riordan Goodwin and Robert E. Reynolds	2003	Cultural and Paleontological Resources Assessment: Lincoln Ranch Tract 29217-3, City of Murrieta, Riverside County, California	Outside
05362	Jean A. Keller	2003	A Phase I Cultural Resource Assessment of Development Plan 03-161 (The Orchard at Stone Creek) +/- 54.0 Acres of Land in the City of Murrieta, Riverside County, California	Outside
06049	David C. Hanna	2004	Archaeological Testing and Monitoring at Greer Ranch Within the City of Murrieta, Riverside County, California	Outside
06232	Bai Tang, Michael Hogan, and Josh Smallwood	2004	Historical/Archaeological Resources Survey Report: Assessor Parcel Number 359-240-038, 28175 Lee Lane, City of Murrieta, Riverside County, California	Outside
06444	Tang, Bai, Michael Hogan, Matthew Wetherbee, and John J. Eddy	2004	Historical/Archaeological Resources Survey Report: Antelope Industrial Park, City of Murrieta, Riverside County, California	Outside
06659	Hogan, Michael, Deirdre Encarnacion, and Josh Smallwood	2006	Archaeological Survey Report: Linnel Lane Overcrossing at I-215 and Meadowlark Lane Improvement, City Of Murrieta, Riverside County, California, 08-RIV-215-PM 13.0-KP 20.9, EA OH820	Outside
06733	Riordan Goodwin and Patricia Tuck	2004	Cultural Resource Monitoring Program: Lincoln Ranch Tract 29271-3, City of Murrieta, Riverside County, California	Outside
06825	Jeanette McKenna	2005	Environmental Phase I Report: Nextel Communications Facility IRENE (CA-8306-B), Project No. N-3007-04	Outside
07030	Jean A. Keller	2006	A Phase I Cultural Resources Assessment of NWC Linnel Lane & Mcelwain road 10-Acre Site	Outside
07041	Jordan, Stacey	2007	Archaeological Survey Report for Southern California Edison Company Relocation of the Garboni 12KV and Leon 12KV Circuits Project Riverside County, California	Outside
07045	Anna M. Hoover	2006	An Archaeological Record Search and Survey Report on Murrieta 56, APN 392-290-002, 56.18 Acres in the City of Murrieta, Riverside County, California	Outside
07049	Robinson, Mark C.	2007	Historical Property Survey Report (08-RIV-215, PM 11.9-13.7, [KP19.30-21.03], EA 32780)	Overlapping
07476	Richardson, Karma O.K. and Robin D. Turner	2007	A Cultural Resource Assessment of the Proposed Commercial Development for 15 +/- Acres at 35070 Antelope Road, Murrieta, Riverside County, California	Outside

Table 4.4-1. Previously Conducted	Cultural Resource Stu	dies within 1.0 Mile (of the Project Site

EIC Report Number (RI-)	Authors	Year	Title	Proximity to
08278	Lorna Billat	2009	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Number(s)/Name(s): LA-3439B / TCO Cool CA2639 Antelope TCNS# 54935	Outside
08283	Lorna Billat	2009	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Number(s)/Name(s): CA-2639 / Antelope TCNS #57797	Outside
08645	Jean A. Keller	2009	A Phase I Cultural Resources Assessment of DPO 2008-2749 +/- 4.45 Acres of Land in the City of Murrieta, Riverside County, California	Outside
08665	CRM TECH	2011	Archaeological Monitoring Program For the Meadowlark Road form Clinton Keith Road to Baxter Road Project	Outside
08673	Jean A. Keller	2010	A Phase IV Cultural Resources Monitoring Report of CK-17, APN 392-290-038, Grading Permit No. 69235, +/- 2.5 Acres of Land Located at 28255 Clinton Keith Road, Murrieta, Riverside County, California	Overlapping
09024	John J. Eddy,	2013	Phase I Cultural Resources Assessment for the Clinton Keith Road Extension Project, Riverside County, California	Outside
09327	Riordan Goodwin	2015	Cultural Resources Assessment Clinton Keith Road/ McElwain Road CVS, City of Murrieta, Riverside County, California	Outside
09342	Dennis McDougall and Joan George	2015	Cultural Resource Monitoring Report for the Pacific Landing Project: Assessor's Parcel No. 900-040-021, City of Murrieta, Riverside County, California	Outside
09477	Bai "Tom" Tang, Jesse Yorck, Ben Kerridge, and Nina Gallardo	2016	Historical/Archaeological Resources Survey Report: Assessor's Parcel No. 392-310-018, HealthSouth Rehabilitation Hospital Project, City of Murrieta, Riverside County, California	Outside
09610	Historic Resource Associates	2014	Archaeological Survey Report of the United Church of the Valley Project, AT&T Mobility Site No. RS0276, 35921 Green Road, Murrieta, Riverside County, California 92589	Outside
09716	Joan George	2015	Cultural Resource Constraints Analysis for the Fireman's Circle Project, in the City of Murrieta, Riverside County, California	Outside
09898	Bai "Tom" Tang, Deirdre Encarnacion, Daniel Ballester, and Nina Gallardo	2016	Historical/ Archaeological Resources Survey Report: Murrieta Skilled Nursing Facility Project, Assessor's Parcel No. 392-310-002, City of Murrieta, Riverside County, California	Outside

Note: EIC = Eastern Information Center.

RI-07049

As indicated in Table 4.4-1, Jones & Stokes was contracted by the California Department of Transportation to prepare an archaeological survey report in support of the proposed Clinton Keith Road/Interstate (I) 215 Interchange Improvement Project. An archaeological survey of the area did not identify any archaeological resources and the potential for undiscovered archaeological resources was determined to be low. The project was determined to have no potential adverse impacts to cultural resources.

RI-08673

As indicated in Table 4.4-1, Jean A. Keller was contracted by CK-17 LLP to provide cultural resource services in support of the proposed development of residential subdivisions on approximately 2.5 acres of land in the City of Murrieta. Services included archaeological monitoring and the preparation of a Phase IV Monitoring Report. No cultural resources were observed within the boundaries of the subject property during construction activities. No further mitigation or research was recommended at the culmination of the project.

Previously Recorded Cultural Resources

The records search identified that 46 resources have been recorded within 1.0 mile (1,608 meters) of the project area. Of these 46 resources, none have been recorded within the project site. Of the 46 resources, 6 are historic resources, including 3 refuse scatters, 2 residences, and 1 concrete foundation with an associated refuse scatter. The remaining 40 resources are prehistoric resources including 16 bedrock milling features, 9 lithic scatter, 12 prehistoric lithic or groundstone isolates, 1 habitation site, and 2 processing sites with bedrock milling features and associated lithic scatters. Table 4.4-2 summarizes all 46 cultural resources identified.

Primary Number (P-33-)	Trinomial (CA-RIV-)	Period	NRHP Eligibility	Year and Record By	Descriptions	Proximity To Project Site
000629	000629	Prehistoric	Not evaluated	1973 (J. Humbert, S. Hammond, C.E.F.U.)	Lithic scatter with associated bedrock mortars	Outside
000637	000637	Prehistoric	Not evaluated	1973 (J. Humbert, S. Hammond, C.E.F.U.)	Lithic scatter with associated bedrock mortars	Outside
000638	000638	Prehistoric	Not evaluated	J. Humbert, S. Hammond (1973)	Processing site; dense lithic scatter and 15 bedrock mortars; possible habitation site	Outside
001364	001364	Prehistoric	Not evaluated	1976 (Hildebrand, Morin and Waldron, ARU); 1981 (Jean A. Salpas, ARU)	Milling station with three milling surfaces	Outside

Table 4.4.0 Dravieval	Deserved and Culture		1 O Mile of	the Dreiget Cite
i able 4.4-2. Previousi	y Recorded Cultura	i Resources within	1.0 Mile of	the Project Site

Primary Number (P-33-)	Trinomial (CA-RIV-)	Period	NRHP Eligibility	Year and Record By	Descriptions	Proximity To Project Site
001375	001375	Prehistoric	Not evaluated	1976 (Morin, Waldron, Pettus, Hildebrand, ARU); 1981 (Jean A. Salpas, ARU)	Milling station with two milling surfaces	Outside
001376	001376	Prehistoric	Not evaluated	1976 (Morin, Waldron, Pettus and Hildebrand, ARU); 1981 (Jean A. Salpas, ARU)	Milling station with two milling surfaces	Outside
001377	001377	Prehistoric	Not evaluated	1976 (Morin, Waldron, Hildebrand and Pettus, ARU); 1981 (Jean A. Salpas, ARU); 2007 (Koji Tsunoda, Jones and Stokes)	Milling station; was not relocated in most recent site visit	Outside
002190	002190	Prehistoric	Not evaluated	1981 (T. Banks, Scientific Resource Surveys, Inc., Santa Ana, CA.); 2001 (David C. Hanna, Jr., SWCA Environmental Consultants, Mission Viejo, CA.)	Temporary habitation site consisting of dense lithic scatter and food processing stations	Outside
003056	003056	Prehistoric	Found ineligible through survey process	1987 (Victor C. de Munk, Archaeological Research Unit, UC Riverside, CA.); 1992 (Ron Bissell and Ken Becker, RMW Paleo Associates, Inc., Mission Viejo, CA.); 1999 (Robbins-Wade, Affinis, El Cajon, CA.)	Food processing station with milling surfaces, ground stone, and lithic scatter	Outside
003684	003684	Prehistoric	Not evaluated	1989 (C.E. Drover and Andy Jackson)	Lithic scatter	Outside
004104	004104	Prehistoric	Not evaluated	1990 (C.E. Drover and D.M. Smith, Christopher Drover, 13522 Malena Dr. Tustin, CA 92680)	Lithic scatter with groundstone	Outside
004905	004905	Historic	Ineligible	1999 (Robbins-Wade, Gross, Van Wormer, Affinis)	Historic refuse scatter dating to the 1920s	Outside

Table 4.4-2. Previously Recorded Cultural Resources within 1.0 Mile of the Project Site

Primary Number (P-33-)	Trinomial (CA-RIV-)	Period	NRHP Eligibility	Year and Record By	Descriptions	Proximity To Project Site
009703	006469	Prehistoric	Not evaluated	2000 (Jean A. Keller, Cultural Resources Consultant)	Bedrock milling feature consisting of two mortars and one milling slick on a single granitic bedrock outcrop	Outside
009704	006470	Prehistoric	Not evaluated	2000 (Jean A. Keller, Cultural Resources Consultant)	Bedrock milling feature consisting of one milling slick on a granitic bedrock outcrop	Outside
009705	006471	Prehistoric	Not evaluated	n/a	Bedrock milling feature consisting of two milling slick on adjacent granitic bedrock outcrops	Outside
011238	_	Prehistoric	Not evaluated	2001 (CW Bouscaren, MG Espinoza, and KA Hintzman, LSA Assoc., Inc.)	Bedrock milling feature consisting of three milling slicks on a cluster of bedrock outcrops	Outside
011239	-	Prehistoric	Not evaluated	n/a	Sparse lithic scatter	Outside
011240	_	Historic	Not evaluated	2001 (CW Bouscaren, MG Espinoza, KA Hintzman, LSA Assoc. Inc.)	Fallen wooden structure with a concrete foundation and an associated can scatter	Outside
013304	007405	Prehistoric	Not evaluated	Sal Boites (2005)	Two bedrock milling features with associated lithic and groundstone	Outside
013332	007424	Prehistoric	Not evaluated	2004 (Robert Porter, CRM TECH); 2004 (John J. Eddy)	Bedrock milling slick	Outside
013334	007426	Prehistoric	Not evaluated	2004 (Robert Porter, CRM TECH); 2004 (John J. Eddy)	Two bedrock milling features	Outside
013335	007427	Prehistoric	Not evaluated	2004 (Michael Lozano, CRM TECH)	One bedrock milling feature consisting of two milling slicks; the site was not	Outside

Table 4.4-2. Previously Recorded Cultural Resources within 1.0 Mile of the Project Site

Primary Number (P-33-)	Trinomial (CA-RIV-)	Period	NRHP Eligibility	Year and Record By	Descriptions	Proximity To Project Site
					relocated during its most recent update	
013363	_	Prehistoric	Isolate: Ineligible	2004 (Robert Porter, CRM TECH)	Two bedrock milling features, each containing one milling slick	Outside
013398	_	Prehistoric	Isolate: Ineligible	2004 (Clarie Frtiz and Patricia Tuck, LSA Associates)	lsolated quartz mano	Outside
013976	_	Prehistoric	lsolate: Ineligible	(Ballester, Daniel, CRM Tech)	lsolated milky quartz biface blade	Outside
014358	-	Prehistoric	lsolate: Ineligible	2004 (Eddy, John J., CRM Tech)	Isolated metate fragment	Outside
015146	008055	Prehistoric	Not evaluated	2006 (Gillean, William R., Author)	Two bedrock mortars	Outside
015330	_	Historic	Determined ineligible through Section 106 process	2006 (Smallwood, Josh, CRM Tech)	Wood-framed residence at 35530 Antelope Road	Outside
015331	_	Historic	Isolate: Ineligible	2006 (Smallwood, Josh, CRM Tech)	Wood-framed residence at 35500 Antelope Road	Outside
019791	010075	Prehistoric	Not evaluated	2011 (R. Porter, CRM TECH)	Three granite boulders each with a single milling slick, associated lithic scatter, and three groundstone artifacts	Outside
019849	010098	Prehistoric	Not evaluated	2011 (R. Porter, CRM TECH)	Four quartz flakes and one piece of quartz shatter; site has been destroyed since recordation	Outside
021027	010892	Prehistoric	Not evaluated	AECOM 2012	Sparse lithic scatter	Outside
023904	011739	Prehistoric	Not evaluated	2014 (K. Moslak, C, Yearyean, Applied EarthWorks)	Lithic scatter with one groundstone metate fragment	Outside
023971	011777	Historic	Not evaluated	2014 (Andrew R Pigniolo, Laguna	Historic refuse scatter	Outside

Table 4.4-2.	Previously	Recorded	Cultural	Resources	within	1.0 N	Mile of the	e Proiect	: Site
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Primary Number (P-33-)	Trinomial (CA-RIV-)	Period	NRHP Eligibility	Year and Record By	Descriptions	Proximity To Project Site
				Mountain Environmental)		
023972	011778	Prehistoric	Not evaluated	2014 (Andrew R Pigniolo, Laguna Mountain Environmental, Inc.)	Sparse lithic scatter	Outside
023973	_	Prehistoric	Isolate: Ineligible	2014 (Andrew R Pigniolo, Laguna Mountain Environmental, Inc.)	Isolated scraper	Outside
024132	011871	Historic	Not evaluated	2015 (Riordan Goodwin, LSA Associates Inc.)	Historic refuse scatter	Outside
024619	—	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	Isolated quartz chopper	Outside
024620	_	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	Isolated milling slick	Outside
024622	—	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	Isolated quartz chopper	Outside
024624	_	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	Isolated quartz projectile point tip	Outside
024632	_	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	lsolated quartz flake	Outside
024634	_	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	Isolated quartz utilized flake	Outside
024638	_	Prehistoric	Isolate: Ineligible	Max Jewett, Atkins (2014)	Isolated quartz pressure flake	Outside
024646	012195	Prehistoric	Not evaluated	2014 (Max Jewett, Atkins, Plute/BP Murrieta Hills LLC)	Bedrock milling slicks with associated lithic and groundstone fragments	Outside

Note: NRHP = National Register of Historic Places.

Native American Coordination

On January 12, 2018, Dudek contacted the Native American Heritage Commission (NAHC) and requested a review of the Sacred Lands File. A response letter was received via email from the NAHC on February 20, 2018. The results of the Sacred Lands File search indicated the presence of Native American cultural resources within the project site and stated that the Pechanga Band of Luiseño Indians should be contacted for additional information on the resources identified within the project site. The NAHC suggested contacting 25 Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the project (see Appendix D). Dudek contacted all groups and/or individuals identified by the NAHC. To date, four responses have been received (see Confidential Appendix D in Appendix D). This outreach was conducted for informational purposes only and does not constitute formal government-to-government consultation as specified by Assembly Bill 52. Further details related to Native American consultation and an analysis of potential impacts to tribal cultural resources are provided in Section 4.15, Tribal Cultural Resources.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans or policies related to cultural or historical resources that are applicable to the project.

State

The California Register of Historical Resources

In California, the term "historical resource" includes, but is not limited to, "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code Section 5020.1[j]). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code Section 5024.1[a]). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below. A resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria (California Public Resources Code Section 5024.1[c][1–4]):

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. Prehistoric resources are those that pre-date written records, while historic resources reflect written records or recorded events of the past. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Health and Safety Code Section 7050.5

California law protects human remains, Native American burials, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains and determined that the remains are not subject to

the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the California Public Resources Code (Section 7050.5[b]). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact NAHC within 24 hours (Section 7050.5[c]). NAHC will notify the "most likely descendant." With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

County of Riverside General Plan

The County of Riverside General Plan Land Use Element specifies the following policies that pertain to the preservation of cultural resources (County of Riverside 2019):

- Policy LU 9.1 [Development should] Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.
- Policy LU 9.4Allow development clustering and/or density transfers in order to preserve open
space, natural resources, cultural resources, and biologically sensitive resources.

County of Riverside Cultural Resource Review Process

If deemed necessary by the County of Riverside's Planning Department, a Phase I Cultural Resource Review is required to be conducted for proposed private development projects within unincorporated Riverside County. These reports should be submitted directly to the office of the County Archaeologist.

Murrieta General Plan 2035

The Conservation Element of the Murrieta General Plan 2035 specifies preservation of historical and cultural resources. The following policies that pertain to historical and cultural resources would apply to the project (City of Murrieta 2011a):

- **Policy CSV-9.1** Identify and protect native trees, trees of historic or cultural significance, and mature trees, consistent with the Tree Preservation Ordinance.
- **Goal CSV-11** Murrieta protects, enhances, and celebrates archaeological, cultural, and historic resources as a way to foster community identity.
 - Policy CSV-11.1 Promote the protection and preservation of archaeological, cultural, historical, and architecturally significant sites, structures, districts, Native American resources, and natural features throughout the community, consistent with the Cultural Resource Preservation Ordinance. Preferred methods of

protection include avoidance of impacts, placing resources in designated open space and allocation of local resources and/or tax credits as feasible.

- **Policy CSV-11.2** Encourage appropriate adaptive reuse of historic structures and sites.
- **Policy CSV-11.3** Promote the designation of eligible resources to the City Register of Cultural Resources, the County Landmarks Program, or other regional, state, or federal programs.
- **Policy CSV-11.4** Encourage the development of programs to educate the community about Murrieta's historic resources and involve the community in historic preservation.
- **Policy CSV-11.5** Comply with state and federal law regarding the identification and protection of archaeological and Native American resources, and consult early with the appropriate tribal governments.
- **Policy CSV-11.6** Investigate the feasibility of establishing a museum or other repository to archive and display Murrieta's archaeological resources.
- **Policy CSV-11.7** Maintain the position of archivist/historian at the Murrieta Public Library, and promote the Library's Heritage Room as a repository for historical information about the Murrieta area.
- **Policy CSV-11.8** Promote the use of historic elements in City parks and public places.
- **Policy CSV-11.9** Exercise sensitivity and respect for all human remains, including cremations, and comply with all applicable state and federal laws regulating human remains.

City of Murrieta Historic Preservation Advisory Commission

The City's Historic Preservation Advisory Commission acts in an advisory capacity to the City Council with regard to the preservation of cultural and archaeological resources within the City's boundaries. Through the City Planner or Community Development Director, the Historic Preservation Advisory Commission makes recommendations to the City Council regarding the designation of cultural resources (e.g., individual properties, archaeological districts, or Historic Murrieta Specific Plan areas) within the City. The Historic Preservation Advisory Commission is also responsible for maintaining the register of designated cultural resources within the City; reviewing land use, redevelopment, municipal improvement, and other planning matters and programs undertaken by the City with regard to cultural resources; providing recommendations to the City's cultural resources; and reviewing applications for certificates of appropriateness related to demolition permits and development plan approval, in compliance with the City's Development Code for designated cultural resources (City of Murrieta 2011b).

City of Murrieta Development Code

The City's Municipal Code Chapter 16 (Development Code) includes Subchapter 16.26.050, Designation Criteria for Cultural Resources Archaeological Districts and Historic Districts, which defines the City's designation criteria for cultural resources as follows (City of Murrieta 2001):

For the purposes of the ordinance codified in this section, an improvement or natural feature may be designated a cultural resource by the city council and any area within the city may be designated as an archaeological district or historic preservation district by the city council if it meets any of the following criteria:

- A. Individual Resource Designation.
 - 1. It exemplifies or reflects special elements of the city's cultural, architectural, aesthetic, social, economic, political, artistic and/or engineering heritage;
 - 2. It is identified with persons, a business use or events significant in local, state or national history;
 - 3. It embodies distinctive characteristics of style. type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
 - 4. It is representative of the notable work of a builder, designer or architect; or
 - 5. Its unique location or singular physical characteristic represents an established and familiar visual feature of a neighborhood, community or the city:
- B. Local District Designation.

A geographic area may be designated as a local archaeological district or historic preservation district if the city council, after hearing(s) finds that all of the requirements set forth below are met. Concurrent with the designation of a historic preservation district, design guidelines shall be developed and shall apply to all properties within the historic preservation district.

- 1. Archaeological District.
 - a. The area is a geographically definable area:
 - b. The area possesses either:
 - 1. A significant concentration or continuity of archaeological resources; or
 - 2. The area is associated with the prehistory of Murrieta.
 - c. The designation of the geographic area as an archaeological district is reasonable, appropriate, and necessary to protect, promote and further the goals and purposes of the ordinance codified in this chapter and is not inconsistent with other goals and policies of the city.
- 2. Historic Preservation District.
 - a. The area is a geographically definable area:
 - b. The area possesses either:
 - 1. A significant concentration or continuity of buildings unified by past events or aesthetically by plan or physical development; or
 - 2. The area is associated with an event, person, or period significant or important to Murrieta history.
 - c. The designation of the geographic area as a historic preservation district is reasonable, appropriate, and necessary to protect, promote and further the goals and purposes of the ordinance codified in this chapter and is not inconsistent with other goals and policies of the city.

- d. Determining Factors. In determining whether to designate a historic preservation district, the following factors shall be considered:
 - 1. District should have integrity of design, setting, materials, workmanship, and association.
 - 2. The collective value of the buildings and structures in a district taken together may be greater than the value of each individual building or structure.
- 3. Contributing Resources.

Contributing resources may be included in a historic preservation district if the city council finds, after a hearing(s) that all of the following requirements are satisfied:

- a. The nominated resource is within a historic preservation district;
- The nominated resource either embodies the significant features and characteristics of the district or adds to the historical associations, architectural qualities or archaeological values identified for the district;
- c. The nominated resource was present during the period of historical significance of the district and relates to the documented historical significance of the district;
- d. The nominated resource possesses historic integrity or is capable of yielding important information about the period of historical significance or the district; and
- e. The nominated resource has important historic or architectural worth, and its designation as a contributing resource is reasonable, appropriate and necessary to protect, promote and further the goals and purposes of the ordinance codified in this chapter.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

- 1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
- 2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- 3. Disturb any human remains, including those interred outside of dedicated cemeteries.

As determined in the Initial Study (Appendix A), the project would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines, Section 15064.5. Thus, the project would have no impact on Threshold 1. Thresholds 2 and 3 are addressed in this Project EIR.

4.4.4 Impacts Analysis

Methodology

Eastern Information Center Records Search

On January 10, 2018, a CHRIS records search was conducted of the project site and a 1.0-mile (1,608-meter) records search buffer (study area) from the Eastern Information Center, which houses cultural resources records for Riverside County. This search included their collections of mapped prehistoric, historic, and built environment resources; Department of Parks and Recreation Site Records; technical reports; and ethnographic references.

Additional consulted sources included historical maps of the study area, the NRHP, the CRHR, the California Historic Property Data File, the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility.

Field Survey

On February 13, 2018, an intensive-level pedestrian survey was conducted on the project site. The survey was conducted using standard archaeological procedures and techniques that meet the Secretary of Interior's standards and guidelines for cultural resources inventory. Survey transects were spaced no more than 15 meters wide and oriented south-north across accessible areas of the project site. Where transects were not feasible, a mixed approach (opportunistic survey) was utilized, selectively examining open ground surface where possible.

The survey examined presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historical artifacts (e.g., metal, glass, ceramics), sediment discolorations that might indicate the presence of a cultural midden, and depressions and other features that might indicate the former presence of structures or buildings. All fieldwork was documented using field notes and iPad technology with close-scale field maps and aerial photographs. Location-specific photographs were taken using an Apple 3rd Generation iPad equipped with 8-mega-pixel resolution and georeferenced PDF maps of the project site.

Historic Topographic Map and Aerial Photography Review

Historic topographic maps and aerial photographs were consulted to understand development of the project site and surrounding properties. Topographic maps are available for the years 1943, 1955, 1962, 1971, 1975, 1979, 1986, 2012, and 2015 (NETR 2018a). Historic aerials are available for the years 1938, 1967, 1978, 1996, 2002, 2005, 2009, 2010, 2012, 2014, and 2016 (NETR 2018b).

The topographic map from 1943 shows that there was a road where the I-215 now runs, just west of the project site. By 1955, the I-215 had been built; however, no significant development within the area is apparent based on this map. Topographic maps from 1962 to present show an increase in roads throughout the area, though general development history is difficult to gauge from these maps.

Aerial images depicting the project site show that in 1938, the only development within the area was a northsouth running road, which became the I-215 freeway sometime in the 1950s. Aerial images from 1967 show no development within the project site. There are a few roads to the east of the I-215 at this time and some possible residential development to the north; however, the overall project site and general vicinity is completely undeveloped. The aerials from 1978 show the apparent construction of the Clinton Keith Road on-ramp and offramp. By 1996, there are several small developments to the north and east of the project site, though there is no development within the project site. Clinton Keith Road, which runs south of the project site, appears to be a dirt road in 1996; though it appears to be paved west of the freeway. Between 2002 and 2005, a large amount of development took place just east of the project site, where a large residential subdivision and a high school were built. Additionally, the North Country Sand and Gravel, immediately east of the project site, is shown in the 2002 aerial. There were also several residential subdivisions built to the southwest and northwest of the project site and a minor increase in residential development to the east and south of the project site since 2005. Presently, the project site remains undeveloped vacant land.

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less-than-Significant Impact with Mitigation Incorporated. As part of the Cultural Resources Inventory Report prepared for the project (Appendix D), a CHRIS records search was conducted at the Eastern Information Center on January 10, 2018. Additionally, a qualified archaeologist conducted an intensive-level pedestrian survey of the project site on February 13, 2018. No archaeological resources were identified within the project site or immediate vicinity as a result of the pedestrian survey or the CHRIS records search.

As previously discussed, the project site has been affected by previous disturbances from past construction activities within the project area. Additionally, no cultural resources were identified during the cultural resource survey. Although several prehistoric archaeological sites have been recorded within the record search area (an area comprised of the project site and a 1-mile buffer), neither the records search nor the pedestrian survey identified any cultural resources within the project site.

Considering these factors, the likelihood of the unanticipated discovery of prehistoric or archaeological deposits within the project site is considered to be low. No additional, archaeological efforts are recommended beyond the standard considerations for the management of unanticipated resources, included as **MM-CR-1** (see Section 4.15). With implementation of **MM-CR-1**, the project would have a less-than-significant impact on archaeological resources.

Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact. As previously discussed, the project site has been affected by previous disturbances from past construction activities within the project area. In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to California Public Resources Code Section 5097.98. The county coroner must be notified of the find immediately. If the remains are determined to be Native American, the county coroner will notify the NAHC, which will determine and notify a most likely descendant. With the permission of the landowner or his/her authorized representative, the most likely descendant may inspect the site of the discovery. The most likely descendant shall complete the inspection within 48 hours of notification by the NAHC. The most likely descendant will have the opportunity to offer recommendations for the disposition of the remains. In the event that unanticipated human remains are discovered, adherence to these regulatory requirements would ensure that impacts associated with human remains would be less than significant and no mitigation is required.

4.4.5 Mitigation Measures

MM-CR-1 Discovery of Archaeological Resources: In the event that archaeological resources (e.g., sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether additional study is warranted. Depending upon the significance of the find, the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under the California Environmental Quality Act, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

4.4.6 Level of Significance After Mitigation

MM-CR-1 would reduce potential impacts to cultural resources to a less-than-significant level.

4.4.7 Cumulative Impacts

Cumulative impacts on cultural resources evaluate whether impacts of the project and related projects, when taken as a whole, substantially diminish the number of historical or archaeological resources within the same or similar context or property type. As discussed throughout this section, the project could have potentially significant impacts to unknown archaeological resources, and mitigation would be required to reduce adverse impacts to less than significant. It is anticipated that cultural resources that are potentially affected by related projects would be subject to the same requirements of CEQA as the project, and that the project applicants would mitigate for their impacts, if applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the project would not contribute to a cumulatively considerable impact associated with cultural resources and cumulative impacts would be less than significant.

4.4.8 References Cited

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4.5 Energy

This section describes the existing setting related to energy, identifies associated regulatory requirements, and evaluates potential energy impacts related to implementation of the proposed Vineyard III Retail Development Project (project). This analysis is based on emission calculations and California Emissions Estimator Model (CalEEMod) outputs presented in the Air Quality and Greenhouse Gas Emissions Analysis Technical Report prepared for the project (included as Appendix B of this Environmental Impact Report [EIR]).

4.5.1 Existing Conditions

Electricity

According to the U.S. Energy Information Administration (EIA), California used approximately 257,268 gigawatt hours of electricity in 2017 (EIA 2019a). By sector in 2017, commercial uses utilized 46% of the state's electricity, followed by 35% for residential uses, and 19% for industrial uses (EIA 2019a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's per-capita electricity use in the commercial sector is lower than any other state except Hawaii (EIA 2018).

Southern California Edison (SCE) provides electricity to the project area. SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and Southern California. According to the California Public Utilities Commission (CPUC), approximately 84 billion kilowatt-hours of electricity were used in SCE's service area in 2017. Demand forecasts anticipate that approximately 75 billion kilowatt-hours of electricity will be used in SCE's service area in 2020 (CPUC 2018).

SCE receives electric power from a variety of sources. According to CPUC's 2018 California Renewables Portfolio Standard Annual Report, 32% of SCE's power came from eligible renewables, such as biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2018). The California Energy Commission (CEC) estimates that about 29% of the state's electricity retail sales in 2017 came from renewable energy (CEC 2016a). The California Renewables Portfolio Standard (RPS) Program establishes a goal for California to increase the amount of electricity generated from renewable energy resources to 20% by 2010, and to 33% by 2020. Recent legislation revised the current RPS target for California to obtain 50% of total retail electricity sales from renewable sources by 2030, with interim targets of 40% by 2024, and 45% by 2027 (CPUC 2016).

Natural Gas

According to the CEC, California used approximately 12,571 million therms¹ of natural gas in 2017 (EIA 2019b). In 2017 (the most recent year for which data is available), by sector, industrial uses utilized 37% of the state's natural gas, followed by 32% from electric power, 19% from residential, 11% from commercial, and 1% from transportation uses (CEC 2018a). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (EIA 2019b).

¹ One Therm is equal to 100,000 British thermal units (BTU) or 100 thousand British thermal units (kBTU).

The Southern California Gas Company (SoCalGas) provides the project with natural gas service. The territory serviced by SoCalGas encompasses approximately 20,000 square miles and more than 500 communities. In the California Energy Demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas's service territory. As of 2017, approximately 7.2 billion therms were used in SoCalGas's service area per year of 19.7 million therms per day. At project buildout (2021), natural gas demand is anticipated to be approximately 7.9 billion therms per year in SoCalGas's service area (CEC 2018b). The total capacity of natural gas available to SoCalGas in 2016 is estimated to have been 3.9 billion cubic feet per day. In 2021, the total capacity available is also estimated to be 3.9 billion cubic feet per day² (California Gas and Electric Utilities 2016). This amount is approximately equivalent to 3.98 billion thousand British thermal units (kBTU) per day or 39.8 million therms per day. Over the course of a year, the available capacity would therefore be 14.5 billion therms per year, which is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas.

Petroleum

According to the CEC, California used approximately 18.6 billion gallons of petroleum in 2017 (EIA 2019c). This equates to a daily use of approximately 51 million gallons of petroleum. By sector, transportation uses utilize approximately 85.5% of the state's petroleum, followed by 11.1% from industrial, 2.5% from commercial, 0.9% from residential, and 0.01% from electric power uses (EIA 2018). In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. Production of petroleum in the United States was 9.7 million barrels per day during April 2015, which was the highest output since April 1971 (CEC 2016b).

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased corporate average fuel economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

² One cubic foot of natural gas has approximately 1,020 BTUs of natural gas or 1.02 kBTUs of natural gas.

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2017). The U.S. Environmental Protection Agency is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in greenhouse gas (GHG) emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program (RFS2) includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel, and set separate volume requirements for each one.
- EISA required the U.S. Environmental Protection Agency to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

State

Warren-Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974, which created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

Senate Bill (SB) 1078 established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) increased the standards set forth in SB 350. The bill establishes that 44% of the total electricity sold per year to retail customers in California be secured from qualifying renewable energy sources by December 31, 2024, with that number increasing to 52% by December 31, 2027, and 60% by December 31, 2030. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from nonrenewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on nonrenewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates cobenefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 4.7, Greenhouse Gas Emissions, of this EIR.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and nonresidential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The 2016 Title 24 building energy efficiency standards, which became effective on January 1, 2017, further reduce energy used in the state. In general, single-family homes built to the 2016 standards are anticipated to use approximately 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015). The 2016 Title 24 building energy efficiency standards became effective January 1, 2017. The 2019 Title 24 Building Energy Efficiency Standards became effective January 1, 2020, which will further reduce energy used and associated GHG emissions compared to the 2016 Title 24 building energy standards. Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018c).

Title 24 also includes Part 11, the California Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011, and instituted mandatory minimum environmental performance standards for all groundup, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The 2016 CALGreen standards became effective on January 1, 2017. The CALGreen 2019 standards will continue to improve upon the 2016 CALGreen standards and became effective on January 1, 2020.

Integrated Energy Policy Report

The CEC is responsible for preparing integrated energy policy reports that identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The CEC's 2015 Integrated Energy Policy Report discusses the state's policy goal to require that new residential construction be designed to achieve zero net energy standards by 2020, and that new nonresidential construction be designed to achieve zero net energy standards by 2030 (CEC 2016b), which is relevant to this EIR. Refer to Section 4.7, Greenhouse Gas Emissions, of this EIR for additional information on the state's zero net energy objectives and how the state's achievement of its objectives would serve to beneficially reduce the project's GHG emissions profile and energy consumption.

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO₂) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emissions standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be those whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emissions standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009 through 2012 standards resulted in a reduction in approximately 22% of GHG emissions compared to emissions from the 2002 fleet, and the 2013 through 2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global-warming gases with requirements for greater numbers of zeroemissions vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global-warming gases and 75% fewer smog-forming emissions (CARB 2011).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code Section 65080, SB 375 requires metropolitan planning organizations (e.g., Southern California Association of Governments) to include a Sustainable Communities Strategy in their regional transportation plan. The main focus of the Sustainable Communities Strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also part of a bigger effort to address other development issues, including transit and vehicle miles traveled (VMT), which influence the consumption of petroleum-based fuels.

Local

Murrieta General Plan 2035

The Conservation Element of the Murrieta General Plan 2035 (General Plan) includes the following goals and policies that may be applicable to the proposed project (City of Murrieta 2011a):

- **Goal CSV-2** Murrieta promotes compliance with requirements from the State and appropriate agencies regarding comprehensive water conservation measures in buildings and landscaping.
 - **Policy CSV-2.1** Ensure that all developments comply with water efficiency requirements, as mandated by the applicable Building Code.
- **Goal CSV-12** Energy conservation and the generation of energy from renewable sources is prioritized as part of an overall strategy to reduce GHG emissions.
 - **Policy CSV-12.1** Ensure that all developments comply with energy efficiency requirements as mandated by the applicable Building Code.
- **Policy CSV-12.3** Support the on-site installation and use of renewable energy generation systems for residential, commercial, institutional, and industrial uses.
- **Goal CSV-13** Solid waste is diverted from landfills through waste reduction, re-use, and recycling.
 - **Policy CSV-13.1** Continue to comply with the landfill diversion requirements of the Integrated Waste Management Program.
 - **Policy CSV-13.2** Ensure that non-residential and multi-family developments provide readily accessible areas for recycling (at a minimum) paper, corrugated cardboard, glass, plastics and metals, as required by California law.
- **Goal CSV-14** A community that encourages and incentivizes the sustainable development of buildings and neighborhoods, particularly with respect to durability, energy and water use, and transportation impacts.
 - **Policy CSV-14.1** Ensure all applicable construction projects comply with the California State Green Building Standards Code.
 - **Policy CSV-14.2** Encourage the integration of other principles of green building into development standards and guidelines, looking for opportunities to realize other benefits such as improved health and increased bicycle transportation.

City of Murrieta Climate Action Plan

Adopted as part of the City of Murrieta's (City's) General Plan 2035, the City's Climate Action Plan (CAP) (City of Murrieta 2011b), which was prepared following California Environmental Quality Act (CEQA) Guidelines Section 15183.5, provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate. With respect to evaluation of projects under CEQA, the CAP states, "Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the CAP would have a less than significant impact on climate change" (City of Murrieta 2011b, p. 1-2). The City's CAP also suggests best practices for implementation and makes recommendations for measuring progress.

The City's CAP is intended to address the main sources of the emissions that cause climate change, which include emissions from the energy consumed in buildings and for transportation. The purpose of the City's CAP is to guide the development, enhancement, and implementation of actions that would reduce the City's GHG emissions by 15% below existing (2009) levels by 2020.

The City of Murrieta prepared a Draft CAP Update as part of the Focused General Plan Update, which was adopted on June 16, 2020. The City's CAP Update provides a comprehensive roadmap of actions that the City will take to achieve GHG emission reductions by 2030, 2035, and 2050. Per CEQA Guidelines Section 15183.5, the City's CAP Update is considered a "Qualified" CAP and may be used for streamlining the analysis of GHG emissions for new development projects. The project as proposed already complies with the following applicable measures in the CAP Consistency Checklist: Measure SW-2, Construction Waste Diversion, and Measure T-2, Installation of Electric Vehicle Service Equipment (City of Murrieta 2020).

4.5.3 Thresholds of Significance

The CEQA Guidelines provide Appendix F and Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provide guidance for evaluating whether a development project may result in significant impacts with regard to energy. Based on Appendix F and Appendix G of the CEQA Guidelines, a project could have a significant impact on energy conservation if the project would:

- 1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- 2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.5.4 Impacts Analysis

Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-than-Significant Impact. The proposed project would consume energy resources during project construction and operation and would intensify development on the project site as compared to the existing site condition. The project also includes standard conditions (SCs) that would reduce energy consumption (see Section 4.5.5, Mitigation Measures).

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment (e.g., computers inside temporary construction trailers, heating, ventilation, and air conditioning) would be provided by SCE. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from petroleum. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be less than significant.

Operational Use

The proposed project's operational phase would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, refrigeration, and electronics. SCE has confirmed availability of electricity supply in the project vicinity to serve the proposed project. CalEEMod version 2016.3.2 was used to analyze electrical usage during operation, and the default value for electricity consumption for the retail and commercial land uses was applied for the project (CAPCOA 2017). Default electricity generation rates in CalEEMod for the proposed land use and climate zone were used. The electricity use for nonresidential buildings was calculated in CalEEMod using energy intensity value (electricity use per square foot per year) assumptions, which were based on the California Commercial End-Use Survey database (CEC 2006).

The project is estimated to have a total electrical demand of 685 megawatt-hours per year. CalEEMod default assumes compliance with the 2016 Title 24 standards. Although the project would be required to be in compliance with the 2019 Title 24 standards at the time of construction, the analysis conservatively did not assume energy reductions to meet the 2019 Title 24 standards. The nonresidential electricity demand in 2017 was 8,346,000 megawatt-hours for Riverside

County (County) (CEC 2016a). Although electricity consumption would increase due to the implementation of the project, the installation of solar photovoltaic systems and other measures would be designed to maximize energy performance, as detailed in **SC-AQ/GHG-1**. SCE, which will provide electricity for the project, is compliant with existing regulations regarding generation of power from renewable sources. In addition, the project would generate electricity from solar panels (estimated at 52,444 kilowatt-hours per year) which would be delivered to SCE and offset electrical requirements. The project will be built in accordance with the current Title 24 standards at the time of construction and CALGreen standards, thus the project's electrical demand would be less than the value reported. Therefore, due to the limited electricity use of the project compared to that generated by the project as a result of the installation of solar panels, incorporation of sustainability features, and the inherent increase in efficiency of building code regulations, the project would not result in a wasteful use of energy. Impacts related to operational electricity use would be less than significant.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection Petroleum, below. Any minor amounts of natural gas that may be consumed as a result of project construction would be temporary and negligible, and would not have an adverse effect; therefore, impacts would be less than significant.

Operational Use

Natural gas consumption during operation would be required for various purposes, including, but not limited to, building heating and cooling. SoCalGas has confirmed availability of natural gas supply in the project vicinity to serve the proposed project.

Default natural gas generation rates in CalEEMod for the proposed land use and climate zone were used. According to these estimations, the project would consume approximately 1.9 million BTU per year. The nonresidential natural gas consumption in 2017 was 139,166 million BTU for the County (CEC 2016a). For disclosure, the project's natural gas consumption during operation would be 0.0014% of the County's nonresidential natural gas consumption total, therefore, there would be available supply to meet the project's demand.

The project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Prior to project approval, the project applicant would ensure that the project would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. Thus, the natural gas consumption of the project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

Construction Use

Petroleum would be consumed throughout construction of the proposed project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities and haul trucks involved in relocating dirt around the project site are assumed to use diesel fuel. Construction workers

would travel to and from the project site throughout the duration of construction. It is assumed that construction workers would travel to and from the project site in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during project construction. CalEEMod was used to estimate construction equipment usage; results are included in Appendix B of this EIR. Based on that analysis, diesel-fueled construction equipment would operate for an estimated 11,658 hours, as summarized in Table 4.5-1.

Table 4.5-1. Hours of Operation for Construction Equipment

Phase	Hours of Equipment Use
Site Preparation	160
Grading	2,560
Trenching	240
Building Construction	8,370
Paving	200
Architectural Coating	128
Total	11,658

Source: Appendix B.

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2018). The estimated diesel fuel use from construction equipment is shown in Table 4.5-2.

Table 4.5-2. Construction Equipment Diesel Demand

Phase	Pieces of Equipment ^a	Equipment CO ₂ (MT)ª	kg CO ₂ / Gallon ^b	Gallons
Site Preparation	4	10.67	10.21	1,045.04
Grading	5	57.99	10.21	5,680.21
Trenching	3	5.00	10.21	489.60
Building Construction	13	214.15	10.21	20,974.91
Paving	5	3.55	10.21	347.64
Architectural Coating	2	2.72	10.21	266.75
	·	•	Total ^o	28,804.14

Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

^a Source: Appendix B.

^b Source: The Climate Registry 2018.

^c Totals may not sum due to rounding.

Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled.

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 4.5-3, Table 4.5-4, and Table 4.5-5.

Table 4.5-3. Construction Worker Vehicle Gasoline Demand

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Site Preparation	50	0.30	8.78	33.90
Grading	910	5.33	8.78	607.40
Trenching	588	0.36	8.78	40.67
Building Construction	4,270	67.54	8.78	7,691.94
Paving	70	0.42	8.78	47.46
Architectural Coating	216	1.14	8.78	130.17
			Total	8,551.54

Sources:

a Appendix B.

^b The Climate Registry 2018.

Notes: CO₂ = carbon dioxide; MT = metric ton; kg = kilogram.

Table 4.5-4. Construction Vendor Truck Diesel Demand

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg/CO ₂ /Gallon ^b	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	130	1.72	10.21	168.79
Trenching	0	0.00	10.21	0.00
Building Construction	840	30.05	10.21	2,943.12
Paving	3,100	41.74	10.21	4,087.67
Architectural Coating	0	0.00	10.21	0.00
			Total	7,199.58

Sources:

a Appendix B.

^b The Climate Registry 2018.

Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Table 4.5-5. Construction Haul Truck Diesel Demand

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	5,000	59.50	10.21	5,827.19
Trenching	0	0.00	10.21	0.00
Building Construction	0	0.00	10.21	0.00
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
			Total	5,827.19

Sources:

^a Appendix B.

^b The Climate Registry 2018.

Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

As shown in Tables 4.5-2 through 4.5-5, the project is estimated to consume 50,382 gallons of petroleum during the construction phase. By comparison, approximately 12.2 billion gallons of petroleum would be consumed in California over the course of the project's construction phase based on the California daily petroleum consumption estimate of approximately 52.9 million gallons per day (CEC 2016c). Also, for comparison, countywide total petroleum use by vehicles is expected to be 1.0 billion gallons per year by 2019 (CARB 2018). For disclosure, the proposed project's petroleum consumption during the construction phase would be 0.0004% of the state's consumption over the course of the project's construction phase. The project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, CARB's Truck and Bus Regulation, and federal fuel efficiency requirements, which would minimize fuel consumption. Also, in accordance with mitigation measure **(MM)** AQ-1 (see Section 4.2, Air Quality), the project would utilize Tier 4 Interim construction equipment, which would reduce petroleum usage. Therefore, because petroleum use during construction would be temporary and relatively minimal in comparison to overall usage, and would not be wasteful or inefficient, impacts would be less than significant.

Operational Use

Mobile sources for the proposed project would primarily be motor vehicles (automobiles, light-duty trucks, and heavy-duty delivery trucks) traveling to and from the project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. Based on the project-specific Traffic Impact Analysis (TIA) prepared by Trames Solutions Inc. (Appendix I of this EIR), the proposed development is anticipated to generate 4,433 employee, customer, and delivery primary trips, which was assumed for the daily trip rate.³ The peak daily trip rate was conservatively assumed for the daily trip rate over 365 days per year. Emissions from the mobile sources during operation of the project were estimated using a spreadsheet-based model and emission factors from the CARB EMFAC2017 and U.S. Environmental Protection Agency AP-42 factors for paved road dust generation. The CalEEMod default trip lengths for delivery, customer, and employee trip lengths were assumed.

Petroleum fuel consumption associated with motor vehicles traveling to and from the project site during operation is a function of VMT. The annual VMT attributable to the proposed project is expected to be 16.3 million VMT per year (see Air Quality and Greenhouse Gas Emissions Calculations in Appendix B). Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO₂ emissions from the retail and commercial land use type to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. The employee and customer vehicles were assumed to be 92% gasoline-powered and 8% diesel-powered.

Calculations for annual mobile-source fuel consumption are provided in Table 4.5-6.

Table 4.5-6	. Petroleum	Consumption -	Operation	(2021)
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Fuel	Vehicle CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Gasoline	4968.09	8.78	565,841
Diesel	403.90	10.21	39,560
		Total	605,401

Sources:

^a Appendix B.

³ The trip rates expected to be generated by the project were estimated using Institute of Transportation Engineers Trip Generation Manual, 9th Edition, for the tire store; shopping center; high turnover sit-down restaurant; fast food with drive through; and bank with drive through land use categories (Institute of Transportation Engineers Code 848, 820, 932, 934, and 912, respectively) (ITE 2012), which accounts for "an integrated group of commercial establishments," as it is proposed for the site. The trip rate expected to be generated by the automobile parts and service center land use was estimated using Institute of Transportation Engineers Trip Generation Manual, 10th Edition (ITE 2017).

The Climate Registry 2018.
 Notes: CO₂ = carbon dioxide; MT = metric ton; kg = kilogram.

Mobile sources from the project would result in approximately 605,401 gallons of gasoline per year beginning in 2021. By comparison, California as a whole consumes approximately 19.3 billion gallons of petroleum per year (CEC 2016c). Countywide total petroleum use by vehicles is expected to be 987 million gallons per year by 2021 (CARB 2018). In addition, as part of **SC-AQ/GHG-1**, the proposed project would install electric vehicle–charging stations (5% of the total parking spaces), exceeding the City's CAP Update Measure T-2, requiring 3% of parking spaces be equipped with electric vehicle-charging stations.

Over the lifetime of the proposed project, the fuel efficiency of the vehicles being used by the employees is expected to increase, as is the number of electric cars in use. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards. The approach also includes efforts to support and accelerate the number of plug-in hybrids and zero-emissions vehicles in California (CARB 2013). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by 2020, and 13% by 2035 for light-duty passenger vehicles in the planning area for the Southern California Association of Governments. The Southern California Association of Governments. The Southern California Association of petroleum use by 2020 and an 18% reduction by 2030 (SCAG 2016). As such, operation of the project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

In summary, although the project would increase petroleum use during operation as a result of employees and customers traveling to and from the project site, the use would be a small fraction of the statewide use and, due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the project would not be considered inefficient or wasteful and would result in a less-than-significant impact.

Conclusion

Implementation of the project would increase the demand for electricity and natural gas at the project site and petroleum consumption in the region during construction and operation. However, the electrical and natural gas consumption demands of the project during construction and operation would conform to the state's Title 24 and to CALGreen standards, which implement conservation measures. Further, as discussed in the impacts analysis discussion of Section 4.16, Utilities and Service Systems, and Section 4.7, the proposed project would not directly require the construction of new energy generation or supply facilities, and providers of electricity and natural gas are in compliance with regulatory requirements that assist in conservation, including requirements that electrical providers achieve state-mandated renewal energy production requirements. The project's petroleum consumption demands during construction and operation would conform to CARB's Airborne Toxics Control Measure. Furthermore, the project would implement MM-AQ-1. With compliance with the above-referenced mitigation measure, Title 24 conservation standards, and other regulatory requirements, as well as implementation of the additional sustainable features described in SC-AQ/GHG-1, the proposed project would not be wasteful or inefficient or unnecessarily consume energy resources during construction or operation and would result in a less-than-significant impact with respect to consumption of energy resources.

Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less-than-Significant Impact. Construction and operation of the proposed project would not conflict with state or local plans for renewable energy or energy efficiency. The project would be consistent with the City's CAP strategies, as discussed in Table 4.7-6, Consistency with City of Murrieta Climate Action Plan Strategies, of Section 4.7; consistent with the City's CAP Strategy Goals, as discussed in Table 4.7-7, Consistency with Applicable City of Murrieta Climate Action Plan Strategy Goals, of Section 4.7; consistent with the City's CAP Update, as discussed in Table 4.7-8, Consistency with the City's Climate Action Plan Update Consistency Checklist, of Section 4.7; and consistent with the City's General Plan policies, as discussed in Table 4.7-9, Consistency with Applicable City of Murrieta General Plan Policies, of Section 4.7. Title 24 of the California Code of Regulations contains energy efficiency standards for residential and nonresidential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.

Part 6 of Title 24 specifically establishes energy efficiency standards for residential and nonresidential buildings constructed in the State of California in order to reduce energy demand and consumption. The proposed project would comply with Title 24, Part 6, per state regulations. In addition, per **SC-AQ/GHG-1**, the project applicant would install the solar photovoltaic systems to generate renewable energy and install electric vehicle-charging stations.

As discussed under the previous threshold, the project would result in an increased demand for electricity, natural gas, and petroleum. Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the proposed project under CALGreen. In order to comply with Title 24, Part 11 mandatory compliance measures, the project applicant would implement the following voluntary measures (SC-AQ/GHG-1): (a) provide parking spaces for electric vehicles/clean air/van pools; (b) install solar photovoltaic system; (c) install drought-tolerant vegetation and water-efficient irrigation system; and, (d) provide recycling bins for each tenant. Compliance with all of these mandatory measures would decrease the consumption of electricity, natural gas, and petroleum.

In addition, energy service to the project site would be provided to meet the needs of the project as required by the California Public Utilities Code, which obligates electricity and natural gas providers to provide service to existing and potential customers. Because the project would comply with Title 24, Part 6 and Part 11, no conflict with existing energy standards and regulations would occur.

The project would comply with regulatory requirements. As such, the project would not conflict with or obstruct an applicable state or local plan for renewable energy or energy efficiency, and impacts would be considered less than significant.

4.5.5 Mitigation Measures

Impacts related to energy would be less than significant. Therefore, no mitigation measures are necessary.

Standard Conditions

The following standard condition would be incorporated into the project:

- SC-AQ/GHG-1 To reduce construction and operational emissions to the extent feasible, the project would incorporate the following:
 - Operational landscaping maintenance equipment shall be electric, operated with plugs on exteriors of each building to allow for recharging.

Vineyard III Retail Development Project

- Each tenant shall be provided a recycling bin slot in their trash enclosure areas for recycling.
- Solar shall be installed on building rooftops totaling 2,100 square feet, which would generate a system output of 52,444 kilowatt-hours per year.
- The remaining rooftops shall be designed to accommodate the additional structural load of the solar panels to allow for the flexibility for possible future installation.
- A total of 10 electric vehicle-charging stations shall be installed in the parking lot: 8 electric vehicle-charging stations and 2 Americans with Disabilities Act-compliant electric vehicle-charging stations, with 4 connected to a solar-powered source.
- Six parking spaces shall be marked for electric vehicle/clean air/van pool parking only, and two Americans with Disabilities Act-compliant parking spaces shall be marked for electric vehicle/clean air/van pool parking only.
- The project shall install drought-tolerant vegetation and water-efficient irrigation systems.
- Non-potable irrigation lines shall be installed in preparation for future recycled water.

4.5.6 Level of Significance After Mitigation

The proposed project would comply with regulatory requirements and would comprise a small fraction of the estimated City nonresidential energy demand in 2021, the year when the project would become operational. Furthermore, the project applicant would include various SCs that would further reduce the project's energy consumption. As such, the project would not result in the wasteful or inefficient use of electricity, and impacts would be **less than significant**.

Additionally, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the City's General Plan policies. Also, the proposed project would be consistent with the City's CAP. As a result, impacts would be **less than significant**.

4.5.7 Cumulative Impacts

Cumulative projects that could exacerbate the proposed project's impacts include any projects that could result in wasteful, inefficient, or unnecessary use of energy. Future projects would be subject to CEQA and would require an energy analysis; consistency with existing plans and policies for renewable energy and energy efficiency; and implementation of control measures and mitigation, if necessary, to avoid wasteful, inefficient, or unnecessary consumption of energy resources. Furthermore, the project would minimize construction and operational activities through energy reduction strategies pursuant to SC-AQ/GHG-1. Therefore, the proposed project's contribution to cumulative impacts would not be cumulatively considerable, and cumulative impacts to energy use would be less than significant.

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4.6 Geology and Soils

This section describes the existing geological setting of the proposed Vineyard III Retail Development Project (project) site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. This analysis was completed, in part, based on a geotechnical investigation conducted for the project site (included as Appendix E of this Environmental Impact Report [EIR]), the Murrieta General Plan 2035 EIR (City of Murrieta 2011a), the Murrieta General Plan 2035 (General Plan) (City of Murrieta 2011b), the project-specific water quality management plan (Appendix G-1 of this EIR), and project-specific hydrology report (Appendix G-2 of this EIR).

4.6.1 Existing Conditions

Site Description

The project site is an approximately 6.65-acre undeveloped property nestled between the northbound on-ramp to Interstate 215, the vacated section of Antelope Road, and Clinton Keith Road in the northern part of the City of Murrieta (City), California. In September 2017, Geotechnical Professionals Inc. conducted a field investigation to determine the suitability of the site for development (see Appendix E). The investigation found that, prior to about 2009, the site was undisturbed and appeared to be used for farming. The site's ground surface generally sloped gently from an elevation of 1,546 feet above mean sea level in the north to 1,526 feet above mean sea level in the south. Under the existing conditions, the project site remains undeveloped with sparse vegetation over the area and the vacated section of Antelope Road is located on the project site's eastern boundary.

Geologic Conditions

The project site is located within the northern portion of the Peninsular Ranges, a group of mountain ranges that stretch from Southern California to the southern tip of the Baja California Peninsula. The northern portion of the Peninsular Ranges is characterized by steep, elongated valleys and ranges that generally trend northwestward from the tip of Baja California to the Los Angeles Basin, subparallel to faults branching off the San Andreas Fault. The City is situated within two structural blocks or subdivisions of the Peninsular Range province that are separated by the active Elsinore fault zone, which forms a complex pull-apart basin known as the Temecula Valley that is filled with sedimentary deposits. Regional geologic features include the Santa Ana Mountains and the Santa Rosa Plateau directly to the west, the Santa Margarita and Agua Tibia Ranges approximately 12 to 14 miles to the south, and the San Jacinto Ranges approximately 35 miles to the east.

More specifically, the project site is situated on the Perris Structural Block, within the Elsinore Fault zone (Kennedy 1977). The Elsinore Fault zone is comprised of northwest-trending strike-slip faults and is part of the greater San Andreas Fault system. The Elsinore Fault zone stretches from the City of Corona in Riverside County, southeast approximately 124 miles to just beyond the international border with Mexico (Kennedy 1977). According to surficial geological mapping by Kennedy et al. (2003) at a scale of 1:24,000, the project site is underlain by Cretaceous (approximately 145 million years ago to 66 million years ago) plutonic igneous rocks that include gabbro (map unit Kgb) and monzogranites to granodiorites (map unit Kpvg). The nearest section of the Elsinore Fault is 3.4 miles southwest of the project site (Appendix E).

Soils

The project site's subsurface profile consists of descending layers of topsoil, weathered organic bedrock, and less weathered organic bedrock. The uppermost topsoil layer contains the following three soil series:

- **Cajalco Series** consists of well-drained, moderately permeable soils formed in alluvium from igneous rock. These soils are typically found in foothills and interior valleys (USDA 2020). This soils series makes up the northern and western portions of the project site.
- Las Posas Series consists of well-drained, moderately deep soils formed from igneous rocks. These soils are typically found within mountainous uplands and foothills (USDA 2020). This soil series makes up the southern and eastern portions of the project site.
- **Cieneba Series** consists of excessively drained, very shallow and shallow soils formed from granitic rock. These soils are typically found on hills and mountains (USDA 2018). This soil series makes up a small portion of the southern tip of the project site.

While the exact composition of the on-site soils varies by location, the near-surface soil materials generally consist of silty sands, sands, and sandy silts interspersed with varying amounts of gravel. The soils exhibit varying densities ranging from very loose to very dense. These near-surface soils extend approximately 5 to 10 feet below the ground surface until a layer of moderately weathered granitic bedrock is encountered. This moderately weathered layer of bedrock is further underlain by a less-weathered layer of granitic bedrock at depths of 31 to 38 feet below ground surface. Localized cobbles and boulders are present both above and below the ground surface, with some aboveground boulders as large as 15 feet in diameter.

Under the existing conditions, the majority of the project site is covered with low-growing shrubs and grasses. A small linear portion of the eastern side of the project site contains exposed soils resulting from previous use as an access road. The vacated section of Antelope Road runs parallel to this exposed area and consists of a moderately weathered asphalt road.

Geologic Hazards

Geologic hazards are those that may pose serious problems to development and include unstable slopes, slideprone areas, and liquefiable soils. The most common geologic hazards within the City are expansive soils, collapsed soils, loading settlement, subsidence, and hazardous minerals/radon. There have been reported cases of expansive clay layers within the Pauba formation and Alluvial-Valley deposits (City of Murrieta 2011a).

The project site, like the rest of Southern California, is located within a seismically active region. Based on published data, the most significant known active fault zones that are capable of seismic ground shaking and can impact the site are the Elsinore Fault zone to the southwest and the San Jacinto Fault zone to the east. The Wildomar Fault thrust of the Elsinore Fault zone is closest to the site at approximately 3.4 miles to the southwest and is capable of generating an earthquake of magnitude 7.0. No faults are known to exist on the project site, and no known faults are mapped trending toward the site (City of Murrieta 2011a).

The site is expected to experience strong ground shaking within the life of the project. The project site is not within areas mapped as susceptible to subsidence, landslides, or liquefaction, and is not in an earthquake fault zone, as depicted in Exhibit 5.8-2, Subsidence Susceptibility Map; Exhibit 5.8-3, Alquist-Priolo Earthquake Fault Zone Map; Exhibit 5.8-4, Riverside County Fault Hazard Map; and Exhibit 5.8-5, Liquefaction Susceptibility Map, of the Murrieta General Plan 2035 Final EIR (City of Murrieta 2011a). Groundwater is not reported present on site as determined in the geotechnical investigation (Appendix E).

4.6.2 Relevant Plans, Policies, and Ordinances

Federal

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration's Excavation and Trenching standard, Title 29 of the Code of Federal Regulations, Part 1926.650, covers requirements for excavation and trenching operations. The Occupational Safety and Health Administration requires that all excavations where employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (SHMA) (California Public Resources Code, Section 2690 et seq.) directs the California Department of Conservation, California Geological Survey, to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

The SHMA provides a statewide seismic hazard mapping and technical advisory program to assist cities and counties in fulfilling their responsibilities for protecting public health and safety from the effects of strong ground shaking, liquefaction, landslides, other ground failure, and other seismic hazards caused by earthquakes. Mapping and other information generated pursuant to the SHMA is made available to local governments for planning and development purposes. The state requires local governments to incorporate site-specific geotechnical hazard investigations and associated hazard mitigation as part of the local construction permit approval process, and requires the agent for a property seller, or the seller if acting without an agent, to disclose to any prospective buyer if the property is located within a seismic hazard zone. The state geologist is responsible for compiling seismic hazard zone maps. The SHMA specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Code

State regulations protecting structures from geo-seismic hazards are contained in the California Code of Regulations, Title 24, Part 2 (the California Building Code [CBC]). The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code published by the International Code Conference. The CBC contains California amendments based on the American Society of Civil Engineers Minimum Design Standards 7-05, which provides requirements for general structural design and includes means for determining earthquake loads and other loads (such as wind loads) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

State Earthquake Protection Law

The State Earthquake Protection Law (California Health and Safety Code 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in the CBC. The CBC requires a site-specific geotechnical study to address seismic issues and identify seismic factors that must be considered in structural design. Because the project site is not located within an Alquist–Priolo Earthquake Fault Zone (Exhibit 5.8-3, Alquist-Priolo Earthquake Fault Zone Map, in City of Murrieta 2011a), no special provisions would be required for project development related to fault rupture.

California Environmental Quality Act

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations, notably, the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.). This report satisfies project requirements in accordance with CEQA and California Public Resources Code Section 5097.5. This analysis also complies with guidelines and significance criteria specified by the Society of Vertebrate Paleontology (SVP 2010).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or ... unique geological feature[s]" (14 CCR 15000 et seq.). This provision covers fossils of signal importance—remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group—as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that, generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (14 CCR 15064.5 [a][3][D]). Paleontological resources would fall within this category. The California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, also regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

Local

Murrieta General Plan 2035

The Safety Element of the City's General Plan 2035 describes hazards that exist in Murrieta and policies and goals for addressing them. This includes geologic and soils conditions and the associated potential hazards. The following policies may be applicable to the proposed project (City of Murrieta 2011b):

Policy SAF-1.1	Encourage that areas be dedicated as open space when necessary and appropriate to protect property, public health, and safety from hazards such as earthquake fault zones or flood plains.
Policy SAF-2.1	Prior to site development, projects located in areas where liquefaction, subsidence, landslide and fissuring are considered hazards shall be required to prepare geologic reports addressing site conditions, potential risk, and mitigation, to the satisfaction of the City Engineer.
Policy SAF-2.2	Require that all new development comply with the Alquist-Priolo Earthquake Fault Zoning Act.
Policy SAF-2.3	Seek to maintain emergency access in the event of an earthquake by engineering roadways to reduce damage to them.

4.6.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to geology and soils are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to geology and soils would occur if the project would:

- 1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - a. 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 based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.
 - b. Strong seismic ground shaking.
 - c. Seismic-related ground failure, including liquefaction.
 - d. Landslides.
- 2. Result in substantial soil erosion or the loss of topsoil.
- 3. 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.
- 4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- 5. 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.
- 6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As determined in the Initial Study (Appendix A of this EIR), the project would result in less-than-significant impacts associated with Threshold 1 (a-d), and no impacts associated with Threshold 3, 4, or 5. Therefore, Thresholds 1 (a-d), 3, 4, and 5 will not be further discussed in this section, and this EIR only analyzes impacts associated with Threshold 2 related to soil erosion and the loss of topsoil, and Threshold 6, paleontological resources.

4.6.4 Impacts Analysis

Would the project result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact. The proposed project would involve construction of a commercial retail center on undeveloped land. The soils vary from sandy silt and silty sand and there are varying levels of vegetation on the project site. Existing drainage patterns carry stormwater runoff toward four retention basins (further discussed in Section 4.9, Hydrology and Water Quality, of this EIR). Under current conditions, low to moderate levels of erosion occur on site where soil has been exposed as a result of previous disturbance. Some measures are currently in place to reduce the transport of sediments off site and into local storm drains. Straw waddles have been deployed along the project site's southern boundary where the site slopes towards Clinton Keith Road. The proposed project construction could lead to disturbed soils that can have greater erosion and loss of topsoil. Project construction and operation are analyzed below for potential impacts associated with soil erosion.

Construction

Project construction would involve the use of heavy machinery on site, including bulldozers, front loaders, track hoes, trenchers, semi-trucks, and various other large equipment that would be used for site preparation and construction activities. Excavation and grading for the proposed project would result in disturbance of existing sediments, such that erosion could be exacerbated during precipitation or high-wind events.

Because the project would involve construction within an area that is larger than 1 acre, the project applicant would be required to apply for and receive coverage under the current General Construction Permit. Coverage under the General Construction Permit would require adherence to a variety of conditions designed to protect receiving water quality from degradation that could otherwise result from construction activities, as specified in a project-specific Stormwater Pollution Prevention Plan (SWPPP). Conditions would include adherence to sediment and stormwater pollutant control best management practices (BMPs), effluent monitoring and compliance, post-construction-period requirements, worker training, and various other measures designed to minimize potential for soil erosion and loss of top soil.

In addition to requirements of the General Construction Permit, the project would be required to adhere to relevant construction practices required under the City Municipal Code, including the Jurisdictional Runoff Management Program and Erosion/Sediment Control requirements. Stormwater BMPs would include those recommended by the California Stormwater Quality Association (further discussed in Section 4.9 of this EIR).

In addition to the SWPPP mandated by the National Pollutant Discharge Elimination System and to City Municipal Code requirements, the project would be subject to the requirements of the City's Stormwater Management Plan, the Santa Margarita Region Watershed Protection Program, and the Upper Santa Margarita Integrated Regional Water Management Plan. With adherence to these regulations and implementation of the SWPPP and BMPs, project construction would have a less-than-significant impact associated with soil erosion and loss of top soil.

Operation

In accordance with requirements of the Municipal Separate Storm Sewer System Permit for the Santa Margarita Region and San Diego Regional Water Quality Control Board Order No. R9-2010-0016, a project-specific water quality management plan has been prepared for the project site (Appendix G-1). The Water Quality Management Plan is further discussed in Section 4.9 of this EIR. Upon project implementation, the site would be graded and paved, greatly reducing the possibility for soil erosion or loss of topsoil compared to current conditions.

The project site is underlain by dense bedrock at depths of 31 to 38 feet below grading level; therefore, soil infiltration would be limited in its effectiveness. To compensate for this lack of natural infiltration, project design would involve use of biofiltration drainage management areas. For impervious pavement, the project would grade select areas into landscaped BMPs consisting of bio-retention areas located around the perimeter of the parking lot, and BMP bio-retention planters located within the parking lot. There would be four bio-retention areas on the site: one in the north, one in the southwest corner, and two in the southern portion of the site. The bio-retention basins would treat and meet hydromodification requirements, including a 36-inch layer of biofiltration soil media, a 12- to 18-inch layer of gravel, and an underlying perforated subdrain that would flow into the storm drain system. Within the parking lot, areas would be graded to flow into parking lot bio-retention alone is too small to meet hydromodification requirements, would be used to supplement storage and serve as low-impact-development BMPs. Treatment control BMPs would be designed to remove more than 80% of the priority pollutants, including bacteria, metals, organic compounds, sediment, trash, and oil/grease.

Summary

Project grading and construction would be completed in accordance with a SWPPP, as mandated by the National Pollutant Discharge Elimination System, which would include standard BMPs to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. Surface water runoff during project operation would be managed by low-impact-development BMPs, including bio-retention basins, tree wells, planter boxes, and detention basins. These features would be designed to remove at least 80% of the priority pollutants from on-site runoff prior to discharge into the storm drain system. As a result, impacts associated with soil erosion and loss of top soil would be less than significant.

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact. A qualified crossed-trained archaeologist/paleontologist conducted a paleontological survey of the area northeast of the Interstate 215 and Clinton Keith Road interchange on June 13, 2018, using standard paleontological procedures and techniques. The survey methods consisted of a pedestrian survey conducted in 15-meter-wide transects across the project site. Where transects were not feasible, they were not used. Instead, a mixed approach (opportunistic survey) was used, selectively examining open ground surface where possible. The project site is within an area that has been extensively impacted by grading activities; there are several spoils piles throughout the site, and large areas that have been graded.

In addition to the field survey of the project site, a paleontological records search from the Natural History Museum of Los Angeles County (LACM), dated October 1, 2018, for an adjacent parcel with the same mapped geological units was used for this analysis (McLeod, pers. comm. 2018). The project site was included in the 1-mile radius buffer of the 2018 LACM records search. According to the records search, no paleontological localities are documented within a 1-mile radius of the project boundaries, and the project site is underlain by Mesozoic (approximately 252 million years ago to 66 million years ago), intrusive (plutonic) igneous rocks that have no paleontological sensitivity (McLeod, pers. comm. 2018). Therefore, the LACM did not recommend a paleontological mitigation program.

There are various classification schemes used to determine the paleontological sensitivity of geological units. According to the Society of Vertebrate Paleontology's guidelines for assessment of paleontological resources (SVP 2010), plutonic igneous rocks have no paleontological potential to yield significant paleontological resources. In addition, a review of the Riverside County Land Information System database indicates that the project site is underlain by geological units of low paleontological potential (County of Riverside 2018). Note that the Riverside County Land Information System database is a coarse-scale planning-level tool used by Riverside County that is based on geological data available at the time of its creation.

No paleontological resources were identified within the project site as a result of the field survey, institutional records search, or the desktop geological and paleontological review, and the project site is not anticipated to be underlain by unique geologic features. The project site is mapped as being underlain by Cretaceous plutonic igneous rocks that have no potential to yield significant paleontological resources. As such, no mitigation for paleontological resources is necessary, and impacts would be less than significant. In the extremely unlikely event that intact paleontological resources are located on the project site, ground-disturbing activities associated with construction of the proposed project, such as grading during site preparation, should be halted and a qualified paleontologist retained to evaluate the resource and determine the significance.

4.6.5 Mitigation Measures

The project would not result in significant impacts, and no mitigation measures are necessary.

4.6.6 Level of Significance After Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.6.7 Cumulative Impacts

Potential cumulative impacts on geology and soils result from projects that combine to create geologic hazards, including unstable geologic conditions, or substantially contribute to erosion. Most geology and soil hazards associated with development would be site-specific and can be mitigated on a project-by-project basis. Such hazards include exposure of people or structures to rupture of an earthquake fault, liquefaction, landslides, unstable geologic units, and expansive soils. Individual project mitigation for these hazards would ensure that there are no residual cumulative impacts. Proper engineering design, use of standard construction practices, adherence to erosion control standards, implementation of BMPs required by the SWPPP, and implementation of the recommendations found in their respective geotechnical reports would ensure that the potential for cumulatively considerable geological impacts would be less than significant. Since geologic hazards are site-specific and not necessarily cumulative, the proposed project would not have a cumulatively considerable impact when considered in combination with other project development.

Excavation and ground-disturbing activities during construction of the proposed project and cumulative projects could potentially leave loose soil exposed to the erosive forces of rainfall and high winds, which would increase the potential for soil erosion and loss of topsoil. Adequate drainage on site is critical for reducing potential soil erosion and the loss of topsoil. The project site should be graded and maintained such that surface drainage is directed away from structures in accordance with CBC Section 1804.3 and other applicable standards. Earth-disturbing activities associated with construction would be temporary, and with compliance with the General Construction Permit and BMPs outlined in the SWPPP, cumulative impacts related to soil erosion and the loss of topsoil would be less than significant. Furthermore, implementation of BMPs and proposed drainage facilities would ensure that cumulative impacts related to soil erosion and the loss of topsoil.

Since the project has no paleontological sensitivity due to the presence of plutonic igneous rocks on site, there are no anticipated cumulative impacts to paleontological resources with project implementation.

4.6.8 References Cited

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4.7 Greenhouse Gas Emissions

This section describes the existing setting of the project site related to greenhouse gas (GHG) emissions and climate change, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). The GHG emissions analysis is based on the Air Quality and Greenhouse Gas Emissions Analysis Technical Report prepared for the proposed project (included as Appendix B of this Environmental Impact Report [EIR]).

4.7.1 Existing Conditions

Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and is the most significant driver of observed climate change (EPA 2017a; IPCC 2013). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013).

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and

nitrogen trifluoride (see also California Environmental Quality Act [CEQA] Guidelines Section 15364.5). Some GHGs, such as CO₂, CH₄, and N₂O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO₂, include fluorinated gases, such as HFCs, PFCs, and SF₆, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.¹

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH₄ is produced through both natural and human activities. CH₄ is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N₂O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N₂O. Sources of N₂O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N₂O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- Sulfur Hexafluoride: SF₆ is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF₆ is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** Nitrogen trifluoride is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

¹ The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change's Second Assessment Report (IPCC 1995) and Fourth Assessment Report (IPCC 2007), CARB's Glossary of Air Pollution Terms (CARB 2016), and EPA's Glossary of Climate Change Terms (EPA 2016).

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O_3 .

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3 , which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3 , which is created by the interaction between solar ultraviolet radiation and molecular oxygen, plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3 , due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2016). The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO₂; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO₂ equivalent (CO₂e).

The current version of the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2) assumes that the GWP for CH₄ is 25 (so emissions of 1 MT of CH₄ are equivalent to emissions of 25 MT of CO₂), and the GWP for N₂O is 298, based on the Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the proposed project.

Sources of Greenhouse Gas Emissions

Anthropogenic GHG emissions worldwide in 2017 (the most recent year for which data is available) totaled approximately 50,860 million metric tons (MMT) of CO₂e, excluding land use change and forestry (PBL 2018). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,290 MMT CO₂e (PBL 2018).

Per the U.S. Environmental Agency's (EPA's) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018 (EPA 2020), total United States GHG emissions were approximately 6,676.6 MMT CO₂e in 2018. The primary GHG emitted by human activities in the United States was CO₂, which represented approximately 81.3% of total GHG emissions (5,428.1MMT CO₂e). The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO₂ emissions in 2018 (5,031.8 MMT CO₂e). Relative to 1990, gross United States GHG emissions in 2018 are higher by 3.7%, down from a high of 15.2% above 1990 levels in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188.4 MMT CO₂e) and overall, net emissions in 2018 were 10.2% below 2005 levels (EPA 2020).

According to California's 2000–2017 GHG emissions inventory (2019 edition), California emitted 424 MMT CO₂e in 2017, including emissions resulting from out-of-state electrical generation (CARB 2019). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2017 are presented in Table 4.7-1, Greenhouse Gas Emissions Sources in California.

Source Category	Annual GHG Emissions (MMT CO ₂ e)	Percent of Total ^a
Transportation	169.86	40%
Industrial	89.40	21%
Electric power ^b	62.39	15%
Agriculture	32.42	8%
Residential	26.00	6%
Commercial	15.14	4%
High GWP substances	19.99	5%
Recycling and waste	8.89	2%
Total	424.10	100%

Table 4.7-1. Greenhouse Gas Emissions Sources in California

Source: CARB 2019.

Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent per year; GWP = global warming potential. Emissions reflect the 2017 California GHG inventory.

^a Percentage of total has been rounded, and total does not sum due to rounding.

^b Includes emissions associated with imported electricity, which account for 23.94 MMT CO₂e annually.

Between 2000 and 2017, per-capita GHG emissions in California have dropped from a peak of 14.1 MT per person in 2001 to 10.7 MT per person in 2017, representing a 24% decrease. In addition, total GHG emissions in 2017 were approximately 5 MMT CO_2e less than 2016 emissions (CARB 2019).

The City of Murrieta (City) community-wide GHG emissions inventory is summarized in Table 4.7-2. Transportationrelated activities account for the majority of the City's GHG emissions (48%). Approximately 24% of the City's community-wide GHG emissions are attributed to residential uses. Commercial uses account for approximately 15%. Office, business park, civic/institutional, industrial, and waste disposal account for the remaining 13% of communitywide GHG emissions.

Table 4.7-2. Greenhouse Gas Emissions Sources in City of Murrieta

Source Category	Annual GHG Emissions (MT CO ₂ e) ^a	Percent of Total ^a
Residential	91,492	23.5%
Commercial	60,153	15.4%
Office	12,711	3.3%
Business Park	8,332	2.1%
Civic/Institutional	9,333	2.4%
Industrial	3,463	0.9%
Transportation	188,138	48.3%
Waste	14,795	3.8%
Total	389,717	100.0%

Source: City of Murrieta 2011a.

Notes: GHG = greenhouse gas; MT CO₂e = metric tons of carbon dioxide equivalent.

Emissions reflect the 2009 City of Murrieta GHG inventory.

a Total may not sum due to rounding.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 Intergovernmental Panel on Climate Change Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply.

The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed mean surface temperature for the decade 2006–2015 was 0.87 °C (likely between 0.75 °C and 0.99 °C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0 °C (1.8 °F) of global warming above pre-industrial levels, with a likely range of 0.8 °C to 1.2 °C (1.4 °F to 2.2 °F) (IPCC 2018). Global warming is likely to reach 1.5 °C (2.7 °F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed, including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed such as high variability of snow–water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health, as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments need for information to support action in their communities, the Fourth Assessment (CNRA 2018) includes reports for nine regions of the state, including the Inland Deserts Region, where the project is located. Key projected climate change issues for the Inland Deserts Region include the following (Hopkins 2018):

- Extremely high maximum temperatures are expected to occur in the Inland Deserts.
- The fate of the Salton Sea is a critical determinant of future environmental quality.
- Renewable energy development will have big impacts on the economy and infrastructure.
- Continuing current land use/development patterns (i.e., housing development in the region to compensate for lack of development on the coast) will require increased energy for cooling to compensate for a rise in extreme high temperatures.
- Higher temperatures will exacerbate water stress in an already very water-limited region.
- Changing water availability is a key determinant of the future for ecological and agricultural systems.

- Population in the Inland Deserts is highly vulnerable to the effects of climate change.
- Tourism is a major economic driver that is likely to be threatened by a changing climate.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought, to destructive storm events; significant shifts in water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss has occurred).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea-level rise.

Forestry. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions.

Ocean and Coastal Ecosystems and Resources. Sea-level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea-level rise, in addition to more frequent and severe coastal storms and erosion, are threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities, as well as negatively impacting the coastal recreational assets such as beaches and tidal wetlands.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies, and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness, such as asthma and allergies.

Transportation. Although the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand, which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the winter time. Increased risk of flooding has a variety of public health concerns, including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively impact groundwater reserves and result in increased overdraft and subsidence. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality.

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

Massachusetts v. EPA. In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO₂, CH₄, N₂O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling previously discussed, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road

vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200). On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022 through 2025 cars and light trucks (EPA 2017b).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018 (76 FR 57106–57513). The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines.

On September 27, 2019, EPA and NHTSA published the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program (84 FR 51310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. The Part One Rule impacts some of the underlying assumptions in the CARB EMFAC2014 and EMFAC2017 models for criteria air pollutant emissions from gasoline light-duty vehicles, which CARB released offmodel adjustment factors for on November 20, 2019, primarily for use in federal Clean Air Act conformity demonstration analyses. EPA and NHTSA delayed promulgating final federal GHG and fuel economy standards (Safer Affordable Fuel-Efficient Vehicles Rule Part Two) for the "near future." Because CARB does not know the full impacts of these rules until Part Two is released, no off-model adjustments factors are available for GHG emissions at this time. In addition, the EMFAC off-model adjustments have not yet been incorporated into CalEEMod. This issue is evolving as California and 22 other states, as well as the District of Columbia and two cities, filed suit against the EPA over the vehicle waiver revocation on November 15, 2019, and a petition for reconsideration of the rule was filed on November 26, 2019, by California and 22 other states, the District of Columbia, and four cities.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO₂ emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units, and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO₂ emission standards for newly constructed, modified, and reconstructed

affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits.

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The state has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized below.

EO S-3-05. EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010 (CAT 2016).

Assembly Bill 32. In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32. The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

Senate Bill 32 and AB 197. Senate Bill (SB) 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

CARB's 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code Section 38550, CARB approved a statewide limit on the GHG emissions level for 2020, consistent with the determined 1990 baseline (427 MMT CO₂e).

CARB's Climate Change Scoping Plan. One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health

and Safety Code Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first Scoping Plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives. The key elements of the Scoping Plan include the following (CARB 2008):

- 1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- 2. Achieving a statewide renewable energy mix of 33%
- 3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions
- 4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- 5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS) (17 CCR, Section 95480 et seq.)
- 6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012. The First Update concluded that California is on track to meet the 2020 target, but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the Intergovernmental Panel on Climate Change, from 427 MMT CO₂e to 431 MMT CO₂e (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. The Governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate

change. In the summer of 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Chapter 249, Statutes of 2016).

In January 2017, CARB released the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) for public review and comment (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' "known commitments" include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO₂e per capita by 2030 and no more than 2 MT CO₂e per capita by 2050, which are consistent with the state's long-term goals. These goals are also consistent with the Global Climate Leadership Memorandum of Understanding (Under 2 MOU) (Under 2 2016) and the Paris Agreement, which were developed around the scientifically based levels necessary to limit global warming below 2°C. The 2030 Scoping Plan recognized the benefits of local government GHG planning (e.g., through Climate Action Plans [CAPs]) and provide more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project-level review where there is a legally adequate CAP.² The Second Update was approved by CARB's Governing Board on December 14, 2017.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs, and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent if it will further the objectives and not obstruct their attainment.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that the EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (Title 40, CFR, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that the EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit more than 10,000 MT CO₂e per year are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO₂e per year threshold are required to have their GHG emissions report verified by a CARB-accredited third party.

² Sierra Club v. County of Napa (2004) 121 Cal.App.4th 1490; San Francisco Tomorrow et al. v. City and County of San Francisco (2015) 229 Cal.App.4th 498; San Franciscans Upholding the Downtown Specific Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656; Sequoyah Hills Homeowners Assn. V. City of Oakland (1993) 23 Cal.App.4th 704, 719.

EO B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. To facilitate achieving this goal, EO B-30-15 called for CARB to update the Scoping Plan to express the 2030 target in terms of MMT CO₂e. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for methane and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy in March 2017. The Short-Lived Climate Pollutant Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

EO B-55-18. EO B-55-18 (September 2018) establishes a statewide policy for the state to achieve carbon neutrality no later than 2045, and achieve and maintain net negative emissions thereafter. The goal is an addition to the existing statewide targets of reducing the state's GHG emissions. CARB will work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402[b][1]). The regulations receive input from members of industry and the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402[d]) and cost effectiveness (California Public Resources Code, Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2016 Title 24 building energy efficiency standards became effective January 1, 2017. The 2019 Title 24 Building Energy Efficiency Standards became effective January 1, 2020, which will further reduce energy used and associated GHG emissions compared to the 2016 Title 24 building energy standards. Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as California's Green Building Standards (CALGreen), and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals.

The 2019 Title 24 Building Energy Efficiency Standards, which became effective January 1, 2020, will further reduce energy used and associated GHG emissions compared to 2016 standards. Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

The 2019 Title 24 standards focus on building energy efficiency and ensuring solar electricity generated on site is used on site. "Looking beyond the 2019 standards, the most important energy characteristic for a building will be that it produces and consumes energy at times that are appropriate and responds to the needs of the grid, which reduces the building's emissions" (CEC 2018).

The California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy performance for new construction in California. The key policy timelines are all new residential construction in California will be zero net energy by 2020, and all new commercial construction in California will be zero net energy by 2020, and all new commercial construction in California will be zero net energy by 2030.³

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances.

Senate Bill 1. SB 1 (Murray) (August 2006) established a \$3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the California Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption, and placing solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

³ It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards (See, for example, CPUC 2013).
California AB 1470 (Solar Water Heating). This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill defines several terms for purposes of the act. The bill requires the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and S-21-09).

SB 1368. SB 1368 (September 2006), required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for generalpurpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

EO S-14-08. EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency (CNRA), through collaboration with the CEC and California Department of Fish and Wildlife (formerly the California Department of Fish and Game), was directed to lead this effort.

EO S-21-09 and SBX1-2. EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1 2 expanded the Renewables Portfolio Standard by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

Supreme Court Ruling in Center for Biological Diversity. v. California Fish and Wildlife

In its 2015 decision, *Center for Biological Diversity v. Department of Fish and Wildlife*, S217763 (Newhall),⁴ the California Supreme Court evaluated the California Department of Fish and Wildlife's analysis of potential impacts caused by GHG emissions contained in the EIR for the proposed land development called Newhall Ranch. In the EIR, the California Department of Fish and Wildlife analyzed GHG emissions under AB 32, using the business-as-usual comparison as its sole criterion of significance.

In Newhall, the California Supreme Court concluded that a finding of consistency with meeting statewide emission reduction goals is a legally permissible criterion of significance when analyzing potential impacts of GHG emissions under CEQA. However, the Court found that the EIR's conclusion that the project's emissions would be less than significant under that criterion was not supported by substantial evidence, and remanded back to the appellate court the narrow issue of whether substantial evidence supported the application of AB 32 statewide GHG reduction goal of 29% to new land use projects.

The Court then identified "potential options" for lead agencies evaluating cumulative significance of a proposed land use development's GHG emissions in future CEQA documents:

- 1. Business-As-Usual Model: While the Court cautioned that the Scoping Plan may not be appropriate at the project-level, the business-as-usual model might be used to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals pursuant to AB 32.
- 2. Compliance With Regulatory Programs Designed To Reduce Greenhouse Gas Emissions: The Court suggests that a lead agency could rely on a showing of compliance with regulatory programs designed to reduce GHG emissions. The Court clarifies that a significance analysis based on compliance with such statewide regulations only goes to impacts within the area governed by the regulations.
- 3. Local CAP or Other "Geographically Specific Greenhouse Gas Emission Reduction Plans": The Court points out that these plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, so long as the plan is "sufficiently detailed and adequately supported." Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- 4. Regional Sustainable Community Strategy (SCS): The Court also articulates that a lead agency need not additionally analyze GHG emissions from cars and light trucks in CEQA documents for certain residential, mixed use and transit priority projects that are consistent with an applicable SCS adopted pursuant to SB 375.
- 7. Numerical GHG Significance Thresholds: Although noting that use of such thresholds are GHG significance thresholds, which are based on compliance with AB 32, and use a "service population" GHG ratio threshold for land use projects and a 10,000-ton annual GHG emission threshold for industrial projects. The Court remanded for further consideration the application of the 29% overall Scoping Plan metric, which is used by several Air Districts and, like the favorably-cited Bay Area Air Quality Management District metric, is based on AB 32.

⁴ The Newhall decision is available at https://caselaw.findlaw.com/ca-supreme-court/1719578.html (accessed November 2018).

Citing to Executive Order Nos. S-3-05 and B-30-15, the Court cautioned that those EIRs taking a goal-consistency approach to CEQA significance may in the future need to consider the project's effects on meeting emissions reduction targets beyond 2020.

SB 350. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

AB 1493. AB 1493 (July 2002) was enacted in a response to the transportation sector accounting for more than half of California's CO₂ emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Heavy Duty Diesel. CARB adopted the final Heavy Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce PM and NO_x emissions from heavy-duty diesel vehicles. The rule requires PM filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485).

EO S-1-07. EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining LCFS for GHG emissions measured in CO₂e grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered.

SB 375. SB 375 (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375

requires the state's 18 regional metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a MPO is unable to devise an SCS to achieve the GHG reduction target, the MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code, Section 65080(b)(2)(K), a SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the first SB 375 targets for the regional metropolitan planning organizations. The targets for SCAG are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of a SCS is the responsibility of the metropolitan planning organizations. SCAG adopted its first RTP/SCS in April 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035 (SCAG 2012). In June 2012, CARB accepted SCAG's quantification of GHG reductions and its determination the SCS, if implemented, would achieve SCAG targets. On April 4, 2016, the SCAG Regional Council adopted the 2016 RTP/SCS, which builds upon the progress made in the 2012 RTP/SCS. The updated RTP/SCS quantified an 8% reduction by 2020 and an 18% reduction by 2030 (SCAG 2016). In June 2016, CARB accepted SCAG's quantification of GHG reductions and its determination the SCS, if implemented, would achieve SCAG is quantified, would achieve SCAG targets.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program. The Advanced Clean Cars program (January 2012) is a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming pollution that the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

EO B-16-12. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

AB 1236. AB 1236 (October 2015) required a city, county, or city and county to approve an application for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision

to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of electric vehicle charging stations is a matter of statewide concern. The bill required electric vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric vehicle charging stations, as specified. The bill also required a city, county, or city and county with a population of 200,000 residents to adopt this ordinance by September 30, 2017.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Solid Waste

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (Chapter 476, Statutes of 2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations and an evaluation of program effectiveness (CalRecycle 2012).

Other State Actions

Senate Bill 97. SB 97 (August 2007) directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

2015 State of the State Address. In January 2015, Governor Brown in his inaugural address and annual report to the Legislature established supplementary goals, which would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50%, measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

2016 State of the State Address. In his January 2016 address, Governor Brown established a statewide goal to bring per capita GHG emission down to two tons per person, which reflects the goal of the Under 2 MOU to limit global warming to less than two degrees Celsius by 2050. The Under 2 MOU agreement pursues emission reductions of 80% to 95% below 1990 levels by 2050 and/or reaching a per capita annual emissions goal of less than 2 metric tons by 2050. A total of 135 jurisdictions representing 32 countries and 6 continents, including California, have signed or endorsed the Under 2 MOU (Under 2 2016).

Local

South Coast Air Quality Management District

Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. Although air districts will also address some of these issues on a project-specific basis as responsible agencies, they may provide general guidance to local governments on these issues (SCAQMD 2008). As discussed in Section 4.7.3, Thresholds of Significance, the South Coast Air Quality Management District (SCAQMD) has recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects; however, these thresholds were not adopted.

Murrieta General Plan 2035

The Air Quality Element of the Murrieta General Plan 2035 (General Plan) (City of Murrieta 2011a) includes goals and policies that result in co-benefits with reducing GHG emissions (see Section 4.2, Air Quality, of this EIR). The Conservation Element of the General Plan includes the following goals and policies that result in benefits with reducing GHG emissions, and that would apply to the project (City of Murrieta 2011a):

- **Goal CSV-2** Murrieta promotes compliance with requirements from the State and appropriate agencies regarding comprehensive water conservation measures in buildings and landscaping.
 - **Policy CSV-2.1** Ensure that all developments comply with water efficiency requirements, as mandated by the applicable Building Code.
- **Goal CSV-12** Energy conservation and the generation of energy from renewable sources is prioritized as part of an overall strategy to reduce GHG emissions.
 - **Policy CSV-12.1** Ensure that all developments comply with energy efficiency requirements as mandated by the applicable Building Code.
 - **Policy CSV-12.3** Support the on-site installation and use of renewable energy generation systems for residential, commercial, institutional, and industrial uses.
- **Goal CSV-13** Solid waste is diverted from landfills through waste reduction, re-use, and recycling.
 - **Policy CSV-13.1** Continue to comply with the landfill diversion requirements of the Integrated Waste Management Program.
 - **Policy CSV-13.2** Ensure that non-residential and multi-family developments provide readily accessible areas for recycling (at a minimum) paper, corrugated cardboard, glass, plastics and metals, as required by California law.
- **Goal CSV-14** A community that encourages and incentivizes the sustainable development of buildings and neighborhoods, particularly with respect to durability, energy and water use, and transportation impacts.
 - **Policy CSV-14.1** Ensure all applicable construction projects comply with the California State Green Building Standards Code.

Policy CSV-14.2 Encourage the integration of other principles of green building into development standards and guidelines, looking for opportunities to realize other benefits such as improved health and increased bicycle transportation.

City of Murrieta Climate Action Plan

Adopted as part of the City's General Plan on July 11, 2011, the City's CAP (City of Murrieta 2011b), which was prepared following CEQA Guidelines Section 15183.5, provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate. With respect to evaluation of projects under CEQA, the CAP states, "Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the CAP would have a less than significant impact on climate change" (City of Murrieta 2011b, p. 1-2). The City's CAP also suggests best practices for implementation and makes recommendations for measuring progress.

The City's CAP is intended to address the main sources of the emissions that cause climate change, which include emissions from the energy consumed in buildings and for transportation, as well as the solid waste sent to landfills. The purpose of the City's CAP is to guide the development, enhancement, and implementation of actions that would reduce the City's GHG emissions by 15% below existing (2009) levels by 2020.

The City of Murrieta prepared a Draft CAP Update as part of the Focused General Plan Update, which was adopted on June 16, 2020. The City's CAP Update provides a comprehensive roadmap of actions that the City will take to achieve GHG emission reductions by 2030, 2035, and 2050. Per CEQA Guidelines Section 15183.5, the City's CAP Update is considered a "Qualified" CAP and may be used for streamlining the analysis of GHG emissions for new development projects. The project as proposed already complies with the following applicable measures in the CAP Consistency Checklist: Measure SW-2, Construction Waste Diversion, and Measure T-2, Installation of Electric Vehicle Service Equipment.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to greenhouse gases/climate change are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to greenhouse gas emissions would occur if the project would (14 CCR 15000 et seq.):

- 1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- 2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project-level under CEQA.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled "Discussion Draft CEQA and Climate Change Advisory," states that

neither the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for perming an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact. (OPR 2018)

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice." Section 15064.7(c) of the CEQA Guidelines specifies that "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

In October 2008, the SCAQMD proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects as presented in its Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold (SCAQMD 2008). This guidance document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association, explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. In December 2008, the SCAQMD adopted an interim 10,000 MT CO₂e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008). However, SCAQMD has not adopted a GHG significance threshold for land use development projects such as commercial projects; the proposed commercial/residential thresholds were never formally adopted. Thus, the SCAQMD interim GHG significance threshold is not applicable to the project as the project is a commercial project.

In absence of any adopted numeric threshold, this analysis assess compliance with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016 RTP/SCS, which is designed to achieve regional GHG reduction s from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals. This analysis also considers consistency with regulations and requirements adopted by the Scoping Plan and the City's CAP.

This analysis applies the recommended SCAQMD threshold of 3,000 MT CO₂e per year for non-industrial projects. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years (SCAQMD 2008). This impact analysis, therefore, adds amortized construction

emissions to the estimated annual operational emissions and then compares operational emissions to the proposed SCAQMD threshold of 3,000 MT CO₂e per year.

The City's CAP, which was prepared following CEQA Guidelines Section 15183.5, provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate. With respect to evaluation of projects under CEQA, the CAP states, "Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the CAP would have a less than significant impact on climate change" (City of Murrieta 2011b, p. 1-2). The purpose of the City's CAP is to guide the development, enhancement, and implementation of actions that would reduce the City's GHG emissions by 15% below existing (2009) levels by 2020. Accordingly, the CAP consistency analysis would be used to evaluate the project's impacts to climate change. However, the Project buildout would be post-2020; thus, consistency with the City's CAP is included for informational purposes.

4.7.4 Impacts Analysis

Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction Emissions

Less-than-Significant Impact. Construction of the project would result in GHG emissions, which are primarily associated with the use of off-road construction equipment, haul trucks, on-road vendor trucks, and worker vehicles. The SCAQMD Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold (SCAQMD 2009) recommends that "construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies." Thus, the total construction GHG emissions were calculated, amortized over 30 years, and added to the total operational emissions.

Construction of the project is anticipated to commence in February 2021 and reach completion in September 2021, lasting a total of 8 months. On-site sources of GHG emissions include rock crushing diesel-engine generators, off-road equipment and off-site sources including haul trucks, vendor trucks, and worker vehicles. Table 4.7-3 presents construction emissions for the project in 2021 from on-site and off-site emission sources.

Table 4.7-3. Estimated Annual Construction Greenhouse Gas Emissions

	CO ₂	CH4	N ₂ O	CO ₂ e
Year	Metric Tons		•	
Construction				
2021	502.18	0.07	0.00	503.84
Rock Crushing				
2021	15.41	0.00	0.00	15.42

	CO ₂	CH4	N ₂ O	CO ₂ e
Year	Metric Tons			
Total				
2021	517.58	0.07	0.00	519.27
	30-year Amortized Construction Emissions (MT CO ₂ e per year) 17.33			17.31

Table 4.7-3. Estimated Annual Construction Greenhouse Gas Emissions

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; MT = metric tons. See Appendix B for complete results.

The values include emissions from the generators for the rock crushing operation.

Totals may not add due to rounding.

As shown in Table 4.7-3, the estimated total GHG emissions during construction of would be approximately 519 MT CO₂e in 2021 over the construction period. Estimated project-generated construction emissions amortized over 30 years would be approximately 17 MT CO₂e per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would be short-term in nature, lasting only for the duration of the construction period (8 months), and would not represent a long-term source of GHG emissions.

Operational Emissions

Less-than-Significant Impact. Operation of the project would generate GHG emissions through motor vehicle and delivery truck trips to and from the project site; landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment.

GHG emission would be reduced due to the installation of a solar photovoltaic system, which would generate a system output of 52,444 kilowatt-hour per year (PV Watts 2019). The estimated operational (year 2021) project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation are shown in Table 4.7-4.

Table 4.7-4	. Estimated Annual	Operational	Greenhouse	Gas Emissions
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	CO ₂	CH4	N ₂ O	CO ₂ e
Emission Source	Metric Tons per Ye	ear		
Area	0.01	<0.01	0.00	0.01
Energy	306.75	0.01	<0.01	308.17
Mobile	5,274.05	0.25	0.19	5,337.48
Solid waste	29.06	1.72	0.00	71.99
Water supply and wastewater	19.79	0.14	<0.01	24.32
		Amortized Const	ruction Emissions	17.31
Operation plus Amortized Construction Total ^a			5,759.27	

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent. See Appendix B for complete results.

The values shown are the annual emissions reflect California Emissions Estimator Model; reductions for the solar photovoltaic system and installing electric vehicle charging stations; and operational year 2021.

^a Totals may not add due to rounding.

As shown in Table 4.7-4, estimated annual project-generated GHG emissions would be approximately 5,742 MT CO₂e per year as a result of project operations only. Estimated annual project-generated operational emissions in 2021 plus amortized project construction emissions would be approximately 5,759 MT CO₂e per year.

The project's consistency with statewide GHG reduction strategies is summarized in detail in Table 4.7-5.

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project	
Building Components/Facility Operations			
Roofs/Ceilings/Insulation	CALGreen Code (Title 24, Part 11)	The project must comply with efficiency standards regarding roofing, ceilings, and insulation. For example:	
	California Energy Code (Title 24, Part 6)	<u>Roofs/Ceilings</u> : New construction must reduce roof heat island effects per CALGreen Code Section 106.11.2, which requires use of roofing materials having a minimum aged solar reflectance, thermal emittance complying with Section A5.106.11.2.2 and A5.106.11.2.3 or a minimum aged Solar Reflectance Index as specified in Tables A5.106.11.2.2, or A5.106.11.2.3. Roofing materials must also meet solar reflectance and thermal emittance standards contained in Title 20 Standards.	
		<u>Roof/Ceiling Insulation</u> : There are also requirements for the installation of roofing and ceiling insulation. (See Title 24, Part 6 Compliance Manual at Section 3.2.2.)	
Flooring	CALGreen Code	The project must comply with efficiency standards regarding flooring materials. For example, for 80% of floor area receiving "resilient flooring," the flooring must meet applicable installation and material requirements contained in CALGreen Code Section 5.504.4.6.	
Window and Doors (Fenestration)	California Energy Code	The project must comply with fenestration efficiency requirements. For example, the choice of windows, glazed doors, and any skylights for the project must conform to energy consumption requirements affecting size, orientation, and types of fenestration products used. (See Title 24, Part 6 Compliance Manual, Section 3.3.)	
Building Walls/Insulation	CALGreen Code	The project must comply with efficiency requirements	
	California Energy Code	Exterior Walls: Must meet requirements in current edition of California Energy Code, and comply with Sections A5.106.7.1 or A5.106.7.2 of CALGreen Code for wall surfaces, as well as Section 5.407.1, which required weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2. Construction must also meet requirements contained in Title 24. Part 6, which vary	

Table 4.7-5. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		by material of the exterior walls. (See Title 24, Part 6 Compliance Manual, Part 3.2.3.)
		<u>Demising (Interior) Walls</u> : Mandatory insulation requirements for demising walls (which separate conditioned from non-conditions space) differ by the type of wall material used. (<i>Id.</i> at 3.2.4.)
		<u>Door Insulation</u> : There are mandatory requirements for air infiltration rates to improve insulation efficiency; they differ according to the type of door. (<i>Id</i> . at 3.2.5.)
		<u>Flooring Insulation</u> : There are mandatory requirements for insulation that depend on the material and location of the flooring. (<i>Id</i> . at 3.2.6.)
Finish Materials	CALGreen Code	The project must comply with pollutant control requirements for finish materials. For example, materials including adhesives, sealants, caulks, paints and coatings, carpet systems, and composite wood products must meet requirements in CALGreen Code to ensure pollutant control. (CALGreen Code Section 5.504.4.)
Wet Appliances (Toilets/Faucets/Urinals,	CALGreen Code	Wet appliances associated with the project must meet various efficiency requirements. For example:
Dishwasher/Clothes Washer, Spa and Pool/Water Heater)	Appliance Efficiency Regulations (Title 20 Standards)	<u>Spa and Pool</u> : Use associated with the project is subject to appliance efficiency requirements for service water heating systems and equipment, spa and pool heating systems and equipment. (Title 24, Part 6, Sections 110.3, 110.4, 110.5; Title 20 Standards, Sections 1605.1[g], 1605.3[g]; see also California Energy Code.)
		<u>Toilets/Faucets/Urinals</u> : Use associated with the project is subject to new maximum rates for toilets, urinals, and faucets effective January 1, 2016:
		 Showerheads maximum flow rate 2.5 gpm at 80 psi Wash fountains 2.2 x (rim space in inches/20) gpm at 60 psi Metering faucets 0.25 gallons/cycle Lavatory faucets and aerators 1.2 gpm at 60 psi Kitchen faucets and aerators 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi Public lavatory faucets 0.5 gpm at 60 psi Trough-type urinals 16 inches length Wall mounted urinals 0.125 gallons per flush Other urinals 0.5 gallons per flush
		1065.3[h-i]).

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		<u>Water Heaters</u> : Use associated with the project is subject to appliance efficiency requirements for water heaters (Title 20 Standards, Sections 1605.1[f], 1605.3[f)]).
		<u>Dishwasher/Clothes Washer</u> : Use associated with the project is subject to appliance efficiency requirements for dishwashers and clothes washers. (Title 20 Standards, Sections 1605.1[o-q], 1605.3[o-q]).
Dry Appliances (Refrigerator/Freezer,	Title 20 Standards CALGreen Code	Dry appliances associated with the project must meet various efficiency requirements. For example:
Heater/Air Conditioner, Clothes Dryer)		<u>Refrigerator/Freezer</u> : Use associated with the project is subject to appliance efficiency requirements for refrigerators and freezers (Title 20 Standards, Sections 1605.1[a], 1605.3[a]).
		<u>Heater/Air Conditioner</u> : Use associated with the project is subject to appliance efficiency requirements for heaters and air conditioners (Title 20 Standards, Sections 1605.1[b-e], 1605.3[b-e] as applicable).
		<u>Clothes Dryer</u> : Use associated with the project is subject to appliance efficiency requirements for clothes dryers (Title 20 Standards, Section 1605.1[q]).
	CALGreen Code	Installations of HVAC, refrigeration and fire suppression equipment must comply with CALGreen Code Sections 5.508.1.1 and 508.1.2, which prohibits CFCs, halons, and certain HCFCs and HFCs.
Lighting	Title 20 Standards	Lighting associated with the project will be subject to energy efficiency requirements contained in Title 20 Standards.
		<u>General Lighting</u> : Indoor and outdoor lighting associated with the project must comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1[j-k],[n], 1605.3[j-k],[n].
		Emergency lighting and self-contained lighting: the project must also comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1[I], 1605.3[I]).
		<u>Traffic Signal Lighting</u> : For any necessary project improvements involving traffic lighting, traffic signal modules and traffic signal lamps will need to comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1[m], 1605.3[m]).
	California Energy Code	Lighting associated with the project will also be subject to energy efficiency requirements contained in Title 24, Part 6, which contains energy standards for non- residential indoor lighting and outdoor lighting. (See

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		Title 24 Part 6 Compliance Manual, at Sections 5, 6.)
		Mandatory lighting controls for indoor lighting include, for example, regulations for automatic shut-off, automatic daytime controls, demand responsive controls, and certificates of installation. (Id. at Section 5.) Regulations for outdoor lighting include, for example, creation of lighting zones, lighting power requirements, a hardscape lighting power allowance, requirements for outdoor incandescent and luminaire lighting, and lighting control functionality. (Id. at Section 6.)
	AB 1109	Lighting associated with the project will be subject to energy efficiency requirements adopted pursuant to AB 1109.
		Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.
Bicycle and Vehicle Parking	CALGreen Code	The project will be required to provide compliant bicycle parking, fuel-efficient vehicle parking, and electric vehicle charging spaces (CALGreen Code Sections 5.106.4, 5.106.5.1, 5.106.5.3)
	California Energy Code	The project is also subject to parking requirements contained in Title 24, Party 6. For example, parking capacity is to meet but not exceed minimum local zoning requirements, and the project should employ approved strategies to reduce parking capacity (Title 24, Part 6, Section 106.6)
Landscaping	CALGreen Code	The CALGreen Code requires and has further voluntary provisions for:
		 A water budget for landscape irrigation use; For new water service, separate meters or submeters must be installed for indoor and outdoor potable water use for landscaped areas of 1,000- 5,000 square feet; Provide water-efficient landscape design that reduces use of potable water beyond initial requirements for plant installation and establishment
	Model Water Efficient Landscaping Ordinance	The model ordinance promotes efficient landscaping in new developments and establishes an outdoor water budget for new and renovated landscaped areas that are 500 square feet or larger (23 CCR 2, Chapter 2.7).
	Cap-and-Trade Program	Transportation fuels used in landscape maintenance equipment (e.g., gasoline) would be subject to the Cap- and-Trade Program. (See "Energy Use," below.)

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Refrigerants	CARB Management of High GWP Refrigerants for Stationary Sources	Any refrigerants associated with the project will be subject to CARB standards. CARB's Regulation for the Management of High GWP Refrigerants for Stationary Sources 1) reduces emissions of high-GWP refrigerants from leaky stationary, non-residential refrigeration equipment; 2) reduces emissions resulting from the installation and servicing of stationary refrigeration and air conditioning appliances using high-GWP refrigerants; and 3) requires verification GHG emission reductions (17 CCR 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5.1, Section 95380 et seq.)
Consumer Products	CARB High GWP GHGs in Consumer Products	All consumer products associated with the project will be subject to CARB standards. CARB's consumer products regulations set VOC limits for numerous categories of consumer products, and limits the reactivity of the ingredients used in numerous categories of aerosol coating products (17 CCR 3, Chapter 1, Subchapter 8.5.)
Construction		
Use of Off-Road Diesel Engines, Vehicles, and Equipment	Care and Trade	Any relevant vehicle or machine use associated with the project will be subject to CARB standards. The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation: 1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; 2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; 3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and 4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The requirements and compliance dates of the Off-Road regulation vary by fleet size, as defined by the regulation.
	Cap-and-Trade Program	operation would be subject to the Cap-and-Trade Program. (See "Energy Use," below.)
Greening New Construction	CALGreen Code	All new construction, including the project, must comply with CALGreen Code, as discussed in more detail throughout this table. Adoption of the mandatory CALGreen Code standards for construction has been essential for improving the overall environmental performance of new buildings; it also sets voluntary targets for builders to exceed the mandatory requirements.

Table 4.7-5. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Construction Waste	CALGreen Code	The project will be subject to CALGreen Code requirements for construction waste reduction, disposal, and recycling, such as a requirement to recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction waste in accordance with Section 5.408.1.1, 5.408.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.
Worker, vendor and truck vehicle trips (on-road vehicles)	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in worker, vendor and truck vehicle trips would be subject to the Cap-and-Trade Program.
Solid Waste		
Solid Waste Management	Landfill Methane Control Measure	Waste associated with the project will be disposed per state requirements for landfills, material recovery facilities, and transfer stations. Per the statewide GHG emissions inventory, the largest emissions from waste management sectors come from landfills, and are in the form of CH ₄ .
		In 2010, CARB adopted a regulation that reduces emissions from methane in landfills, primarily by requiring owners and operators of certain uncontrolled municipal solid waste landfills to install gas collection and control systems, and requires existing and newly installed gas and control systems to operate in an optimal manner. The regulation allows local air districts to voluntarily enter into a memorandum of understanding with CARB to implement and enforce the regulation and to assess fees to cover costs of implementation.
	Mandatory Commercial Recycling (AB 341)	AB 341 will require the project, if it generates four cubic yards or more of commercial solid waste per week, to arrange for recycling services, using one of the following: self-haul; subscribe to a hauler(s); arranging for pickup of recyclable materials; subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation.
		The project will also be subject to local commercial solid waste recycling program required to be implemented by each jurisdiction under AB 341.
	CALGreen Code	The project will be subject to CALGreen Code requirement to provide areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (CALGreen Code Section 5.410.1)

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Energy Use		
Electricity/Natural Gas Generation	Cap-and-Trade Program	Electricity and natural gas usage associated with the project will be subject to the Cap-and-Trade Program.
		The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program in the second phase.
		Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, reformulated gasoline blendstock for oxygenate blending (RBOB), distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap- and-trade compliance obligation for a fuel supplier is 25,000 metric tons or more of CO ₂ e annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.
Renewable Energy	California RPS (SB X1- 2, SB 350, and SB 100)	Energy providers associated with the project will be required to comply with RPS set by SB X1 2, SB 350, and SB 100.
		SB X1 2 requires investor-owned utilities, publicly- owned utilities, and electric service providers to increase purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. In the interim, each entity was required to procure an average of 20% of renewable energy for the period of January 1, 2011 through December 31, 2013; and will be required to procure an average of 25% by December 31, 2016, and 33% by 2020.
		SB 350 requires retail sellers and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030.
		SB 100 increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California by 2045.

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
	Million Solar Roofs Program (SB 1)	The project will participate in California's energy market, which is affected by implementation of the Million Solar Roofs Program.
		As part of Governor Schwarzenegger's Million Solar Roofs Program, California has set a goal to install 3,000 megawatts of new, solar capacity through 2016. The Million Solar Roofs Program is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time.
	California Solar Initiative- Thermal Program	The project will participate in California's energy market, which is affected by implementation of the California Solar Initiative -Thermal Program. The program offers cash rebates of up to \$4,366 on solar water heating systems for single-family residential customers. Multifamily and Commercial properties qualify for rebates of up to \$800,000 on solar water heating systems and eligible solar pool heating systems qualify for rebates of up to \$500,000. Funding for the California Solar Initiative-Thermal program comes from ratepayers of Pacific Gas & Electric, SCE, Southern California Gas Company, and San Diego Gas & Electric. The rebate program is overseen by the CPUC as part of the California Solar Initiative.
	Waste Heat and Carbon Emissions Reduction Act (AB	The project will participate in California's energy market, which is affected by implementation of the Waste Heat and Carbon Emissions Reduction Act.
	1613, AB 2791)	Originally enacted in 2007 and amended in 2008, this act directed the CEC, CPUC, and CARB to implement a program that would encourage the development of new combined heat and power systems in California with a generating capacity of not more than 20 megawatts, to increase combined heat and power use by 30,000 gigawatt-hour. The CPUC publicly owned electric utilities, and CEC duly established policies and procedures for the purchase of electricity from eligible combined heat and power systems.
		CEC guidelines require combined heat and power systems to be designed to reduce waste energy; have a minimum efficiency of 60%; have NO_x emissions of no more than 0.07 pounds per megawatt-hour; be sized to meet eligible customer generation thermal load; operate continuously in a manner that meets expected thermal load and optimizes efficient use of waste heat; and be cost effective, technologically feasible, and environmentally beneficial.

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Vehicular/Mobile Sources		
General	SB 375 and SCAG RTP/SCS	As set forth below, the project complies with the applicable policies of, and is subject to, the SCAG adopted RTP/SCS, which CARB approved as meeting its regional GHG targets in 2016, and which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals.
Fuel	Low Carbon Fuel Standard (LCFS)/ EO S-01-07	Auto trips associated with the project will be subject to LCFS (E0 S-01-07), which requires a 10% or greater reduction in the average fuel carbon intensity by 2020 with a 2010 baseline for transportation fuels in California regulated by CARB. The program establishes a strong framework to promote the low carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG goals.
	Cap-and-Trade Program	Use of gasoline associated with the project will be subject to the Cap-and-Trade Program.
		The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program in the second phase.
		Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, RBOB, distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap-and-trade compliance obligation for a fuel supplier is 25,000 MT or more of CO ₂ e annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.
Automotive Refrigerants	CARB Regulation for Small Containers of Automotive Refrigerant	Vehicles associated with the project will be subject to CARB's Regulation for Small Containers of Automotive Refrigerant (17 CCR 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5, Section 95360 et seq.). The regulation applies to the sale, use, and disposal of small containers of automotive refrigerant with a GWP greater than 150. The regulation achieves emission reductions through implementation of four requirements: 1) use of a self-sealing valve on the container, 2) improved labeling instructions, 3) a deposit and recycling program for small containers, and 4) an education program that emphasizes best

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		practices for vehicle recharging. This regulation went into effect on January 1, 2010 with a 1-year sell- through period for containers manufactured before January 1, 2010. The target recycle rate is initially set at 90%, and rises to 95% beginning January 1, 2012.
Light-Duty Vehicles	AB 1493 (or the Pavley Standard)	Cars that drive to and from the project will be subject to AB 1493, which directed CARB to adopt a regulation requiring the maximum feasible and cost effective reduction of GHG emissions from new passenger vehicles.
		Pursuant to AB 1493, CARB adopted regulations that establish a declining fleet average standard for CO ₂ , CH ₄ , N ₂ O, and HFCs (air conditioner refrigerants) in new passenger vehicles and light-duty trucks beginning with the 2009 model year and phased-in through the 2016 model year. These standards are divided into those applicable to lighter and those applicable to heavier portions of the passenger vehicle fleet.
		The regulations will reduce "upstream" smog-forming emissions from refining, marketing, and distribution of fuel.
	Advanced Clean Car and ZEV Programs	Cars that drive to and from the project will be subject to the Advanced Clean Car and ZEV Programs.
		In January 2012, CARB approved a new emissions- control program for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions.
		The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018–2025 model years.
	Tire Inflation Regulation	Cars that drive to and from the project will be subject to the CARB Tire Inflation Regulation, which took effect on September 1, 2010, and applies to vehicles with a gross vehicle weight rating of 10,000 pounds or less.
		Under this regulation, automotive service providers must, inter alia, check and inflate each vehicle's tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service, and to keep

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		a copy of the service invoice for a minimum of 3 years, and make the vehicle service invoice available to the CARB, or its authorized representative upon request.
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the project would be subject to EPA and NHTSA GHG and CAFE standards for passenger cars, light-duty trucks, and medium-duty passenger vehicles. (75 FR 25324– 25728, 77 FR 62624–63200.)
Medium- and Heavy-Duty Vehicles	CARB In-Use On-Road Heavy-Duty Diesel	Any heavy-duty trucks associated with the project will be subject to CARB standards.
Vehicles Regulation (Truck and Bus Regulation) CARB In-Use Off-Road Diesel Vehicle	The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.	
		The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.
	CARB In-Use Off-Road Diesel Vehicle	Any relevant vehicle or machine use associated with the project will be subject to CARB standards.
	Regulation	The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulations: 1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; 2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; 3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and 4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).
		The requirements and compliance dates of the Off- Road regulation vary by fleet size, as defined by the regulation.

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
	Heavy-Duty Vehicle GHG Emission Reduction Regulation	Any relevant vehicle or machine use associated with the project will be subject to CARB standards.
		The CARB Heavy-Duty Vehicle GHG Emission Reduction Regulation applies to heavy-duty tractors that pull 53- foot or longer box-type trailers (17 CCR 3, Chapter 1, Subchapter 10, Article 4, Subarticle 1, Section 95300 et seq.). Fuel efficiency is improved through improvements in tractor and trailer aerodynamics and the use of low rolling resistance tires.
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the project would be subject to EPA and NHTSA GHG and CAFE standards for medium- and heavy-duty vehicles. (76 FR 57106–57513.)
Water Use		
Water Use Efficiency	Emergency State Water Board	Water use associated with the project will be subject to emergency regulations.
E0 B-37-16	Regulations	On May 18, 2016, partially in response to EO B-27-16, the State Water Board adopted emergency water use regulations (23 CCR 864.5, and amended and re- adopted Sections 863, 864, 865, and 866). The regulation directs the State Water Board, Department of Water Resources, and CPUC to implement rates and pricing structures to incentivize water conservation, and calls upon water suppliers, homeowners' associations, California businesses, landlords and tenants, and wholesale water agencies to take stronger conservation measures.
	EO B-37-16	Water use associated with the project will be subject to Emergency EO B-37-16, issued May 9, 2016, which directs the State Water Resources Control Board to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state.
		The Water Board must also develop a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The Water Board and Department of Water Resources will develop new, permanent water use targets to which the project will be subject.
		The Water Board will permanently prohibit water- wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes

Table 4.7-5. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.
	EO B-40-17	EO B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne. It also rescinds EO B-29-15, but expressly states that EO B-37-16 remains in effect and directs the State Water Resources Control Board to continue development of permanent prohibitions on wasteful water use to which the project will be subject.
	SB X7-7	Water provided to the project will be affected by SB X7- 7's requirements for water suppliers.
		SB X7-7, or the Water Conservation Act of 2009, requires all water suppliers to increase water use efficiency. It also requires, among other things, that the Department of Water Resources, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.
	CALGreen Code	The project is subject to CALGreen Code's water efficiency standards, including a required 20% mandatory reduction in indoor water use. (CALGreen Code, Division 4.3.)
	California Water Code, Division 6, Part 2.10, Sections 10910– 10915.	Development and approval of the project requires the development of a project-specific Water Supply Assessment.
	Cap-and-Trade Program	Electricity usage associated with water and wastewater supply, treatment and distribution would be subject to the Cap-and-Trade Program.
	California RPS (SB X1- 2, SB 350, SB 100)	Electricity usage associated with water and wastewater supply, treatment and distribution associated with the project will be required to comply with RPS set by SB X1-2, SB 350, and SB 100.
Water Recycling	Water Reclamation Requirements for Recycled Water Use. State Water Resources Control Board Order WQ 2016-0068-DDW	These requirements replace 2014-0090-DWQ General Waste Discharge Requirements for Recycled Water Use, and establish standard conditions for recycled water use and conditionally delegates authority to an Administrator to manage a Water Recycling Program and issue Water Recycling Permits to recycled water users.
		Only treated municipal wastewater for non-potable uses can be permitted, such as landscape irrigation, crop irrigation, dust control, industrial/commercial cooling, decorative fountains, etc. Potable reuse is not covered.

Table 4.7-5. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
	Regulations for Groundwater Replenishment Using Recycled Water	This emergency rulemaking by the California Department of Public Health (California Title of Regulations, Title 22, Sections 60301.050 et seq.), effective June 18, 2014, applied to Groundwater Replenishment Reuse projects utilizing surface application, which received initial permits from the Regional Board. The regulations address permitting and plan approval, sampling requirements, operation requirements, and ongoing reporting requirements.
	Policy for Water Quality Control for Recycled Water. State Water Resources Control Board Resolution No. 2009- 0011, as amended by Resolution No. 2013- 0003	The project would be subject to the State Water Resources Control Board statewide mandate to increase recycled water usage by 0.2 million acre-feet per year by 2020. However, recycled water is not currently available at the project site.

Table 4.7-5. Applicable Greenhouse Gas-Related Laws and Regulations

Notes: AB = Assembly Bill; CARB = California Air Resources Board; CEC = California Energy Commission; CFC = chlorofluorocarbon; CH4 = methane; CO2 = carbon dioxide; CO2e = carbon dioxide equivalent; CPUC = California Public Utilities Commission; EO = Executive Order; EPA = Environmental Protection Agency; GHG = greenhouse gas; GWP = global warming potential; HCFC = hydrochlorofluorocarbon; HFC = hydrofluorocarbon; gpm = gallons per minute; MT = metric tons; N2O = nitrous oxide; NHTSA = National Highway Traffic Safety Administration; PM = particulate matter; RPS = Renewable Portfolio Standard; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SCAG = Southern California Association of Governments; VOC = volatile organic compound; ZEV = zero emission vehicle

As shown, the project would be consistent with and would not conflict with the applicable GHG-reducing strategies of the state.

As part of the City's General Plan, the City adopted a CAP on July 11, 2011, which was prepared following CEQA Guidelines Section 15183.5. As previously mentioned, the City has not established a significance threshold under the City's CAP, but the CAP noted that projects that demonstrate consistency with the goals, strategies, actions, and emission reduction targets contained in the City's CAP would have a less-than-significant impact on climate change. To achieve the City's GHG emission reductions, the City's CAP includes seven reduction strategies for each category of GHG emissions (i.e., transportation, energy and water consumption, and waste disposal). Table 4.7-6 describes the project's consistency with those strategies.

Table 4.7-6. Consistency with City of Murrieta Climate Action Plan Strategies

Climate Action Strategies	Project Consistency
Community Involvement Strategy. The community involvement strategy is intended to foster a sense of ownership of the ideas and actions to be carried out within the City. To create a successful plan that is supported by the community, who will ultimately make these changes.	<i>Not applicable.</i> This strategy does not apply to the project.

Table 4.7-6. Consistency with City of Murrieta	Climate Action Plan Strategies
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Climate Action Strategies	Project Consistency
Land Use and Community Vision Strategy. The land use and community vision strategy encourages changes in the land use pattern to enable residents to reduce dependence on their cars to get around town.	<i>Consistent.</i> Bus route 23 and 61 serviced by the Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center. Residents surrounding the project site could be able to walk to the project site. Residents in the City and surrounding communities would also be provided a nearer retail center rather than driving to another location.
Transportation and Mobility Strategy. The transportation and mobility strategy identifies opportunities to improve mobility such as walking, bicycling, and transit use, and to decrease the need to drive.	<i>Consistent.</i> Bus route 23 and 61 serviced by the Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center. Residents surrounding the project site could be able to walk to the project site. Residents in the City and surrounding communities would also be provided a nearer retail center rather than driving to another location.
Energy Use and Conservation Strategy. The energy use and efficiency strategy recommends ways to increase energy efficiency in existing buildings, enhance energy performance for new construction, and increase use of renewable energy.	Consistent. The project would include standard condition SC-AQ/GHG-1, which would reduce energy use and increase energy efficiency, including operating electric-powered landscaping maintenance equipment, providing recycling bins for tenants, installing EV charging stations, installing solar photovoltaic systems, and designing solar ready roofs on the remaining rooftops.
Water Use and Efficiency Strategy. The intent of this strategy is to conserve water through efficient use and conservation.	Consistent. The project would include standard condition SC-AQ/GHG-1, which would conserve water, including planting drought-tolerant vegetation and water-efficient irrigation system.
Waste Reduction and Recycling Strategy. The strategy builds on past City successes by increasing waste diversion, reducing consumption of materials that otherwise end up in landfills, and increasing recycling.	<i>Consistent.</i> All non-hazardous solid waste generated from the project site once operational (e.g., plastic and glass bottles and jars, paper, newspaper, metal containers, and cardboard) would be recycled to the greatest extent possible.
Open Space Strategy. This strategy expands the utilization of open space areas for habitat, storm water management, soil retention, air filtration, and cooling, aesthetic and economic value, local food security, increased and improved parks, preservation, and to create new open spaces.	Not applicable. Per the City's General Plan, the project area was not zoned as an open space land use type (e.g., park), and the project area does not include elements (e.g., creek, designated trail) that would require open space designation. The project includes outdoor eating and seating areas for customers and employees.

Source: City of Murrieta 2011b.

Notes: City = City of Murrieta; HVAC = heating, ventilation, and air conditioning; EV = electric vehicle.

Each of the City's CAP strategies described above includes goals to identify ways to reduce GHG emissions. For informational purposes, the project is shown to be consistent with the strategies in the CAP. Table 4.7-7 describes the project's consistency with applicable goals.

Climate Action Strategy Goals	Project Consistency	
Community Involvement Strategy		
Increase Public Education Goal CIR-6: Alternative travel modes and facilities are available to serve residents and employers/employees and reduce vehicle miles traveled.	<i>Consistent.</i> Bus route 23 and 61 serviced by the Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center. Residents surrounding the project site could be able to walk to the project site. Residents in the City and surrounding communities would also be provided a nearer retail center rather than driving to another location.	
Green the City Operations	Not applicable. This goal does not apply to the project.	
Goal CSV-15. A community taking a leadership role in resource conservation and reduction of GHG by implementing programs to improve municipal operations.		
Green the City Fleet	Not applicable. This goal does not apply to the project.	
Goal HC-1: Application of innovative and model best practices in the community health field.		
Land Use and Community Vision Strategy		
Balance of Land Uses to Reduce Vehicles Miles Traveled Goal LU-1: A complementary balance of land uses throughout the community that meets the needs of existing residents and businesses as well as anticipated growth, and achieves the community's vision.	<i>Consistent.</i> The project site is designated Commercial in the General Plan and the zoning is Regional Commercial, so the proposed project is consistent with the General Plan land use and zoning designation for the site. By locating a regional retail center here, it would reduce vehicle miles traveled in the community and in the region as residents currently travel greater distance elsewhere. It would also provide additional employment opportunities in the City, which reduces vehicle miles traveled for residents who may otherwise be traveling outside the City for these retail jobs.	
Improve Jobs/Housing Balance	Consistent. By providing additional employment	
Goal LU-4: A housing stock that meets the diverse needs of Murrieta's existing and future residents.	opportunities within the City, this project would improve the jobs/housing imbalance.	
Improve Jobs/Housing Balance	Not applicable. This goal does not apply to the project.	
Goal LU-5: Promotion of quality industrial development that provides local employment opportunities.		
Improve Jobs/Housing Balance	Consistent. The project would generate approximately	
Goal LU-6: Land use policy that encourages job retention and attraction.	communities.	

Climate Action Strategy Goals	Project Consistency
Transit Oriented Development Goal LU-7: Economically viable, vital, and attractive commercial centers throughout the City that serve the needs of the community.	<i>Consistent.</i> Bus route 23 and 61 serviced by the Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center. Residents surrounding the project site could be able to walk to the project site. Residents in the City and surrounding communities would also be provided a nearer retail center rather than driving to another location.
Transit Oriented Development	Not applicable. This goal does not apply to the project.
Goal LU-8: A community that provides opportunities for mixed use and/or transit-oriented development.	
Pedestrian-Friendly Environment Goal LU-9: Land use patterns and urban design that support healthy and sustainable lifestyles and businesses.	Consistent. The project would include standard condition SC-AQ/GHG-1, which would generate renewable energy and conserve water that would help reduce environmental impacts.
Pedestrian-Friendly Environment	Consistent. The project site would be accessible for
Goal LU-10: A community that provides pedestrian- friendly environments for residential, commercial, business, and recreation uses.	from adjacent streets and neighboring properties.
Sustainable Economy	Consistent. The project would generate approximately
Goal ED-3: A sound, stable, and diversified economic base.	communities, consistent with the City's economic development strategy.
Sustainable Economy	Consistent. Residents in the City and surrounding
Goal ED-4: Positive balance between the supply of retail opportunities and demand for goods and services will reduce the need to travel outside the City.	commercial/retail center rather than driving to another location.
Improve Jobs/Housing Balance	Consistent. The project would generate approximately
Goal ED-5: An improved jobs/housing balance.	communities.
Improve Jobs/Housing Balance	Consistent. The project would generate 20 jobs for
Goal ED-6: An educated and highly-skilled labor force.	project would provide highly skilled employment opportunities, including the managerial staff.
Improve Jobs/Housing Balance	Consistent. The project would generate 20 jobs for
Goal ED-8: Strategic approach to economic growth.	project would increase sales tax generated by the goods sold at the project site.
Sustainable Economy	Not applicable. This goal does not apply to the project.
Goal ED-10: A revitalized and economically stable Historic Downtown Murrieta.	
Green Economy	Not applicable. This goal does not apply to the project.
Goal AQ-6: Stationary source pollution (point source and area source) are minimized through existing and future regulations and new technology.	

Climate Action Strategy Goals	Project Consistency	
Transportation and Mobility Strategy		
Increase Trail Connectivity	Not applicable. This goal does not apply to the project.	
Goal LU-22: Natural and visual resources are valued resources to maintain the rural character of the Los Alamos Hills.		
Reduce Driving	Not applicable. This goal does not apply to the project.	
Goal LU-24: Historic Murrieta as the City's cultural, civic, and community center.		
Support High Speed Rail	Not applicable. This goal does not apply to the project.	
Goal LU-25: Collaboration with Federal, State, County, and other regional agencies and authorities to ensure compliance with existing and future legislation that affects the City of Murrieta.		
Support Multi-Modal Transportation	Not applicable. This goal does not apply to the project.	
Goal CIR-1: A circulation system that serves the internal circulation needs of the City, while also addressing the inter-community or through travel needs.		
Promote Pedestrian Safety	Consistent. Proposed project driveways and internal	
Goal CIR-2: A comprehensive circulation system that promotes safety.	circulation elements have been designed to reflect the specific opportunities and constraints within the project site with safety in mind. All intersections, circulation improvements, and access to the site would be designed consistent with City roadway standards and would not create a hazard for vehicles, bicycles, or pedestrians entering or exiting the site. Sidewalks would be constructed to ensure connectivity and easy access from adjacent streets and neighboring properties.	
Improve Public Transportation Goal CIR-5: A supported regional transportation system that serves existing and future travel between Murrieta and other population and employment centers within southwest Riverside County and the larger region, and that accommodates the regional travel needs of developing areas outside the City.	<i>Consistent.</i> Bus Routes 23 and 61 serviced by the Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center.	
Reduce Driving	Consistent. Bus Routes 23 and 61 serviced by the	
Goal CIR-6: Alternative travel modes and facilities are available to serve residents and employers/employees and reduce vehicle miles traveled.	Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center. Residents surrounding the project site could be able to walk to the project site. Residents in the City and surrounding communities would also be provided a nearer commercial/retail center rather than driving to another location. Furthermore, under SC-AQ/GHG-1 the project would install EV charging stations.	

Climate Action Strategy Goals	Project Consistency
Increase Walking	Not applicable. This goal does not apply to the project.
Goal CIR-7: Residential areas and activity centers are accessible to all pedestrians, including persons with disabilities or having special accessibility needs.	
Increase Trail Connectivity	Not applicable. This goal does not apply to the project.
Goal CIR-8: Development, expansion, and maintenance of a network of bicycle, pedestrian, and multi-use trails that allows residents to travel between parks, schools, neighborhoods, and other major destinations without driving.	
Goal AQ-4: Mobile source emissions are reduced by providing a balance of jobs and housing that serve the needs of the community.	<i>Consistent.</i> Implementation of the project would generate approximately 20 jobs that could be available for residents of the City and surrounding communities. Residents in the City and surrounding communities would also be provided a nearer commercial/retail center rather than driving to another location.
Improve Air Quality by Reducing Driving Goal AQ-5: Air quality is improved through an efficient circulation system, reduced traffic congestion, and reduced vehicle miles traveled.	Consistent. Bus Routes 23 and 61 serviced by the Riverside Transit Agency would provide residents and employers/employees an alternate mode of transportation to the future commercial/retail center. Residents surrounding the project site could be able to walk to the project site. Residents in the City and surrounding communities would also be provided a nearer commercial/retail center rather than driving to another location. The project site would be accessible for bicycles and pedestrians. Sidewalks would be constructed to ensure connectivity and easy access from adjacent streets and neighboring properties.
Energy Use and Conservation Strategy	
Renewable Energy and Efficiency Goal CSV-12: Energy conservation and the generation of energy from renewable sources is prioritized as part of an overall strategy to reduce greenhouse gas emissions.	<i>Consistent.</i> The project would include standard condition SC-AQ/GHG-1, which would reduce energy use and increase energy efficiency, including the installation of solar photovoltaic systems and designing solar ready roofs.
Green Building	Consistent. The project would include standard
Goal CSV-14: A community that encourages and incentivizes the sustainable development of buildings and neighborhoods, particularly with respect to durability, energy and water use, and transportation impacts.	condition SC-AQ/GHG-1, which would reduce vehicle idling by providing electric plug-ins at loading docks for delivery trucks and installation of electric vehicle charging stations and preferred parking encouraging electric vehicle/clean air/vanpools that would help reduce environmental impacts.
Energy Efficient Design	Not applicable. This goal does not apply to the project.
Goal 2: Conserve and enhance the quality of existing housing and residential neighborhoods in Murrieta.	

Climate Action Strategy Goals	Project Consistency	
Water Use and Efficiency Strategy		
Increase Use of Recycled Water Goal INF-2: Infrastructure for recycled water is expanded throughout Murrieta for irrigation and other non-potable uses.	Not applicable. Recycled water is not available to the site; however, the project would install non-potable irrigation lines in preparation for recycled water becoming available in the future as implemented under SC-AQ/GHG-1.	
Goal CSV-1: A community that conserves, protects, and manages water resources to meet long-term community needs, including surface waters, groundwater, imported water supplies, storm water, and waste water.	conditions that would conserve water including planting drought-tolerant vegetation and water-efficient irrigation system as implemented under SC-AQ/GHG-1. The project has been designed to include landscape throughout the project site that will help with runoff and stormwater management. A system of bio-filtration planters at the perimeter of the parcel and within the parking area would provide an ecologically responsible method of on-site stormwater treatment.	
Reduce Water for Landscaping Goal CSV-2: Murrieta promotes compliance with requirements from the State and appropriate agencies regarding comprehensive water conservation measures in buildings and landscaping.	<i>Consistent.</i> The project would include standard conditions that would conserve water including planting drought-tolerant vegetation and water-efficient irrigation system The project has been designed to include landscape throughout the project site that will help with runoff and stormwater management. A system of bio-filtration planters at the perimeter of the parcel and within the parking area would provide an ecologically responsible method of on-site stormwater treatment. Recycled water would be used for irrigation and landscape where applicable.	
Waste Reduction and Recycling Strategy		
Reduce Waste through Education Goal INF-1: New development and redevelopment is coordinated with the provision of adequate infrastructure for water, sewer, storm water, and energy.	<i>Consistent</i> . Upon project approval, all infrastructure systems would be adequate to serve the project.	
Increase Waste Diversion Goal CSV-13: Solid waste is diverted from landfills through waste reduction, re-use, and recycling.	Consistent. The project would incorporate recycling as applicable in order to divert waste from landfills. Extensive recycling/reuse program shall be implemented for warehouse and office space, including tires, cardboard, grease, plastics, and electronic waste.	
Open Space Strategy		
Goal CSV-9: A community that promotes the growth of an urban forest and water-efficient landscaping, recognizing that plants provide natural services such as habitat, storm water management, soil retention, air filtration, and cooling, and also have aesthetic and economic value.	<i>Consistent.</i> The project has been designed to include landscape throughout the project site that will help with runoff and stormwater management. A system of bio- filtration planters at the perimeter of the parcel and within the parking area would provide an ecologically responsible method of on-site stormwater treatment.	

Table 4.7-7. Consistency with Applicable City of Murrieta	a Climate Action Plan Strategy Goals
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Climate Action Strategy Goals	Project Consistency
Improve Local Food Security	Not applicable. This goal does not apply to the project.
Goal CSV-10: Fresh food is grown locally and made available through multiple venues that maintain a link to the City's agricultural heritage and promote healthy eating.	
Preserve Open Space Goal ROS-7: Open space areas are planned to protect, conserve, and utilize resources of unique character and value of the community.	Not applicable. Per the City's General Plan, the project area was not zoned as an open space land use type (e.g., park), and the project area does not include elements (e.g., creek, designated trail) that would require open space designation. The project includes outdoor eating and seating areas for customers and employees.
Integrate New Development and Open Space	Not applicable. Per the City's General Plan, the project
Goal ROS-8: New development is part of a coordinated system of open space, parkland, recreation facilities, and trails.	area was not zoned as an open space land use type (e.g., park), and the project area does not include elements (e.g., creek, designated trail) that would require open space designation. The project includes outdoor eating and seating areas for customers and employees.
Create New Open Spaces	Not applicable. Per the City's General Plan, the project
Goal ROS-9: Public plazas or green spaces provide additional open space opportunities for existing and future residents and employees.	area was not zoned as an open space land use type (e.g., park), and the project area does not include elements (e.g., creek, designated trail) that would require open space designation. The project includes outdoor eating and seating areas for customers and employees.

Source: City of Murrieta 2011b.

Notes: GHG = greenhouse gas; City = City of Murrieta; SCAQMD = South Coast Air Quality Management District; HVAC = heating, ventilation, and air conditioning; EV = electric vehicle.

As shown in Table 4.7-7, the project demonstrates consistency with the City's Climate Action Strategy Goals.

Per CEQA Guidelines Section 15183.5, the City's CAP Update is considered a "Qualified" CAP and may be used for streamlining the analysis of GHG emissions for new development projects. The project is consistent with the following applicable CAP Update measures in the CAP Consistency Checklist: Measure SW-2, Construction Waste Diversion, and Measure T-2, Installation of Electric Vehicle Service Equipment. Table 4.7-8 describes the project's consistency with the City's CAP Update Consistency Checklist.

Table 4.7-8. Consistency with City of Murrieta's Climate Action Plan Update Consistency Checklist

Climate Action Plan Update Checklist Item*	Project Consistency
 Measure BE-3 Zero Net Energy Standards. a. For residential projects, would the project or a portion of the project be subject to building permitting (i.e., building permits issues) on or after January 1, 2023? b. For commercial projects or commercial portions of mixed-use projects, would the project or a portion of the project be subject to building permit (i.e., building 	<i>Not applicable.</i> The project is a commercial project. The project would be subject to building permitting prior to January 1, 2025.

Climate Action Plan Update Checklist Item*	Project Consistency
permits issued) on or after January 1, 2025? c. For industrial projects, would the project or a portion of the project be subject to building permitting (i.e., building permits issued) on or after January 1, 2025?	
Measure SW-2 Construction Waste Diversion.	<i>Consistent.</i> The project is a nonresidential project. The project would recycle and/or salvage for reuse a
 a. For residential projects, recycle and/or salvage for reuse a minimum of 80 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3, or 4.408.4 of the California Code of Regulations, Title 24? b. For nonresidential projects, recycle and/or salvage for reuse a minimum of 80 percent of the nonhazardous construction and demolition waste in accordance with either Section 5,408.1.1, 5.408.1.2, or 5.408.1.3 of the California Code of Regulations, Title 24? 	minimum of 80% of nonhazardous construction and demolition waste.
Measure T-7 Transportation Demand Management Program.	<i>Not applicable.</i> The project would employ 20 full- time employees, which is less than 50 employees.
 a. For the construction of nonresidential projects that would include 50 or more employees, would the project include a transportation demand management plan that meets requirements of Section 16.40 "Transportation Demand Management" of the City's Municipal Code has been reviewed and approved by the City of Murrieta Public Works Department? 	
Measure T-2 Electric Vehicle Service Equipment.	Consistent. The project is a nonresidential project.
 a. One- and two-family dwellings and townhomes with attached private garages: Would the required parking serving each new dwelling include Electric Vehicle Service Equipment to allow for electric vehicle charging by the resident(s)? b. Multi-Family Residential Projects: Would 6% of the total parking spaces required, or a minimum of two spaces, whichever is greater, include Electric Vehicle Service Equipment to allow for electric vehicle charging by the resident(s)? c. Non-Residential Projects: Would 3% of the total parking spaces required, or a minimum of two spaces, whichever is greater, include Electric Vehicle Service Equipment to allow for electric Vehicle Charging by the resident(s)? 	As implemented under SC-AQ/GHG-1, the project would install 10 electric vehicle charging stations (5% of the total parking spaces) and mark four parking spaces and two Americans with Disabilities Act-compliant parking spaces for electric vehicle/clean air/van pool parking only.

Table 4.7-8. Consistency with City of Murrieta's Climate Action Plan Update Consistency Checklist

Source: City of Murrieta 2020.

As shown in Table 4.7-8, the project demonstrates consistency with the City's CAP Update.

The City's General Plan includes various goals and policies that promote the use of clean and renewable energy sources, facilitate alternative modes of transportation and reduce VMTs, reduce waste, conserve water, and promote the efficient and sustainable use of energy. The Conservation Element includes goals and policies that result in benefits with reducing GHG emissions. Table 4.7-9 summarizes the project's consistency with these policies.

General Plan Policies	Project Consistency
Policy CSV-2.1. Ensure that all developments comply with water efficiency requirements, as mandated by the applicable Building Code.	<i>Consistent.</i> The project would comply with water efficiency requirements as mandated by the applicable Building Code.
Policy CSV-12.1. Ensure that all developments comply with energy efficiency requirements as mandated by the applicable Building Code.	<i>Consistent.</i> The project would comply with energy efficiency requirements as mandated by the applicable Building Code. Additionally, under SC-AQ/GHG-1, the project would include project design features that would install electric vehicle charging stations, solar photovoltaic systems, and design solar ready roofs.
Policy CSV-12.3. Support the on-site installation and use of renewable energy generation systems for residential, commercial, institutional, and industrial uses.	<i>Consistent.</i> The project would install solar photovoltaic systems and design the roofing structure to accommodate the additional structural load of the solar panels to allow for the flexibility for possible future installation.
Policy CSV-13.1. Continue to comply with the landfill diversion requirements of the Integrated Waste Management Program.	<i>Consistent.</i> Under SC-AQ/GHG-1, the project would incorporate recycling as applicable in order to divert waste from landfills. Extensive recycling/reuse program shall be implemented for warehouse and office space including tires, cardboard, grease, plastics, and electronic waste.
Policy CSV-13.2. Ensure that non-residential and multi-family developments provide readily accessible areas for recycling (at a minimum) paper, corrugated cardboard, glass, plastics and metals, as required by California law.	Consistent. Under SC-AQ/GHG-1, the project would incorporate recycling as applicable to divert waste from landfills. Extensive recycling/reuse program shall be implemented for warehouse and office space including tires, cardboard, grease, plastics, and electronic waste.
Policy CSV-14.1. Ensure all applicable construction projects comply with the California State Green Building Standards Code.	<i>Consistent.</i> The project would comply with all applicable California State Green Building Standards Code.
Policy CSV-14.2. Encourage the integration of other principles of green building into development standards and guidelines, looking for opportunities to realize other benefits such as improved health and increased bicycle transportation.	<i>Consistent.</i> The project would include standard conditions, such as use of electric landscape maintenance equipment, installation of electric vehicle charging stations, installation of solar photovoltaic systems, and design solar ready roofs

Table 4.7-9. Consistency with Applicable City of Murrieta General Plan Policies

Source: City of Murrieta 2011a.

Notes: HVAC = heating, ventilation, and air conditioning.

As discussed in Table 4.7-9, the project would be consistent with the City's General Plan Policies.

The Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.⁵ Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., LCFS), among others.

⁵ The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 4.7-10 highlights measures that have been, or will be, developed under the Scoping Plan and the project's consistency with Scoping Plan measures. To the extent that these regulations are applicable to the project, its inhabitants, or uses, the project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Table 4.7-10. Project Consistency with Scoping Plan Greenhouse Gas Emission
Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	<i>Consistent</i> . The project's customers and employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	<i>Consistent</i> . Motor vehicles driven by the project's customers and employees would use compliant fuels.
Regional Transportation-Related	T-3	<i>Consistent</i> . The project location would be convenient for customers and customers to travel to shopping and work.
GHG Targets		
 Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing 	T-4	<i>Consistent.</i> The project's tire center would purchase tires in compliance with EPA and NHTSA standards that are in effect at the time of tire purchase.
Ship Electrification at Ports (Shore Power)	T-5	Not applicable.
 Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti- Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction 	T-6	Not applicable.
 Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I) 	T-7	<i>Consistent</i> . The project's delivery trucks would comply with EPA and NHTSA federal Phase 2 Standards that are in effect at the time of vehicle purchase.

Table 4.7-10. Project Consistency with Scoping Plan Greenhouse Gas EmissionReduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	<i>Consistent</i> . The project's delivery trucks would comply with EPA and NHTSA federal Phase 2 Standards that are in effect at the time of vehicle purchase.
High-Speed Rail	T-9	Not applicable.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	<i>Consistent</i> . The project would comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction. Under SC- AQ/GHG-1, the project would install solar photovoltaic systems and design solar ready roofs to accommodate the solar equipment that may be installed at a future date.
Energy Efficiency (Natural Gas)	CR-1	<i>Consistent</i> . The project would comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for natural gas appliances and other devices at the time of building construction.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	<i>Consistent</i> . The project would comply with current Title 24, Part 6 of the California Code of Regulations.
Combined Heat and Power	E-2	Not applicable.
Renewable Portfolios Standard (33% by 2020)	E-3	<i>Consistent</i> . The electricity used by the project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources. Furthermore, under SC-AQ/GHG-1, the project would install solar photovoltaic systems and design solar ready roofs.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	<i>Consistent</i> . Under SC-AQ/GHG-1, the project would install solar photovoltaic systems and design solar ready roofs on the remaining rooftops.
Water Sector		
Water Use Efficiency	W-1	<i>Consistent</i> . Under SC-AQ/GHG-1, the project would include planting drought-tolerant vegetation and water-efficient irrigation system
Water Recycling	W-2	<i>Not feasible</i> . Recycled water is not available to the site; however, the project would install non-potable irrigation lines in preparation for recycled water becoming available in the future, as implemented under SC-AQ/GHG-1.
Water System Energy Efficiency	W-3	<i>Not applicable.</i> This is applicable for the transmission and treatment of water, but it is not applicable for the project.
Reuse Urban Runoff	W-4	<i>Not feasible.</i> Per the project applicant, reuse of urban water on-site was determined to not be feasible.
Renewable Energy Production	W-5	<i>Not applicable</i> . Applicable for wastewater treatment systems.
Table 4.7-10. Project Consistency with Scoping Plan Greenhouse Gas EmissionReduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency	
Green Buildings	1		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	<i>Consistent.</i> The project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction, which currently includes the 2019 Title 24 and 2019 CALGreen standards.	
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	<i>Consistent</i> . The project's buildings would meet green building standards that are in effect at the time of design and construction.	
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	<i>Consistent</i> . The project would be required to be constructed in compliance with local green building standards in effect at the time of building construction, which currently includes the 2019 Title 24 and 2019 CALGreen standards.	
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	<i>Not applicable.</i> This is applicable for existing buildings only. It is not applicable for the project except as future standards may become applicable to existing buildings.	
Industry Sector			
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	Not applicable.	
Oil and Gas Extraction GHG Emission Reduction	I-2	Not applicable.	
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	Not applicable.	
Refinery Flare Recovery Process Improvements	I-4	Not applicable.	
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	Not applicable.	
Recycling and Waste Management Sector			
Landfill Methane Control Measure	RW-1	Not applicable.	
Increasing the Efficiency of Landfill Methane Capture	RW-2	Not applicable.	
Mandatory Commercial Recycling	RW-3	<i>Consistent.</i> During both construction and operation of the project, the project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During operation, extensive recycling/reuse program would be implemented by providing tenants with recycling bins, as implemented under SC-AQ/GHG-1.	

Table 4.7-10. Project Consistency with Scoping Plan Greenhouse Gas EmissionReduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Increase Production and Markets for Compost and Other Organics	RW-3	Not applicable.
Anaerobic/Aerobic Digestion	RW-3	Not applicable.
Extended Producer Responsibility	RW-3	<i>Not applicable</i> (applicable to product designer and producers).
Environmentally Preferable Purchasing	RW-3	<i>Not applicable</i> (applicable to product designer and producers).
Forests Sector		
Sustainable Forest Target	F-1	Not applicable.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	<i>Consistent.</i> The project's customers and employees would be prohibited from performing air conditioning repairs and would be required to use professional servicing.
SF ₆ Limits in Non-Utility and Non- Semiconductor Applications	H-2	Not applicable.
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	Not applicable.
Limit High GWP Use in Consumer Products	H-4	Not applicable.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Not applicable.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	Not applicable.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	Not applicable.
SF ₆ Leak Reduction Gas Insulated Switchgear	H-6	Not applicable.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	Not applicable.

Source: CARB 2017.

Notes: CARB = California Air Resources Board; GHG = greenhouse gas; SB = Senate Bill; EPA = U.S. Environmental Protection Agency; NHTSA = National Highway Traffic Safety Administration; SF₆ = sulfur hexafluoride; GWP = global warming potential.

Based on the analysis in Table 4.7-10, the project would be consistent with the applicable strategies and measures in the Scoping Plan.

SCAG's 2016 RTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an

overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. The 2016 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The City's Zoning Map shows the site as being zoned Regional Commercial (City of Murrieta 2014). The project would be consistent with the current zoning and land use designation.

The project would add approximately 20 full-time employees. The SCAG 2016 RTP/SCS provides employee estimates for the years 2012 and 2040. To provide an interim year comparison, this analysis interpolates the City's projected employee population in the project's operational year (2021) based on the average growth rate to compare with the estimated increase in employees generated by the project. The SCAG 2016 RTP/SCS estimates that the City's employee population will increase approximately 30% between 2012 and 2040. Regarding households, the SCAG 2016 RTP/SCS estimates that the City's total households will increase approximately 25% between 2012 and 2040. The project's 20 potential employees would not exceed the interpolated annual growth rate of 782 employees a year for the City. Based on these considerations, vehicle trip generation and planned development for the site are concluded to have been anticipated in the SCAG growth projections because the land use designation and zoning would remain the same (i.e., Regional Commercial). The addition of project-generated employees to the City's estimated employee population would not exceed the SCAG 2016 RTP/SCS forecasted population.

With regard to individual developments, such as the project, the strategies and policies set forth in the 2016 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency. The project's consistency with these three strategy categories is presented below.

1. Consistency with Vehicle Miles Traveled Reduction Strategies and Policies

The project's consistency with this aspect of the 2016 RTP/SCS is demonstrated via the project's land use characteristics and features that would reduce vehicular trips and VMT, as well as the project's consistency with the regional growth forecast assumed in the 2016 RTP/SCS for the City. As discussed in Section 4.7.2, vehicle trip generation and planned development for the project site are concluded to have been anticipated in the SCAG 2016 RTP/SCS growth projections because the project would be consistent with the current zoning and land use designation. Regarding VMT reduction characteristics, the project would be serviced by the Riverside Transit Agency Bus Routes 23 and 61, which provide residents and employers/employees an alternate mode of transportation to the project site. Furthermore, the residents in the City and surrounding communities would also be provided a closer commercial/retail center rather than driving to other, more distant, locations. Furthermore, the project would also provide additional employment opportunities in the City, which reduces VMT for residents who may otherwise be traveling outside the City for these retail jobs. The project site would be accessible for bicycles and pedestrians. A pedestrian pathway would be constructed to ensure connectivity throughout the site and easy access from adjacent streets and neighboring properties.

2. Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2016 RTP/SCS, with regard to individual development projects such as the project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. This 2016 RTP/SCS policy initiative focuses on accelerating fleet conversion to electric or other near zero-emission technologies. The project would be consistent with these strategies since the electric vehicle charging stations would be implemented into the project, including installing 10 electric vehicle charging stations

(5% of the total parking spaces) and marking four parking spaces and two Americans with Disabilities Act-compliant parking spaces for electric vehicle/clean air/van pool parking only, consistent with the requirements of the City's CAP Update.

3. Energy Efficiency Strategies and Policies

The third important focus within the 2016 RTP/SCS, for individual developments such as the proposed project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. The project would comply with the current CALGreen and Title 24 standards. Additionally, the project applicant committed to installing plugs on exteriors of each building allowing for landscaping maintenance equipment recharging, installing solar photovoltaic systems, designing remaining rooftops to be solar ready, and installing electric plug-ins at loading docks for delivery trucks.

Based on the analysis above, the project would be consistent with the SCAG 2016 RTP/SCS.

Conclusion

The City has taken steps to address climate change impacts at a local level. In 2011, the City Council adopted a CAP. The purpose of the City's CAP is to guide the development, enhancement, and implementation of actions that would reduce the City's GHG emissions by 15% below existing levels below 2009 baseline emission levels by 2020. Actions to be taken to achieve this goal are outlined in the City's CAP. In addition, as summarized in Table 4.7-7, Consistency with Applicable City of Murrieta Climate Action Plan Strategy Goals, the City's General Plan includes various goals and policies that promote the use of clean and renewable energy sources, facilitate alternative modes of transportation and reduce VMT, reduce waste, conserve water, and promote the efficient and sustainable use of energy. Table 4.7-5, Applicable Greenhouse Gas-Related Laws and Regulations, and Table 4.7-6, Consistency with City of Murrieta Climate Action Plan Strategies, demonstrate the project's consistency with the City's climate action strategies and City's climate action strategy goals in the City's CAP, respectively. As stated in the City's CAP, projects that demonstrate consistency with the goals, strategies, actions, and emission reduction targets contained in the City's CAP would have a less-than-significant impact on climate change. Since Table 4.7-5 and Table 4.7-6 demonstrate the project's consistency with those strategies and goals, respectively, the project would be consistent with the City's climate action strategies and would not result in a conflict with the adopted CAP. Furthermore, the project would be consistent with the strategies of the City's CAP Update, including Measure SW-2, Construction Waste Diversion, and Measure T-2, Installation of Electric Vehicle Service Equipment.

SCAG's 2016 RTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region. The 2016 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The City's Zoning Map shows the site as being zoned Regional Commercial (City of Murrieta 2014). The project would be consistent with the current zoning and land use designation. The project would add approximately 20 full-time employees.

The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-3-05 and SB 32. As discussed in Section 3.2.2, EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are

no established protocols or thresholds of significance for that future year analysis; CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

To begin, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014):

This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the Second Update, which states (CARB 2017):

The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197.

The project is consistent with the GHG emission reduction measures in the Scoping Plan. The project is consistent with the Scoping Plan, 2016 RTP/SCS, City's General Plan, City's CAP, and the City's CAP Update, which all promote economic growth while achieving greater energy efficiency. The project would be consistent with SCAG's RTP/SCS, SB 32, and EO S-3-05 by being consistent with VMT reduction strategies and policies, increasing the use of alternative fueled vehicles, and implementing energy efficiency strategies. The project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the proposed project's impacts on GHG emissions would be **less than significant**.

4.7.5 Mitigation Measures

Impacts related to GHG emissions and climate change would be less than significant. Therefore, no mitigation measures are necessary.

Standard Conditions

The following standard condition would be incorporated into the project:

- SC-AQ/GHG-1 To reduce construction and operational emissions to the extent feasible, the project would incorporate the following:
 - Operational landscaping maintenance equipment shall be electric, operated with plugs on exteriors of each building to allow for recharging.
 - Each tenant shall be provided a recycling bin slot in their trash enclosure areas for recycling.
 - Solar shall be installed on building rooftops totaling 2,100 square feet, which would generate a system output of 52,444 kilowatt-hours per year.
 - The remaining rooftops shall be designed to accommodate the additional structural load of the solar panels to allow for the flexibility for possible future installation.
 - A total of 10 electric vehicle-charging stations shall be installed in the parking lot: 8 electric vehicle-charging stations and 2 Americans with Disabilities Act-compliant electric vehicle-charging stations, with 4 connected to a solar-powered source.
 - Six parking spaces shall be marked for electric vehicle/clean air/van pool parking only, and two Americans with Disabilities Act-compliant parking spaces shall be marked for electric vehicle/clean air/van pool parking only.
 - The project shall install drought-tolerant vegetation and water-efficient irrigation systems.
 - Non-potable irrigation lines shall be installed in preparation for future recycled water.

4.7.6 Level of Significance After Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.7.7 Cumulative Impacts

As previously discussed in Section 4.7.1, Existing Conditions, GHG emissions inherently contribute to cumulative impacts, and thus, any additional GHG emissions would result in a cumulative impact. Development of the project site would be consistent with the City's CAP climate action strategies and would not result in a conflict with the adopted CAP, would be consistent with the City's CAP Update strategies, would support the SCAG 2016 RTP/SCS by being consistent with the current zoning and land use designation and through incorporation of energy and water-efficient features, and would demonstrate consistency with the Scoping Plan. Given the project's consistency with statewide, regional, and local plans adopted for the purpose of reducing GHG emissions, it is concluded that the project's incremental contribution to GHG emissions and their effects on climate change would not be cumulatively considerable. Therefore, the project would result in a less than cumulatively considerable GHG emissions impact.

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4.8 Hazards and Hazardous Materials

This section describes the existing hazardous materials within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). The analysis was completed, in part, based on a Phase I Environmental Site Assessment (ESA) prepared by IWS Environmental Inc. (IWS) in 2017 (included as Appendix F of this Environmental Impact Report [EIR]).

4.8.1 Existing Conditions

As part of the Phase I ESA, IWS conducted a site reconnaissance on August 3, 2017; conducted interviews with the property owner and site manager; reviewed online historical Sanborn Fire Insurance Maps, aerial photographs, topographic maps, telephone directory information, and a radius map report provided from Environmental Data Resources Inc. (EDR); and reviewed available pertinent records of local, state, and federal agencies in its investigation of the project site. These activities are commonly undertaken during ESAs to help identify recognized environmental conditions. The term "recognized environmental condition" means the presence or likely presence of any hazardous substances or petroleum products on the project site under conditions that indicate an existing release, a past release, or a material threat of a release into the ground, groundwater, or surface water, and can be potential hazards to the public or environment. The following discussion summarizes the findings of the Phase I ESA regarding the existing conditions at the project site.

Site History

According to the Phase I ESA, aerial photographs and historical topographic maps were reviewed to determine the history of the project site. The Phase I ESA concluded that the project site has remained vacant undeveloped land absent of agricultural use and any former buildings. Portions of adjacent properties located around the project site were formerly used for light agriculture between 1938 and 1989.

Site Reconnaissance

A site reconnaissance was conducted on August 3, 2017, as part of preparing the Phase I ESA (Appendix F). The site reconnaissance consisted of walking the project site and viewing adjacent properties. During the reconnaissance, several areas of patched pavement were observed along Antelope Road, which travels through the project site. The report suggests that utility lines (cable facilities) were recently installed beneath the asphalt on this road.

Hazardous Materials History

A review of historical aerial photographs was conducted to document prior use of the project site. Table 4.8-1 summarizes land uses and historical development of the project site from 1938 through 2012.

Year	Approximate Scale	Summary
1938	1 inch = 500 feet	Site: The project site is vacant with undeveloped land.
		Surrounding Area: Portions of surrounding area located to the east appear to be utilized for dry oat farming. A two-lane dirt road (currently the I-215 Freeway) extends along the western portion of the site.
1949	1 inch = 500 feet	Site: The project site appears the same as the 1938 photograph.
		Surrounding Area: Portions of land located on the south and west of the site are used for dry oat farming.
1961	1 inch = 500 feet	Site: The project site appears the same as the 1949 photograph.
1967		Surrounding Area: The surrounding area appears the same compared to the 1949 photograph reviewed.
1978	1 inch = 500 feet	Site: The majority of the project site appears the same. The eastern portion of the site is graded for Antelope Road, which connects to Clinton Keith Road from the north.
		Surrounding Area: Dry oat farming is still present on properties to the east.
1985 1989	1 inch = 500 feet	Site: The project site appears generally the same. Antelope Road is present extending through the property as a completed two-lane street.
		Surrounding Area: The surrounding area is generally the same, with the exception that there is some housing development north of the project site. Dry oat farming is present directly east and south of the site.
1996	1 inch = 500 feet	Site: The project site appears the same as the 1989 photograph.
		Surrounding Area: A graded area is present north of the northern portion of the site adjacent to the northbound I-215 on-ramp. Dry oat farming being performed on properties to the east and south is no longer present.
2002	1 inch = 500 feet	Site: The project site appears the same as the 1996 photograph.
		Surrounding Area: The surrounding area is the same.
2005	1 inch = 500 feet	Site: The project site appears the same as the 2002 photograph.
2006		Surrounding Area: The land to the east appears to have been developed with residences. Adjacent, to the east, land is being graded. Land southeast of the site has been developed with a track, baseball fields, parking lot, and a campus (Vista Murrieta High School). The Orchard shopping center is under construction to the west.
2009	1 inch = 500 feet	Site: The project site appears the same as the 2006 photograph.
2010		Surrounding Area: The surrounding area is the same.
2012		

Table 4.8-1. Review of Historical Photographs

Source: Appendix F

Notes: I = Interstate.

Aerial photographs only provide information concerning indications of land use, and no conclusions regarding the release of hazardous substances or petroleum products can be drawn from the review of photographs alone.

Table 4.8-2 summarizes historical uses of the project site and surrounding areas from 1938 through 2012. Topographic maps from 1901, 1942, 1943, 1947, 1953, 1973, 1979, and 2012 were reviewed.

Year	Scale	Summary
1901	1:125,000	Site: The project site is an undeveloped area absent of buildings and structures.
		Surrounding Area: The surrounding area is undeveloped and absent of buildings and structures. There are scattered dirt roads west of the site (currently I-215). The only buildings are seen 4 miles southwest.
1942	1:62,500	Site: The project site is the same and is described as rural and undeveloped.
1943	1:62,500 1:50,000	Surrounding Area: Immediate area is depicted as rural, undeveloped land.
1947		
1953	1:24,000	Site: The project site is the same as the 1947 map.
1973	1:24,000 1:24,000	Surrounding Area: I-215 is visible as a paved highway.
1979		
2012	1:24,000	Site: The project site is depicted as fully developed, though no structures or development is shown.
		Surrounding Area: The surrounding area appears generally more developed, though structures are not shown on this topographic map.

Table 4.8-2. Review of Historical Topographic Maps

Source: Appendix F.

Note: I = Interstate.

A search of Sanborn Fire Insurance maps was requested as part of the Phase I ESA, but no such maps were available for the site (Appendix F).

Surrounding Property Use

Properties surrounding the project site as observed during the Phase I ESA (Appendix F) include the following:

- North: Vacant land and continuation of Antelope Road
- East: Vacant land being graded for soil and rock
- South: Clinton Keith Road and residential area
- West: Northbound on-ramp from Clinton Keith Road to the Interstate (I) 215 Freeway and Orchard shopping center

According to the Phase I ESA (Appendix F), none of these nearby properties have documented releases.

Hazardous Materials Inventory

The Phase I ESA revealed no evidence of recognized environmental conditions in connection with the project site. Table 4.8-3 summarizes the materials/items observed during the site visit and categorizes them with regard to risk and potential recognized environmental conditions.

Currently Tracked Materials	On-Site Risk	Comment
Asbestos	No	None observed. Mass grading operations are presently performed at the site.
Chromium	No	None observed. Mass grading operations are presently performed at the site.
Freon	No	None observed. Mass grading operations are presently performed at the site.
Lead paint	No	None observed. Mass grading operations are presently performed at the site.
Lead shielding	No	None observed. Mass grading operations are presently performed at the site.
Mercury	No	None observed. Mass grading operations are presently performed at the site.
PCBs lighting ballasts	No	None observed.
Soil remediation (i.e., lead and other non-tank related materials)	No	None observed.
USTs	No	None reported or observed.
Aboveground storage tanks	No	None reported or observed.

Table 4.8-3. Review of Risk and Potentially Recognized Environmental Conditions

Source: Appendix F.

Notes: PCB = polychlorinated biphenyl; UST = underground storage tank.

Hazardous Sites Database Searches

CEQA requires review of Section 65962.5 of the California Government Code, also known as the "Cortese List," to identify whether a project crosses or is in close proximity to a site known to have had a hazardous materials release or to represent a threat to human health and the environment. A regulatory database search was conducted to identify known chemical handlers, hazardous waste generators, or polluters within a 1-mile radius of the project site. The database search is included as Appendix B of the Phase I ESA (Appendix F).

Table 4.8-4 summarizes the reviewed environmental databases that evaluated the listed sites generally within a 1-mile radius from the project site.

Table 4.8-4. Environmental Agency Lists, Search Distance, Listings

Agency List/Database	Search Radius	Number of Listed Sites
Federal National Priorities List sites	1.0 mile	0
Federal delisted National Priorities List sites	1.0 mile	0
Federal CERCLA list	0.5 mile	0
Federal CERCLA No Further Remedial Action Planned list	0.5 mile	0
Federal Resource Conservation and Recovery Act Corrective Action facilities	1.0 mile	0

Agency List/Database	Search Radius	Number of Listed Sites
Federal Resource Conservation and Recovery Act Non-Conservation and Recovery Act Corrective Action Transportation, Storage, and	0.5 mile	0
Disposal		-
Federal Resource Conservation and Recovery Act generators	0.25 mile	3
Federal institutional controls/engineering controls registries	0.5 mile	0
Federal Emergency Response Notification System of Spills	0.001 mile	0
State and tribal – Equivalent National Priorities List	1.0 mile	0
State and tribal – Equivalent CERCLA	1.0 mile	1
State and tribal – Solid waste facilities	0.5 mile	0
State and tribal – Registered storage tank sites	0.25 miles	0
State and tribal – Leaking storage tank sites	0.5 miles	0
State and tribal – Voluntary cleanup sites	0.5 miles	0
Local brownfield sites	0.5 miles	0
Local lists of landfill/solid waste disposal sites	Various	0
Local lists of hazardous waste sites	Various	0
Local lists of registered storage tanks	0.25 miles	0
Local land records	Various	0
Records of emergency release reports	0.001	0
Other ascertainable records	Various	1
EDR manufactured gas plants	1.0 mile	0
EDR historical auto stations	0.125 miles	0
EDR historical cleaners	0.125 miles	0

Table 4.8-4. Environmental Agency Lists, Search Distance, Listings

Source: Appendix F.

Notes: CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; EDR = Environmental Data Resources Inc.

North County Sand & Gravel Inc. was mapped next to the site and listed in the U.S. Mines database. According to the Phase I ESA (Appendix F), observations made during the site reconnaissance indicate that the site's listing in the U.S. Mines database does not represent a recognized environmental condition to the site. In total, four other off-site facilities were identified in the environmental database. No releases have been identified at these facilities, and the facilities were not identified as a potential concern to the site.

4.8.2 Relevant Plans, Policies, and Ordinances

Hazardous materials and wastes are identified and defined by federal and state regulations for the purpose of protecting public health and the environment. Hazardous materials contain certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous wastes are defined in the Code of Federal Regulations, Title 40, Volume 25, Parts 260–265, and in the California Code of Regulations, Title 22 Division 4.5, Chapter 11, Article 1, Section 66261. Over the years, the laws and regulations have evolved to deal with different aspects of the handling, treatment, storage, and disposal of hazardous substances.

Federal

Federal Toxic Substances Control Act of 1976

The Federal Toxic Substances Control Act of 1976 tasked the U.S. Environmental Protection Agency (EPA) with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. The Federal Toxic Substances Control Act addresses the production, importation, use, and disposal of specific chemicals including PCBs, asbestos, radon, and lead-based paint (EPA 2018a).

Resource Conservation and Recovery Act of 1976

The objectives of the Resource Conservation and Recovery Act of 1976 are to protect human health and the environment from the potential hazards of waste disposal, conserve energy and natural resources, reduce the amount of waste generated, and ensure that wastes are managed in an environmentally sound manner. The Resource Conservation and Recovery Act affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act. The Hazardous and Solid Waste Amendments of 1984 also added Subtitle I, which governs underground storage tanks (USTs) (EPA 2018b).

Comprehensive Environmental Response, Compensation, and Liability Act of 1980

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan. The National Contingency Plan provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priorities List, which is a list of contaminated sites warranting further investigation by EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986 (EPA 2018c).

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act amended CERCLA on October 17, 1986. The Superfund Amendments and Reauthorization Act had several changes and additions, including the following:

- Stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites
- Required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations
- Provided new enforcement authorities and settlement tools
- Increased state involvement in every phase of the Superfund program
- Increased the focus on human health problems posed by hazardous waste sites
- Encouraged greater citizen participation in making decisions on how sites should be cleaned up
- Increased the size of the trust fund to \$8.5 billion

The Superfund Amendments and Reauthorization Act also required the EPA to revise the Hazard Ranking System to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List (EPA 2018d).

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation between states under the Code of Federal Regulations, Title 49, Chapter 1, Parts 100–185. In California, the California Department of Transportation (Caltrans) and the California Highway Patrol enforce federal law related to the transport of hazardous materials. Together, these agencies determine driver training requirements, load labelling procedures, and specifications for container types.

Occupational Safety and Health Act of 1970 and Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 was passed to prevent workers from being killed or seriously harmed at work. The Occupational Safety and Health Act created the Occupational Safety and Health Administration (OSHA), which sets and enforces protective workplace safety and health standards. OSHA also provides information, training, and assistance to employers and workers. Under the Occupational Safety and Health Act, employers have the responsibility to provide a safe workplace (OSHA 2014).

State

Primary state agencies with jurisdiction over public health hazards and hazardous chemical materials management are the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (California Occupational Safety and Health Administration [Cal/OSHA] implementation), Office of Emergency Services (Office of Emergency Services–California Accidental Release Prevention Implementation), California Department of Fish and Wildlife, California Air Resources Board, Caltrans, State Office of Environmental Health Hazard Assessment (Proposition 65 implementation), and the California Integrated Waste Management Board.

The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol and Caltrans. Hazardous materials and waste transporters are responsible for complying with applicable packaging, labeling, and shipping regulations. South Coast Air Quality Management District Rules and Regulations pertain to asbestos abatement (including Rule 1403), Construction Safety Orders 1529 (pertaining to asbestos), and Section 1532.1 (pertaining to lead) from Title 8 of the California Code of Regulations. Hazardous chemical and biohazardous materials management laws in California include the following statutes:

- Hazardous Materials Management Act Requires that businesses handling or storing certain amounts of hazardous materials prepare a hazardous materials business plan, which includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program.
- Hazardous Waste Control Act (California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq.) Authorizes DTSC and local certified unified program agencies to regulate facilities that generate or treat hazardous waste.
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) Requires the governor to publish and update, at least annually, a list of chemicals known to the state to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals.

- Hazardous Waste Management Planning and Facility Siting, also known as the Tanner Act (Assembly Bill 2948, 1986) Requires counties to prepare, for California DTSC approval, hazardous waste management plans and prescribes specific public participation activities, which must be carried out during the local land use permit process for siting new or expanding off-site commercial treatment, storage, and disposal facilities.
- Hazardous Materials Storage and Emergency Response (Assembly Bill 2185) Requires the immediate reporting to local fire departments and Offices of Emergency Services of any release or threatened release of a hazardous material, regardless of the amount handled by the business.
- California Medical Waste Management Act (California Health and Safety Code, Sections 117600–118360)
 Establishes procedures for the proper handling, storage, treatment, and transportation of medical waste.
- Land Disposal Restrictions (22 CCR, Chapter 18) Set up by Congress in 1984 for EPA, ensures that toxic constituents present in hazardous waste are properly treated before hazardous waste is land disposed.
- California Fire Code (Chapter 38) Includes requirements for handling, storing, and using liquefied petroleum gas, principally propane, to reduce the possibility of damage to containers, accidental releases of liquefied petroleum gas, and exposure of flammable concentrations of liquefied petroleum gas to ignition sources.
- California Health and Safety Code, Section 25501 California law defines a hazardous material as any
 material that, because of its quantity, concentration, or physical, chemical, or infectious characteristics,
 may pose a present or potential hazard to human health and safety or to the environment if released in the
 workplace or the environment.
- California Health and Safety Code, Section 25280 Establishes requirements for USTs to mitigate for the
 potential accidental release of hazardous materials into the environment. The section requires that USTs
 and associated piping be designed and constructed to have primary and second levels of containment
 (double-walled). Tanks are required to have continuous leak detection systems capable of detecting the
 entry of the stored substance from the primary containment into the secondary containment, and be
 capable of detecting water intrusion into the interstitial space from the environment (CWB 2019).

State regulations and agencies pertaining to hazardous materials management and worker safety are described in the following subsections.

California Environmental Protection Agency

The boards, departments, and offices that make up the California Environmental Protection Agency (CalEPA) include the California Air Resources Board, the Department of Pesticide Regulation, the Department of Resources Recycling and Recovery, DTSC, the Office of Environmental Health Hazard Assessment, and the State Water Resources Control Board. These boards, departments, and offices were placed within the CalEPA "umbrella" to create a cabinet-level voice for the protection of human health and the environment (such as clean air, clean water, clean soil, safe pesticides, and waste recycling and reduction) to assure the coordinated deployment of state resources (CalEPA 2019a).

Government Code Section 65962.5

Pursuant to Government Code, Section 65962.5, environmental regulatory database lists are compiled to identify and locate properties with known hazardous substance contamination (California Government Code, Section 65960 et seq.). Four state agencies are required to provide lists of facilities that have contributed to, harbor, or are responsible for environmental contamination within their jurisdiction. The four state agencies that are required to provide these lists to the Secretary for Environmental Protection include DTSC, the State Department for Health Services, the State Water Resources Control Board, and the California Integrated Waste Management Board. The Secretary for Environmental Protection then takes each of the four respective agency lists and forms one list, referred to as the Hazardous Waste and Substances Site List – Site Cleanup (Cortese List), which is made available to every city and/or county in California (CalEPA 2019b).

California Occupational Safety and Health Administration

Cal/OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the work place. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

California Occupational Safety and Health Regulations, Section 2540.7

Section 2540.7 of the California Code of Regulations helps mitigate fire and explosion dangers by providing safeguards for dispensing liquid and gaseous motor fuels into the fuel tanks of automotive vehicles. Specifically, the regulations require fuel-dispensing facilities to install vapor-processing (recovery) systems and abide by dispenser siting and design requirements. The regulations of the program are contained in the California Code of Regulations, Title 8, Division 1, Chapter 4.5.

California Hazardous Waste Control Law

The California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) is administered by CalEPA to regulate the management of hazardous wastes. While the California Hazardous Waste Control Law is generally more stringent than the Resource Conservation and Recovery Act, until EPA approves the California Hazardous Waste Control Program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Accidental Release Prevention Program

Similar to the Federal Risk Management Program, the California Accidental Release Prevention Program includes additional state requirements and an additional list of regulated substances and thresholds. The regulations of the program are contained in Title 19, Division 2, Chapter 4.5 of the California Code of Regulations. The intent of the California Accidental Release Prevention Program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, minimize the damage if releases do occur, and satisfy community right-to-know laws.

California Health and Safety Code

The handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95, of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a hazardous materials business plan. Hazardous materials business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Chapter 6.95 of the California Health and Safety Code establishes minimum statewide standards for hazardous materials business plans.

In addition, in the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by the California Health and Safety Code, facilities are also required to prepare a risk management plan and

California accidental release plan. The risk management plan and California accidental release plan provide information on the potential impact zone of a worst-case release and require plans and programs designed to minimize the probability of a release and mitigate potential impacts (California Health and Safety Code, Chapter 6.95).

Local

Riverside County Community Health Agency - Department of Environmental Health

The Environmental Protection and Oversight Division is one of two divisions of the Riverside County (County) Department of Environmental Health. The Environmental Protection and Oversight Division has regulatory control over a number of hazardous materials, land use, and water system-based programs.

The Hazardous Materials Management Division is one of three divisions of the County Community Health Agency. The Hazardous Materials Management Division is the certified unified program agency for the County (City of Murrieta 2011a). A local certified unified program agency is responsible for administering/overseeing compliance with the following programs, as required by state and federal regulations:

- Hazardous materials release response plans and inventories (area plans)
- California Accidental Release Prevention program
- Underground storage tank program
- Aboveground Petroleum Storage Act requirements for spill prevention, control and countermeasure plans (aboveground storage tank)
- Hazardous waste generator and on-site hazardous waste treatment (tiered permitting) programs
- California Fire Code: Hazardous material management plans and hazardous material inventory statements

Facilities that store, use, or handle hazardous materials above reportable amounts are required to prepare and file a hazardous materials business plan for the safe storage and use of chemicals. In the event of an emergency, firefighters, health officials, planners, public safety officers, health care providers, and others rely on the business plan. Implementation of the business plan should prevent or reduce damage to the health and safety of people and the environment when a hazardous material is released.

A hazardous materials business plan must be submitted by businesses that handle a hazardous material, or a mixture containing a hazardous material, in quantities equal to or greater than the following:

- 500 pounds of a solid
- 55 gallons of a liquid
- 200 cubic feet of a compressed gas at standard temperature and pressure
- The federal threshold planning quantity for extremely hazardous substances
- Radioactive materials in quantities for which an emergency plan is required per Parts 30, 40, or 70, Chapter 1, Title 10, of the Code of Federal Regulations

The business plan must include (1) the type and quantity of hazardous materials, (2) site map, (3) risks of using these materials, (4) spill prevention, (5) emergency response, (6) employee training, and (7) emergency contacts.

Businesses—such as photographic, chrome plating, or service stations—that generate small amount of hazardous waste or require underground storage of hazardous materials require a permit from the department.

City of Murrieta Emergency Operations Plan

The City's Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, national security emergencies, and technological incidents affecting the City. The City's EOP describes the operations of the City's Emergency Operations Center, which is the central management entity responsible for directing and coordinating the various City departments and other agencies in their emergency response activities. The City's Emergency Operations Center centralizes the collection and dissemination of information about the emergency and makes policy-level decision about response priorities and the allocation of resources. As part of the City's Emergency Management Program, the City's Emergency Operations Center Manager (Fire Division Chief) is responsible for ensuring the readiness of the Emergency Operations Center (City of Murrieta 2011a).

Murrieta General Plan 2035

The Safety Element of the Murrieta General Plan 2035 (General Plan) includes the following goals and policies related to hazards and hazardous materials that would apply to the project (City of Murrieta 2011b):

- Goal SAF-8 A community that is protected from the harmful effects of hazardous materials, hazardous waste, and environmental contamination.
 - Policy SAF-8.1 Require geologic investigations for sites of proposed uses that manufacture, handle, or store hazardous or explosive materials.
 - Policy SAF 8.2 Ensure that land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials are located and operated to reduce risk to other land uses.
 - Policy SAF 8.3 Designate appropriate routes for transportation of hazardous materials that are used or produced by facilities in the City.
 - Policy SAF 8.8 Comply with the Riverside County Hazardous Waste Management Plan.
 - Policy SAF 8.9 Support Caltrans and California Highway Patrol efforts to ensure safe transportation of hazardous materials on freeways.
 - Policy SAF 8.13 When approving new development, ensure that the site:
 - Is sufficiently surveyed for contamination and remediation, particularly for sensitive uses near existing or former toxic or industrial sites.
 - Is adequately remediated to meet all applicable laws and regulations, • if necessary.
 - Is suitable for human habitation.
 - Is protected from known hazardous and toxic materials.
 - Does not pose higher than average health risks from exposure to ٠ hazardous materials.

4.8.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

- 1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 2. 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.
- 3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 4. 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 result, would it create a significant hazard to the public or the environment.
- 5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
- 6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- 7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Thresholds 4, 5, and 7 were analyzed in the Initial Study (Appendix A). The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code, Section 65962.5. Additionally, the project site is not located within the vicinity of a private airstrip and is outside the planning area for the French Valley Airport or any other airport land use plan. For these reasons, the impacts of the project with respect to hazardous materials sites and airport land use plans were determined to be less than significant. Therefore, Thresholds 4 and 5, will not be further discussed in this section.

With regard to Threshold 7, the Initial Study determined that the project site is located in a predominantly urban area and is not considered to be at a significant risk of loss, injury, or death involving wildland fires (Appendix A). However, because the scope of the threshold was broadened by a December 2018 update to the CEQA Guidelines, this threshold will be reanalyzed in this EIR.

4.8.4 Impacts Analysis

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

and

Would the project 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?

Both construction and operation of the project could lead to conditions in which the project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or result in their accident conditions.

Short-Term Construction Impacts

Less-than-Significant Impact. The project involves the construction of a retail development center, which includes a bank, tire store, retail pad, auto-related services/retail store, three-tenant food and retail pad, fast-food restaurant, and circulation improvements. The existing cell tower in the northern portion of the project site will remain. It is assumed construction of the project would involve the transport, use, or disposal of hazardous materials on or off site. These materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment. The transportation, use, and handling of hazardous materials would be temporary and would coincide with the short-term project construction activities. Construction contractors are responsible for accident prevention and containment, and construction specifications typically include provisions to properly manage hazardous substances and wastes. Contractors are required to comply with applicable laws and regulations regarding hazardous materials and hazardous waste management and disposal. Examples of hazardous materials management include preventing the disposal or release of hazardous materials onto the ground or into groundwater or surface water during construction and providing completely enclosed containment for all refuse generated in the project area. In addition, construction waste, including trash, litter, garbage, solid waste, petroleum products, and any other potentially hazardous materials, would be removed and transported to a permitted waste facility for treatment, storage, and/or disposal. As a result, proper use and disposal of these materials would not pose a significant risk to the public and the environment.

Long-Term Operational Impacts

Retail and Restaurants

Less-than-Significant Impact. The project involves the construction of a retail development center, which includes a bank, tire store, retail pad, auto-related services/retail store, three-tenant food and retail pad, fast-food restaurant, and circulation improvements. The existing cell tower in the northern portion of the project site will remain. These facilities would involve the routine handling, transport, use, and disposal of hazardous materials, including the following:

- Cleaning solvents and disinfectants for retail and restaurant operations
- Various types of oils for oil change services associated with the tire store
- Automobile batteries as well as oil- and synthetic-based lubricants sold within the auto-related service/retail store

Consistent with applicable federal, state, and local requirements, any handling of hazardous materials would be limited to the quantities and concentrations set forth by the manufacturer or applicable regulations, and hazardous materials would be stored in secure locations. The actual quantity of hazardous materials that would be stored on site would be determined by the individual hazardous characteristics of the material; manufacturer guidelines; and applicable federal, state, and local regulations. Measures would also be taken by employees to properly store, handle, and dispose of these materials to the manufacturer's and retailers' specifications.

Additionally, the handling, transport, use, and disposal of hazardous materials must comply with all applicable federal, state, and local agencies and regulations, including the Resource Conservation and Recovery Act, CERCLA, DTSC, OSHA, Caltrans, and the County Fire Department Hazardous Materials Division.

Therefore, based on compliance with federal, state, and local regulations and adherence to manufacturer's and retailers' specifications concerning the handling of hazardous materials, the long-term retail, restaurant, and auto and tire center operational impacts associated with the handling, transport, use, and disposal of hazardous materials and their accident conditions would be less than significant.

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-than-Significant Impact. The closest school to the project site is Vista Murrieta High School (28251 Clinton Keith Road), which is located within 0.25 miles southeast of the project site. As discussed in the impact discussion above, the project must comply with a variety of federal, state, and local regulations that collectively ensure that operation of the new retail development center would not emit hazardous or acutely hazardous materials, substances, or wastes and that any handling of such activities is consistent with applicable regulatory requirements. Therefore, based on compliance with federal, state, and local regulations, impacts associated with the emitting or handling hazardous materials or substances within 0.25 miles of a school would be less than significant.

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. The project must comply with the City's EOP for both construction and operations of all phases. Construction activities that may temporarily restrict vehicular traffic during all phases would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles through and around any required road closures in accordance with the City's EOP. Operation of the project would not interfere with the City's EOP because the driveways off Clinton Keith Road, Warm Springs Parkway, and Antelope Road would be made accessible for emergency vehicles. The project applicant would be required to design, construct, and maintain structures, roadways, and facilities to comply with applicable local, regional, state, and federal requirements related to emergency access and evacuation plans. The proposed site plan, including the access driveways, would be reviewed and approved by the City Fire Department during construction drawing plan check review. Adherence to these requirements would ensure that potential impacts related to this issue remain below a level of significance and that no mitigation would be required.

Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less-than-Significant Impact. The project site is surrounded by vacant land and I-215 to the north, vacant land to the east, Vista Murrieta High School to the southeast, Clinton Keith Road and vacant land to the south, and I-215

to the west. The project site is identified by the City's General Plan EIR as occurring within a Very High Fire Hazard Severity Zone (City of Murrieta 2011a). However, the project site is located in an area of the City where many of the adjacent properties are developed. The vacant land to the east has been separately proposed for development, at which point the project site would be mostly surrounded by developed land.

As discussed in further detail in Section 4.17, Wildfire, of this EIR, the project would be required to comply with regulations regarding wildfire hazards in the Murrieta Municipal Code (Section 15.24). Structures would be composed of low-combustibility materials, and defensible space would be maintained around the project site to remove vegetative fuels. For the reasons stated above and as discussed in further detail in Section 4.17, impacts would be less than significant.

4.8.5 Mitigation Measures

The project would not result in significant impacts, and no mitigation measures are necessary.

4.8.6 Level of Significance After Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.8.7 Cumulative Impacts

The geographic scope of the cumulative hazards and hazardous materials analysis is the immediate project area, including surrounding land uses and other nearby properties. Hazardous materials incidents are typically site-specific, since adverse effects typically only result from accidental spills or inadvertent releases. Associated health and safety risks generally would be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. As such, adverse effects of hazards and hazardous materials tend to be localized, and thus, the area near the project site would be most affected by project activities. In addition, retail development does not typically combine with other projects to produce cumulative effects, since the use typically only involves the routine use of household and maintenance products (such as paints, solvents, cleaning supplies, pool chemicals, pesticides, and herbicides). For example, there are limited amounts of hazardous materials (and by extension, limited opportunities for adverse effects) used during construction and operation of retail development when compared to uses that involve greater volumes of hazardous materials (i.e., industrial uses), or uses that produce wastes that would have a more severe adverse effect in the event of upset conditions (i.e., uses that produce radiological wastes).

Because cumulative projects would be fully regulated, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would be less than significant. Through compliance with regulatory requirements, the construction or operation of the proposed project itself would not create significant human or environmental health or safety risks that could combine with other project impacts to create a significant and cumulatively considerable impact. The quantities of hazardous materials that would be present during occupancy of the proposed project are expected to be minimal and would consist of household and maintenance products (e.g., paints, solvents, cleaning supplies, pool chemicals, pesticides, herbicides). Implementation of applicable hazardous materials management laws and regulations adopted at the federal, state, and local level would ensure cumulative impacts related to hazardous materials use remain less than significant.

Because the project site is not located on a hazardous materials site, the project would not combine with other sites to result in a cumulatively considerable impact with respect to existing hazardous materials impact. Additionally, because the project would not produce significant hazardous emissions within 0.25 miles of a school, the project would not combine with other cumulative projects to result in a cumulatively considerable impact. Lastly, as discussed in Section 4.17 of this EIR, cumulative impacts with respect to emergency operations and wildfire are less than significant. Therefore, significant cumulative impacts related to hazards and hazardous wastes would be less than significant.

4.8.8 References Cited

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4.9 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). This analysis was completed, in part, based on the Murrieta General Plan 2035 Environmental Impact Report (EIR) (City of Murrieta 2011a), and the following technical reports, which are included as appendices to this EIR:

- Preliminary Geotechnical Investigation Proposed Vineyard/Val Vista Center NEC Clinton Keith Road and 215 Freeway Murrieta, California prepared by Geotechnical Professionals Inc. in September 2017 (Appendix E)
- Project-Specific Water Quality Management Plan TPM 37547 prepared by Excel Engineering in August 2019 (Appendix G-1)
- Hydrology/Hydraulics Study for TPM 37547 Clinton Keith Road prepared by Excel Engineering in June 2018 (Appendix G-2)

4.9.1 Existing Conditions

Regional Hydrology

The project site is located within the inland portion of the Santa Margarita River Watershed, which is composed of approximately 750 square miles. The watershed is located in northern San Diego and southwestern Riverside Counties and borders San Juan Watershed to the northwest and San Luis Rey Watershed to the south. The Santa Margarita Watershed can be divided into nine distinct hydrological areas, each with unique hydrological and environmental features. Specifically, the project site is located on the boundary of the Wildomar and Murrieta Hydrologic Subareas (2.31 and 2.32, respectively) of the Murrieta Hydrologic Area (2.30) and encompassing Santa Margarita Hydrologic Unit (i.e., Santa Margarita Watershed) (2.00). Murrieta Creek and Temecula Creek collect water from the upper watershed and represent the main tributaries to the Santa Margarita River (City of Murrieta 2011a). The Santa Margarita Hydrologic Unit empties into the Pacific Ocean via the Santa Margarita Lagoon, on Marine Corps Base Camp Pendleton. The slough at the river mouth is normally closed off from the ocean by a sandbar, except during periods of high precipitation. Primary water storage areas in the Santa Margarita Hydrologic Unit include Vail Lake, O'Neill Lake, Diamond Valley Lake, and Lake Skinner. Annual precipitation ranges from less than 12 inches near the coast to more than 45 inches inland, near Palomar Mountain (San Diego RWQCB 2016).

Drainage

Surface water is generated by precipitation that cannot be absorbed into the ground in the period following a storm event. The amount of surface water runoff is a factor of precipitation, ground saturation, and the permeability (or perviousness) of existing ground surfaces. Permeability is a measure of how quickly water can penetrate a surface area. Natural or unpaved surfaces have a higher permeability compared to paved and other built surfaces. A portion of the stormwater falling on a relatively pervious surface will infiltrate into surface soils. Runoff occurs when soil infiltration capacity is exceeded. In contrast, stormwater falling onto pavement or other hardscape areas does not infiltrate, resulting in immediate runoff during precipitation events.

The majority of the project site is currently undeveloped, although the vacated portion of Antelope Road traverses the project site. Flows from the undeveloped portions of the project site generally flow either towards the eastern border of the project site, where a storm drain within the California Department of Transportation on-ramp collects flows, or towards Antelope Road. Flows collected by the storm drain and Antelope Road ultimately drain towards a public storm drain system located approximately at the intersection the Interstate (I) 215 on-ramp and the vacated Antelope Road. From here, flows are conveyed west into the public storm drain system within I-215.

Regional Drainage

Surface runoff from the project site flows toward a network of improved and natural streams, storm channels, storm drains, and catch basins. These facilities are maintained by the Riverside County Flood Control and Water Conservation District and the City of Murrieta (City). Regional master-planned facilities are owned and maintained by the Riverside County Flood Control and Water Conservation District, and all non-master-planned facilities are maintained by the City.

The drainage facility in the vicinity of the project site flows to Murrieta Creek through approximately 4.7 miles of public storm drain and natural open channel. Murrieta Creek extends approximately 14 miles and drains an area of approximately 220 square miles. Murrieta Creek remains in a semi-natural state, with areas of substantial native vegetation occurring along portions of each. Stormwater runoff represents the primary source of surface water within the Murrieta Creek Basin. Additional sources of surface water include groundwater from springs, runoff from agricultural uses, and snowmelt (City of Murrieta 2011b). Downstream, these flows combine and constitute the Santa Margarita River.

Surface Water Quality

Stormwater runoff is a nonpoint source of pollutants in the greater Santa Margarita River Watershed. The amount of nonpoint pollution is generally a function of the amount of developed areas, agricultural fields, and roadways. The project site is bordered to the I-215 and a shopping center to the west of I-215, which contains existing paved surfaces, existing buildings, and parking lots. Vacant land is located to the north, Murrieta High School and residential development to the south, and future retail (currently under construction) to the east, all of which are composed of a mix of permeable and impermeable surfaces. Within the Santa Margarita River Watershed, constituents of concern include nitrate (surface water and groundwater), sediment, indicator bacteria, and total dissolved solids in groundwater. Specific activities or uses that affect the quality of surface water include agricultural activities, orchards, livestock, domestic animals, septic systems, use of recycled water, and urban runoff (City of Murrieta 2011a).

Surface water quality within Murrieta Creek is generally good; however, high concentrations of total dissolved solids occur intermittently during times of low flow. Occasional exceedances of nitrate and phosphate levels also occur. Murrieta Creek is also listed as impaired under the 2014–2016 California 303(d) List of Water Quality Limited Segments for chlorpyrifos, copper, indicator bacteria, iron, manganese, nitrogen, and toxicity (EPA 2018). Beneficial uses for Murrieta Creek are identified as municipal/domestic supply, agricultural supply, industrial process/service supply, recreation, warm freshwater habitat, and wildlife habitat (San Diego RWQCB 2016).

To minimize detrimental effects of stormwater pollution, the City implements a Stormwater Management Plan, which identifies methods to reduce potential stormwater runoff and the contribution of pollutants to the storm drain system from industrial, commercial, residential, and municipal sources (City of Murrieta 2011b). In addition, water quality in the encompassing upper Santa Margarita River Watershed, which includes the City, is managed under

the Santa Margarita Region Watershed Protection Program, the Upper Santa Margarita Integrated Regional Water Management Plan (IRWMP), and the Santa Margarita Region Hydromodification Management Plan. The latter was prepared as part of the Santa Margarita River Municipal Separate Storm Sewer System (MS4) Permit. See additional information in Section 4.9.2, Relevant Plans, Policies, and Ordinances.

Flooding

The project site is located within the Murrieta Creek Watershed. Flooding problems in the Murrieta Creek Watershed are related to inadequate capacity of the existing drainage network. Much of the Murrieta Creek area are currently without formal flood control systems. As a result, moderate rainfall creates haphazard drainage in the less developed areas of the City. The problem manifests itself as frequent overtopping of the Murrieta Creek channel by floodwaters in a number of channel reaches, flood inundation of structures with attendant damages, and other water-related problems caused by these events, including emergency costs, traffic disruption, and automobile damage (City of Murrieta 2011a).

Floods that have a 1% chance of occurring in any given year are referred to as "100-year floods." Flood insurance rates are based on Federal Emergency Management Agency designations of flood zones. The practice is to avoid or restrict construction within the 100-year flood zones, or to engage in flood-proofing techniques, such as elevating building pads or constructing flood walls and levees. The project site is not located within or in the vicinity of a 100-year flood zone. The site is located within Federal Emergency Management Agency Zone X, which is an area of minimal flooding (City of Murrieta 2011a; FEMA n.d.).

Portions of the City are subject to potential flooding in the event of dam failure at Lake Skinner and Diamond Valley Lake. However, the project site is not located in a potential inundation area due to dam failure (City of Murrieta 2011a).

Groundwater

The project site is underlain by topsoil and weathered bedrock, underlain by relatively impervious granitic bedrock. Borings drilled on site to a maximum depth of 38 feet did not encounter groundwater (Appendix E); however, very limited groundwater may be present in bedrock fractures beneath these depths. Runoff from the project site flows south toward Murrieta Creek, which is an important sources of groundwater recharge of the downstream Murrieta– Temecula Groundwater Basin. The Murrieta–Temecula Groundwater Basin is approximately 60,000 acres and has an estimated storage capacity of 1.2 million acre-feet.

Groundwater quality varies within the Murrieta Basin. Many wells extracting groundwater from this basin are present within the Murrieta area. In general, water that is extracted at higher elevations and from deeper unconfined aquifers is typically of higher quality. Groundwater is generally unconfined within Pleistocene (older) alluvium, which is estimated to exceed 2,500 feet in thickness in the Murrieta–Temecula Groundwater Basin. In addition, Holocene (younger) alluvium, consisting of unconsolidated gravel, sand, silt, and clay, ranges from 100 to 200 feet in thickness (City of Murrieta 2011a).

4.9.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

The federal Clean Water Act (CWA) was enacted with the primary purpose of restoring and maintaining the chemical, physical, and biological integrity of the nation's navigable waters. The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) are responsible for enforcing water quality standards within the state. As mandated by Section 303(d) of the CWA, the SWRCB maintains and updates a list of "impaired water bodies" (i.e., water bodies that do not meet state and federal water quality standards). This list is known as the Section 303(d) list of impaired water bodies. The state is required to prioritize waters/watersheds for development of total maximum daily load (TMDL) regulations. Section 303(d) of the CWA bridges the technology-based and water quality-based approaches for managing water quality, and requires each state to make a list of waters that are not attaining standards after implementation of the technology-based limits. For waters on this list (and where the U.S. Environmental Protection Agency [EPA] administrator deems it appropriate), the states develop TMDLs that are established at the level necessary to implement applicable water quality standards. A TMDL must account for all sources of pollutants that cause the water to be listed. Federal regulations require that TMDLs, at a minimum, account for contributions from point sources and nonpoint sources. This information is compiled in a list and submitted to the EPA for review and approval. Section 303(c)(2)(b) of the CWA requires states to update the TMDLs on a triennial basis (SWRCB 2018a).

Section 319 of the CWA mandates specific actions for the control of pollution from nonpoint sources. The EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and programs such as the National Pollutant Discharge Elimination System (NPDES) program, to the SWRCB and RWQCBs.

National Pollutant Discharge Elimination System Permit

The NPDES permit system was established by the CWA to regulate both point-source discharges and nonpointsource discharges. Nonpoint pollution often enters receiving waters in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the EPA must consider in setting effluent limits for priority pollutants.

A detailed discussion of the NPDES program is provided under the discussion of state regulations in this section, since the authority to implement the NPDES program has been delegated to the SWRCB and RWQCBs.

State

Responsibility for the protection of water quality in California rests with the SWRCB and nine RWQCBs. The SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. The RWQCBs develop and implement water quality control plans that consider regional beneficial uses, water quality characteristics, and water quality problems. The project site is located within the jurisdiction of the San Diego RWQCB.

All projects resulting in discharges, whether to land or water, are subject to Section 13263 of the California Water Code and are required to obtain approval of waste discharge requirements (WDRs) by the RWQCBs. WDRs related to land and groundwater (i.e., non-NPDES WDRs) regulate discharges of privately or publicly treated domestic wastewater and process/wash-down wastewater. WDRs for discharges to surface water also serve as NPDES permits, which are further described in this section.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to adopt, review, and revise policies for all waters of the state (including surface water and groundwater), and directs the RWQCBs to develop regional water quality control plans. Section 13170 of the California Water Code authorizes the SWRCB to adopt water quality control plans on its own initiative.

Waste Discharge Requirements

All dischargers of waste to waters of the state are subject to regulation under the Porter-Cologne Water Quality Control Act, and the requirements for WDRs is incorporated into the California Water Code. This includes point-source and nonpoint-source dischargers. All current and proposed nonpoint-source discharges to land must be regulated under WDRs, waivers of WDRs, a water quality control plan prohibition, or some combination of these administrative tools. Discharges of waste directly to state waters are subject to an individual or general NPDES permit, which also serves as WDRs. The RWQCBs have primary responsibility for issuing WDRs to cover a category of discharges. WDRs may include effluent limitations or other requirements that are designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions. Violations of WDRs may be addressed by issuing Cleanup and Abatement Orders or Cease and Desist Orders, assessing administrative civil liability, or seeking imposition of judicial civil liability or judicial injunctive relief.

National Pollutant Discharge Elimination System Permits

The NPDES permit system was established by the CWA to regulate point-source discharges and nonpoint-source discharges to surface waters of the United States, and the authority to implement the NPDES program has been delegated to the SWRCB and RWQCBs. The EPA developed the federal NPDES stormwater permitting program in two phases. Phase I, promulgated in 1990, addresses large and medium MS4s located in incorporated places and counties with populations of 100,000 or more. Phase I addresses 11 categories of industrial activity, one of which is large construction activity that disturbs 5 acres or more of land. Phase II, also promulgated in 1999, addresses additional sources, including MS4s not regulated under Phase I, and small construction activity disturbing from 1 to 5 acres of land. For point-source discharges, each NPDES permit outlines limits on allowable concentrations and mass emissions of pollutants contained in the discharge. For diffuse-source discharges, the NPDES program establishes a stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program.

One of the primary objectives of water quality regulations is to reduce pollutants in urban stormwater discharge to the maximum extent practicable through the use of structural and nonstructural best management practices (BMPs). BMPs typically used to manage runoff water quality include controlling roadway and parking lot contaminants by installing oil and grease separators at storm drain inlets, cleaning parking lots on a regular basis, incorporating peak-flow reduction and infiltration features (e.g., grass swales, infiltration trenches, and grass filter strips in landscaping), and implementing educational programs.

Construction General Permit

The SWRCB permits all regulated construction activities under Order No. 2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ. The order requires that, prior to beginning any construction activity, the permit applicant obtain coverage under the Construction General Permit by preparing and submitting to the SWRCB a Permit Registration Document that includes a Notice of Intent and appropriate fee. The SWRCB may issue a Construction General Permit or an Individual Construction Permit that would contain more specific permit provisions. Individual Construction Permits replace Construction General Permit regulations and provisions, if issued. Additionally, coverage would not occur until an adequate stormwater pollution prevention plan (SWPPP) has been prepared. A separate Notice of Intent is submitted to the SWRCB for each construction site.

SWRCB adopted the Construction General Permit on September 2, 2009, and it became effective on July 1, 2011. In addition, 2010-0014-DWQ was adopted on November 16, 2010, and became effective on February 14, 2011. The amendment provided text changes to the fact sheet, Conditions for Permit Coverage, Special Provisions, Electronic Signature, and Certification Requirements of Order No. 2009-009-DWQ. Similarly, 2012-0006-DWQ was adopted on July 17, 2012. The amendment provided updated text changes to the Fact Sheet, primarily with respect to replacing numeric effluent limitations with narrative effluent limitations for Risk Level 3 and Linear Underground/Overhead Project Type 3 construction sites (with the exception of Active Treatment Systems).

Construction activities subject to the NPDES Construction General Permit include clearing, grading, and disturbances to the ground (e.g., stockpiling or excavating), which result in soil disturbances of at least 1 acre of total land area. Because construction of the project would cumulatively disturb more than 1 acre, all improvements and development activities would be subject to these permit requirements, and the project would be required to prepare a SWPPP. The SWPPP has two main objectives: to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges, and to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater discharges.

A SWPPP's required elements include a site description addressing the elements and characteristics specific to the site; BMPs for erosion and sediment controls; BMPs for construction waste handling and disposal; implementation of approved local plans; proposed post-construction controls, including a description of local post-construction erosion and sediment control requirements; and non-stormwater management. The SWPPP must include BMPs that address source control, and if necessary, include BMPs that address specific pollutant control. The SWPPP prepared to comply with the Construction General Permit would also address post-construction activities that can result in ongoing erosion and sedimentation impacts.

All construction activities related to the project are subject to the requirements of the Construction General Permit. The current amended order includes the following:

- **Technology-Based Numeric Action Levels:** The Construction General Permit includes numeric action levels for pH and turbidity.
- Narrative Effluent Limitations: The Construction General Permit requires Risk Level 3 and Linear Underground/Overhead Project Type 3 dischargers with direct discharges to surface waters to conduct receivingwater monitoring whenever their effluent exceeds specified receiving-water monitoring triggers with respect to pH and turbidity. However, in contrast to previous numeric effluent limitations, exceedance of a receiving-water monitoring trigger does not constitute a violation of the Construction General Permit. Best available technology/best conventional technology must be installed to control erosion and off-site sedimentation.

- Risk-Based Permitting Approach: The Construction General Permit establishes a four-level risk calculation, with only the lowest three levels covered under the Construction General Permit. Discharges determined to be Risk Level 4 are not covered by the Construction General Permit, and those projects are required to submit a Report of Waste Discharge to the appropriate RWQCB and seek coverage under an individual or other applicable general permit.
- **Minimum Requirements Specified:** The Construction General Permit specifies minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.
- **Project Site Soil Characteristics Monitoring and Reporting:** The Construction General Permit requires all dischargers to monitor and report the soil characteristics at the project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.
- Effluent Monitoring and Reporting: The Construction General Permit requires effluent monitoring and reporting for pH and turbidity in stormwater discharges. This monitoring is to be used to determine compliance with the narrative effluent limitations included in this Construction General Permit.
- **Receiving Water Monitoring and Reporting:** The Construction General Permit requires some Risk Level 2 and Risk Level 3 dischargers to monitor receiving waters.
- New Development and Redevelopment Stormwater Performance Standards: The Construction General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit to avoid, minimize, and/or mitigate post-construction stormwater runoff impacts.
- Rain Event Action Plan: The Construction General Permit requires sites to develop and implement a Rain Event Action Plan that must be designed to protect all exposed portions of the site 48 hours prior to any likely precipitation event.
- Site Photographic Self-Monitoring and Reporting: The Construction General Permit requires all projects to provide photographs of their sites at least once quarterly if there are no rain events causing a discharge during that quarter. The purpose of this requirement is to help RWQCB staff prioritize their compliance evaluation measures (e.g., inspections). In addition, this reporting makes compliance-related information more available to the public.
- Annual Reporting: The Construction General Permit requires all projects that are enrolled for more than one continuous 3-month period to submit information and annually certify that their site is in compliance with the requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.
- Certification/Training Requirements for Key Project Personnel: The Construction General Permit requires that key personnel (e.g., SWPPP preparers, inspectors) have specific training or certifications to ensure that their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with permit requirements.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739 (Dickinson), Senate Bill 1168 (Pavley), and Senate Bill 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically overdrafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the California Department of Water Resources provides ongoing

support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably, and requires those Groundwater Sustainability Agencies to adopt Groundwater Sustainability Plans for crucial groundwater basins in California. The Temecula Valley Groundwater Basin (9-005), located downstream of the project site, is considered a very low-priority basin with respect to SGMA (SWRCB 2018b).

California Water Code, Section 12924

The California Department of Water Resources, in conjunction with other public agencies, conducts investigations of the state's groundwater basins. The Department of Water Resources identifies the state's groundwater basins on the basis of geological and hydrologic conditions and with consideration of political boundary lines whenever practical. The Department of Water Resources also investigates existing general patterns of groundwater extraction and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft. The Temecula Valley Groundwater Basin has not been identified as a critically overdrafted basin (California Department of Water Resources 2016).

Local

Santa Margarita Region Watershed Protection Program

Water quality in the encompassing upper Santa Margarita River Watershed, including in the City, is managed under the Santa Margarita Region Watershed Protection Program. The Riverside County Flood Control and Water Conservation District is the Principal Permittee of the Santa Margarita MS4 Permit (Regional Permit), in accordance with San Diego RWQCB Order No. R9-2013-0001, as amended by R9-2015-0001 and R9-2015-0100. The area covered by this Regional Permit is referred to as the Santa Margarita Region.

To assist in the design of the development projects within the Santa Margarita Region and ensure compliance with the Regional Permit, the co-permittees have developed and adopted the Water Quality Management Plan for the Santa Margarita Region of Riverside County (San Diego RWQCB 2018a). As stipulated in the Water Quality Management Plan for the Santa Margarita Region of Riverside County, a project-specific water quality management plan (WQMP) is required to be prepared for all development projects within the Santa Margarita Region that meet the Priority Development Project categories and thresholds, as defined in Section F.1.d.(1) of the Regional Permit. Priority Development Projects are defined within the Water Quality Management Plan for the Santa Margarita Region of Riverside County and include new development projects that create 10,000 square feet or more of impervious surfaces. Because the project is a new development Project and a project-specific WQMP is required.

Per the Regional Permit, and as described in the Water Quality Management Plan for the Santa Margarita Region of Riverside County, a project-specific WQMP is required to manage the discharge of stormwater pollutants from development projects to the "maximum extent practicable" (San Diego RWQCB 2018a). The maximum extent practicable is the standard for control of stormwater pollutants, as set forth by Section 402(p)(3)(iii) of the CWA. However, the CWA does not quantitatively define the term maximum extent practicable. As implemented, maximum extent practicable varies with conditions. In general, to achieve the maximum extent practicable standard, co-permittees must require deployment of whatever BMPs are technically feasible (that is, are likely to be effective) and are not cost prohibitive. To achieve fair and effective implementation, criteria and guidance for those controls must be detailed and specific, while also offering the right amount of flexibility or exceptions for special cases. A project-specific WQMP's compliance with the requirement to achieve the maximum extent practicable standard is documented within the project-specific WQMP through the completion of worksheets that document the feasibility or infeasibility of the deployment of BMPs.

Per the requirements of the Water Quality Management Plan for the Santa Margarita Region of Riverside County, the project's project-specific WQMP is required to address potential water quality impacts from pollutants to the maximum extent practicable by ensuring that the project incorporates low-impact development (LID) principles, LID BMPs, and conventional treatment control BMPs (where LID BMPs are technically infeasible), and by explaining the basis for the determination of each BMP's feasibility.

Water Quality Control Plan for the San Diego Region

The San Diego RWQCB has prepared the Water Quality Control Plan for the San Diego Region (Basin Plan) in accordance with state and federal law, and completed its most recent triennial review in 2018 (San Diego RWQCB 2016, 2018b). The Basin Plan sets forth the regulatory water quality standards for surface water and groundwater within the region. The applicable water quality standards are composed of the designated beneficial use for each water body and the water quality objectives to meet those designated beneficial uses. Where multiple designated beneficial uses exist, water quality standards must protect the most sensitive use. Water quality objectives are typically numeric, although narrative criteria based on biomonitoring methods may be employed where numerical objectives cannot be established or where narrative criteria are needed to supplement numerical objectives. In cases where the Basin Plan does not contain a water quality objective for a particular pollutant, other criteria are used to establish a standard. Other criteria may be applied from SWRCB documents (e.g., the Inland Surface Waters Plan and the Pollutant Policy Document) or from water quality criteria developed under Section 304(a) of the CWA.

Total Maximum Daily Loads

In accordance with the CWA and Porter-Cologne Water Quality Control Act, TMDLs have been developed and incorporated into the Basin Plan for some pollutants identified on the 303(d) list as causing impairment in receiving waters. For other pollutants listed on the 303(d) list, TMDLs are scheduled to be determined, are undergoing determination, or are in the process of review by the SWRCB. No TMDLs have been established for the Santa Margarita River Basin (SWRCB 2018a).

City of Murrieta Stormwater Management Plan

To minimize the potential effects of stormwater runoff, the City implements its Stormwater Management Plan to reduce pollutants in urban runoff to the maximum extent practicable. The Stormwater Management Plan identifies methods to reduce potential stormwater runoff and contribution of pollutants to the storm drain system. BMPs for industrial and commercial, as well as residential sources, are identified for consideration and implementation to reduce potential discharges to the maximum extent practicable.

Upper Santa Margarita Integrated Regional Water Management Plan

The upper Santa Margarita River Watershed is also managed in accordance with the Upper Santa Margarita IRWMP. The Upper Santa Margarita IRWMP is a planning and management tool that facilitates efficient use of water resources and the development of effective water conservation measures through a regional- and watershed-based approach. Development of the Upper Santa Margarita IRWMP is a cooperative effort by the Rancho California Water District, Riverside County Flood Control and Water Conservation District, and Riverside County. The intent of the IRWMP is to enable greater watershed-wide coordination and management of water resources within the Santa Margarita Watershed, as well as adjoining watershed and regional planning and funding efforts. Through the Upper Santa Margarita IRWMP, stakeholders collaborate across jurisdictional boundaries to implement water resource management projects. These stakeholders include regional water agencies, flood control districts, counties, cities,

and federal/state/local agencies. The Upper Santa Margarita IRWMP also provides opportunities to identify and evaluate information on the present and future needs within the watershed, for consideration in the California Water Plan (City of Murrieta 2011a).

City of Murrieta Municipal Code

Municipal Code 8.36.320, Water Quality Management Plan, requires all new development that meet the specified categories listed in the NPDES permit prepare a WQMP (City of Murrieta 2019). The WQMP shall identify BMPs to reduce impacts to water quality, including site design, source controls and treatment controls consistent with the Regional Permit (see discussion above under "Santa Margarita Region Watershed Protection Program").

Municipal Code 8.36.140, Jurisdictional Runoff Management Program, requires the city engineer to adopt a specific jurisdictional runoff management program to comply with the NPDES permit and ensure that stormwater pollutant discharges in runoff are reduced to the maximum extent practicable and do not cause or contribute to a violation of water quality standards (City of Murrieta 2019).

Municipal Code 15.52.160, Erosion and Sediment Control, requires that all grading plans include an erosion and sediment control plan designed to limit erosion and sediment of all disturbed portions of the property and to minimize the transport of soil onto adjacent properties or into streets, storm drains, or drainage ways (City of Murrieta 2019).

Municipal Code 16.96.030, Application Filing and Department Review, requires that a detailed drainage and flood control report be prepared. Municipal Code 16.98.070, Preliminary Submittal, requires completion of a 100-year flood inundation map and complete hydrology and hydraulic calculations of all flood flows, retention facilities, and storm drains (City of Murrieta 2019).

City of Murrieta General Plan 2035

The Conservation Element of the Murrieta General Plan 2035 sets forth goals, policies, and implementation measures for the protection and management of surface water and groundwater within the boundaries of the City and sphere of influence, as well as the management of stormwater volumes and flows, including the following (City of Murrieta 2011b):

- **Goal CSV-3** A community that participates in a multi-jurisdictional approach to protecting, maintaining, and improving water quality and the overall health of the watershed.
 - **Policy CSV-3.1** Collaborate with partner agencies and other communities to conserve and properly manage surface waters within the City and Sphere of Influence, through protection of the watershed and natural drainage system.
 - **Policy CSV-3.2** Promote storm water management techniques that minimize surface water runoff in public and private developments.
 - **Policy CSV-3.3** Utilize low-impact development (LID) techniques to manage storm water through conservation, on-site filtration, and water recycling, and continue to ensure compliance with the NPDES permit.
- **Policy CSV-3.4** Encourage the creation of a network of "green" streets that minimize stormwater runoff, using techniques such as on-street bioswales, bioretention, permeable pavement, or other innovative approaches, as feasible.
- **Policy CSV-3.5** Seek opportunities to restore natural watershed function as an added benefit, while mitigating environmental impacts.

4.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to hydrology and water quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the project would:

- 1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- 2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- 3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - a. result in substantial erosion or siltation on or off site;
 - b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
 - c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - d. impede or redirect flood flows.
- 4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- 5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Thresholds 3(d) and 4 were analyzed in the Initial Study (Appendix A) and were not carried forward for further analysis in this EIR because the project site is not in a flood hazard, tsunami, or seiche zone or susceptible to substantial inundation.

4.9.4 Impacts Analysis

Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Less-than-Significant Impact. Project construction would involve the use of heavy machinery on site, including bulldozers, front loaders, track hoes, trenchers, semi-trucks, and various other large equipment, which would be used for site preparation and construction activities. Excavations and grading for the project would result in disturbance of existing sediments, such that erosion could be exacerbated during precipitation events. In addition, construction and related activities could result in the incidental, minor release of oils, grease, antifreeze, paint

washout, cement washout, and other potential water quality pollutants. During a storm event, these pollutants could also become entrained in stormwater and be released into natural waterways, causing water quality degradation in receiving waters. This could have an adverse impact on water quality.

Because the project would involve construction within an area that is larger than 1 acre, the project applicant would be required to apply for and receive coverage under the current General Construction Permit. As discussed in Section 4.9.2, acquisition of coverage under the General Construction Permit would require adherence to a variety of conditions designed to protect receiving water quality from degradation that could otherwise result from construction activities, as specified in a project-specific SWPPP. Conditions would include adherence to sediment and stormwater pollutant control BMPs, effluent monitoring and compliance, post-construction period requirements, worker training, and various other measures designed to minimize potential for sediment and construction-related pollutants to degrade stormwater quality downstream.

In addition to requirements of the General Construction Permit, the project would be required to adhere to relevant construction stormwater practices required under the City Municipal Code, including the Jurisdictional Runoff Management Program and Erosion/Sediment Control requirements. Stormwater BMPs would include those recommended by the California Stormwater Quality Association, such as scheduling or limiting activities to certain times of the year, installing sediment barriers (e.g., silt fences and fiber rolls), maintaining equipment and vehicles used for construction, tracking controls such as stabilizing entrances to the construction site, and developing and implementing a spill prevention and cleanup plan. Non-stormwater management BMPs would include installing specific discharge controls during activities such as paving operations, vehicle and equipment washing, and fueling. BMPs that relate to the handling of hazardous materials, spill prevention and clean up, and the handling of contaminated soil could include minimizing the storage of hazardous materials on site, providing training on spill prevention and clean up, and ensuring proper handling procedures for contaminated soils (California Stormwater Quality Association 2003). Compliance with existing regulations and implementation of an SWPPP would prevent violation of water quality standards and minimize the potential for contributing sources of polluted runoff. Therefore, impacts to water quality and waste discharge from construction activities associated with the project would be less than significant.

Operation

Less-than-Significant Impact. Operation of the project would not result in the violation of any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, as discussed in detail below.

Groundwater Quality

The project would include multiple BMPs that would allow for stormwater to be collected and treated in bio-filtration basins. Depending on the subgrade layers that underlie a project site, these BMPs may be designed to allow for stormwater flows to infiltrate soils and recharge groundwater. Because the existing ground on the project site is approximately 30 feet higher than what the finished grade will be, it is infeasible to test the natural infiltration and storage capacity of on-site soils (Appendix G-1). However, during final engineering, the proposed locations for the structural BMPs will be thoroughly tested for potential infiltration opportunities and will be implemented if possible (Appendix G-1). If determined to be feasible, the structural BMPs would treat stormwater flows prior to infiltration, ensuring that these flows do not result in adverse effects to groundwater quality. Moreover, flows entering these structural BMPs, if implemented as infiltration locations, would be typical of runoff collected from a commercial development and would not contain substantial quantities of pollutants that could not be appropriately treated by the proposed BMPs.

Waste Discharge Requirements

Development projects that have the potential to violate waste discharge requirements are typically industrial in nature and generate wastewater flows that may contain pollutants that could affect the quality of receiving waters that receive those discharges. Examples of projects for which waste discharge requirements are an important consideration include mining projects, oil and gas projects, and projects that involve chemical processing. The project involves the development of a retail center, and thus, would not involve the discharge of waste flows into receiving waters. As discussed in detail in Section 4.16, Utilities and Service Systems, the project would only generate municipal wastewater flows that would be typical of other wastewater flows generated within the City, and all wastewater flows would be collected via the project's interior plumbing systems and discharged into the local sewer system for treatment at the regional water reclamation facility. The project would not generate any wastewater streams that would require specialized treatment processes, and the project's future wastewater treatment provider (i.e., Eastern Municipal Water District) has indicated that it has the capacity and capability to treat all project-generated wastewater at its regional wastewater treatment plants to a standard that is consistent with the water quality requirements imposed upon it by the San Diego RWQCB and EPA. For additional detail about project-generated wastewater and its treatment, see Section 4.16.

Surface Water Quality

A project could have a significant impact with respect to surface water quality if a project were to contribute pollutants to downstream receiving waters and the addition of those pollutants were to cause water quality objectives within the San Diego RWQCB Basin Plan to be violated, or if the addition of those pollutants were to cause the loss or impairment of beneficial uses. A project may contribute pollutants to downstream receiving waters through a variety of vectors, such as directly discharging pollutants into receiving waters, or by indirectly allowing stormwater runoff, which can collect and carry pollutants, to flow into receiving waters. As previously discussed, the project would not directly discharge wastewater into receiving waters and would therefore not directly result in a water quality violation or cause the loss or impairment of beneficial uses. With the occurrence of rain events, the project would generate stormwater runoff that would be routed through the City's stormwater system and ultimately into Murrieta Creek and the Santa Margarita River. With the generation of stormwater and its discharge into receiving waters, the project has the potential to allow for pollutants to be collected within the project site and carried toward receiving waters, which could potentially indirectly result in a water quality violation or loss or impairment of beneficial uses.

To ensure that development projects do not contribute pollutants via stormwater runoff to receiving waters, projects in the Santa Margarita Water Region are required to prepare a project-specific WQMP in accordance with the requirements of Section F.1.d.(1) of the Regional Permit for the Santa Margarita Region. Project-specific WQMPs are required to manage and treat the discharge of stormwater pollutants from development projects to the maximum extent practicable. The Regional Permit and the CWA do not quantitatively define the term maximum extent practicable, nor do they establish quantitative criteria by which a project's efforts to manage and treat stormwater may be evaluated. Rather, the CWA and Regional Permit qualitatively define the maximum extent practicable standard that requires projects to deploy whatever BMPs are technically feasible (i.e., are likely to be effective) and not cost prohibitive (San Diego RWQCB 2018a). A project-specific WQMP's compliance with the requirement to achieve the maximum extent practicable standard is documented within the project-specific WQMP through the completion of worksheets and studies that document the feasibility or infeasibility of deployment of BMPs.

In accordance with the requirements of the Regional Permit, a project-specific preliminary WQMP has been prepared for the project (Appendix G-1). As discussed in the project-specific WQMP, stormwater will be managed and treated through a mixture of strategies, including self-mitigating drainage management areas,

hydromodification, and the use of low-impact development BMPs. For impervious pavement, the project would grade select areas into landscaped BMPs, consisting of bio-retention areas located around the perimeter of the parking lot and BMP bio-retention planters located within the parking lot. The larger perimeter bio-retention BMP basins would treat and meet hydromodification requirements, including a layer of biofiltration soil media, a layer of gravel, and an underlying perforated subdrain that would flow into the storm drain system. If infiltration is determined to be feasible during final engineering design, stormwater would infiltrate on-site soils. Within the parking lot, areas would be graded to flow into parking lot bio-retention planter islands to be located throughout the project site. The treatment control BMPs have been designed to remove greater than 80% of the priority pollutants, including bacteria, metals, organic compounds, sediment, trash, and oil/grease, which is considered to be a removal efficiency of high effectiveness (Appendix G-1).¹

Although the effectiveness of the project's BMPs is not easily predictable, the Water Quality Management Plan for the Santa Margarita Region states that that deployment of BMPs has been shown in studies throughout the country to be effective and reliable at treating a wide range of pollutants that can be found in runoff (San Diego RWQCB 2018a). As such, if deployed to the maximum extent practicable as demonstrated in a project-specific WQMP, the Water Quality Management Plan for the Santa Margarita Region states that BMPs are expected to treat discharges of urban-sourced pollutants from priority development projects with a high level of effectiveness, such that the runoff discharges from the priority development projects should not cause or contribute to an exceedance of receiving water quality objectives or the loss or impairment of beneficial uses. As demonstrated within the project-specific WQMPs, the project has been designed to include the appropriate selection of BMPs that would satisfy the requirements of a project-specific WQMP per the Regional Permit. Furthermore, the project's project-specific WQMPs will be submitted to the City's Engineering Department for review prior to issuance of grading permits. Implementation of the strategies identified in the project-specific WQMP would ensure that potential impacts to surface water quality resulting from stormwater runoff are less than significant.

Operational Impacts Conclusion

The project would collect waste through an indoor plumbing system and discharge it to the existing sewer treatment system and would not generate any wastewater streams that would require specialized treatment processes. Eastern Municipal Water District has indicated that it has the capacity and capability to treat all project-generated wastewater at its regional wastewater treatment plants to a standard that is consistent with the water quality requirements imposed upon it by the San Diego RWQCB and EPA. For additional detail about project-generated wastewater and its treatment, see Section 4.16.

Project grading and construction would be completed in accordance with an NPDES-mandated SWPPP, which would include standard BMPs to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. Surface water runoff during project operations would be managed through a mixture of strategies, including self-mitigating drainage management areas, hydromodification, and low-impact development BMPs, such as bio-retention basins, tree wells, planter boxes, and underground detention basins. These features are designed to remove priority pollutants from on-site runoff prior to discharge into the storm drain system to the maximum extent feasible, as demonstrated within the project-specific WQMP. Therefore, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and water quality impacts would be less than significant.

¹ The 80% effectiveness threshold is a threshold used to evaluate the effectiveness of proprietary treatment mechanisms to treat potential pollutants in runoff (San Diego RWQCB 2018a).

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

Less-than-Significant Impact. Local groundwater (i.e., water pumped from a local well) would not be used for the project. The nearest groundwater basin is located in downstream alluvial sediments of the Murrieta–Temecula Groundwater Basin. Water would be provided to the project by the Eastern Municipal Water District, which utilizes a combination of imported water, groundwater, and recycled water as water sources. As a result, impacts would be less than significant. See Section 4.16 regarding availability of water for the proposed project.

The project would include multiple BMPs that would allow for stormwater to be collected and treated in bio-filtration basins. Depending on the subgrade layers that underlie a project site, these BMPs may be designed to allow for stormwater flows to infiltrate soils and recharge groundwater. Because the existing ground on the project site is approximately 30 feet higher than what the finished grade will be, it is infeasible to test the natural infiltration and storage capacity of on-site soils (Appendix G-1). However, during final engineering, the proposed locations for the structural BMPs will be thoroughly tested for potential infiltration opportunities and will be implemented if possible (Appendix G-1). If determined to be feasible, the structural BMPs would treat stormwater flows prior to infiltration, ensuring that these flows do not result in adverse effects to groundwater management. Therefore, because the project would not require the use of local groundwater and would not result in adverse effects to groundwater quality, impacts would be less than significant.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off site; or (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Erosion or Siltation

Less-than-Significant Impact. The majority of the project site is currently undeveloped, although the vacated portion of Antelope Road traverses the project site. Flows from the undeveloped portions of the project site generally flow either towards the eastern border of the project site, where a storm drain within the California Department of Transportation on-ramp collects flows, or towards Antelope Road. Flows collected by the storm drain and Antelope Road ultimately drain south towards a public storm drain system located approximately at the intersection the I-215 on-ramp and the vacated Antelope Road. From here, flows are conveyed west into the public storm drain system within I-215. Precise grading would result in a series of drainage management areas that would change the internal drainage patterns of the site. However, stormwater would continue to flow off site toward the existing storm drains located at the southern end of the project site before being conveyed west into I-215.

The proposed drainage pattern have been designed such that no substantial erosion and associated off-site siltation would occur. Hydromodification calculations were performed to determine the flow duration for the flow rates that cause erosive conditions. As previously described in this section with respect to water quality, bio-retention basins and other low-impact development BMPs are proposed as part of the project. The basins were designed with low-flow thresholds in order to meet peak flow frequency and flow duration controls. The resulting mitigated outflows associated with design storm scenarios (i.e., theoretical storm scenarios used to evaluate the effectiveness of a storm drain system; a design storm is the rainfall amount and distribution in space and time, used to determine a design

flood or design peak discharge) would be equal to or less than the pre-developed outflows, or within the 10% tolerance (Appendix G-2). As a result, the project would not substantially alter the existing drainage pattern of the site, such that substantial erosion or siltation on or off site would occur. Additionally, the project would implement an SWPPP during construction, which would involve adherence to sediment and stormwater pollutant control BMPS, effluent monitoring and compliance, post-construction-period requirements, worker training, and various other measures designed to minimize potential for soil erosion and loss of top soil. Thus, the project would not result in substantial erosion or siltation on or off site and impacts would be less than significant.

Surface Runoff and Stormwater System Capacity

Less-than-Significant Impact. As previously discussed, the project would change the internal drainage patterns of the site. The proposed grading patterns and drainage facilities would match the existing drainage patterns to the maximum extent practical. The on-site drainage would be collected and treated via a combination of on-site biofiltration basins with detention and partial infiltration biofiltration units with storm drain detention tanks. The project proposes the construction of on- and off-site storm drain pipes to convey runoff into the public storm drain system within I-215. Based on project-specific drainage analyses, the project would result in a decrease of unmitigated 100-year runoff flow rates compared to pre-developed conditions (Appendix G-2). The unmitigated conditions do not account for standard conditions, including the bio-retention basins and detention storm drain tanks provided for hydromodification

The proposed biofiltration features would also attenuate flows associated with 10-year storm events and provide stormwater storage for 100-year attenuation, as necessary. On-site biofiltration basins with partial detention are designed to serve dual purposes for water quality and hydromodification requirements. Because the project, by way of the design of the on-site stormwater system, would result in post-development 100-year peak flows rates that would be below or effectively equal to pre-development conditions (Appendix G-2), it follows that the project would not contribute additional stormwater that would exceed the capacity of existing or planned stormwater drainage systems. Therefore, although the project would substantially alter the existing drainage pattern of the site, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. Additionally, the project's project would not result in substantial additional sources of polluted runoff, would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, and would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Thus, impacts would be below and on the substantial additional.

Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-than-Significant Impact. As previously discussed, during construction and operation the project would comply with applicable water quality regulatory requirements, including implementation of a SWPPP, stormwater BMPs, and low-impact development design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Santa Margarita Region watersheds. In addition, with compliance with these regulatory requirements, the project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the San Diego RWQCB Basin Plan and Upper Santa Margarita Integrated Regional Water Management Plan would not be adversely impacted. As a result, the project would not conflict with or obstruct the San Diego RWQCB Basin Plan.

With respect to groundwater management, the Temecula Valley Groundwater Basin has not been identified as a critically overdrafted basin and is considered a very low-priority basin with respect to SGMA. As a result, the project would not conflict with or obstruct this sustainable groundwater management plan. Impacts are considered less than significant, and no mitigation measures are required.

No other adverse water quality impacts would occur in association with the project. Thus, impacts would be less than significant.

4.9.5 Mitigation Measures

The project would not result in significant impacts, and no mitigation measures are necessary.

4.9.6 Level of Significance After Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.9.7 Cumulative Impacts

Water Quality

The geographic context for the analysis of cumulative impacts associated with water quality is the encompassing Santa Margarita River Watershed. Cumulative development in the watershed could add new sources of stormwater runoff. Construction activities associated with development could temporarily increase the amount of exposed surfaces that could contribute to sediments in stormwater runoff. Additionally, materials associated with construction activities could be deposited on surfaces and carried to receiving waters in stormwater runoff.

Continued development and redevelopment within the Santa Margarita River Watershed could also increase the amount of impervious surfaces that could increase stormwater runoff rates and amounts, as well as changes in land use that may increase the amount of pollutants in stormwater runoff. However, all cumulative development in the watershed would be subject to the existing regulatory requirements to protect water quality and minimize increases in stormwater runoff during construction and operation. For example, the Construction General Permit requires development and implementation of a SWPPP for all construction sites larger than 1 acre to mitigate potential impacts to water quality from polluted stormwater runoff. Additionally, because the City is a co-permittee of the Regional MS4 Permit, new development would be required to prepare a project-specific WQMP to mitigate operational impacts to water quality.

Every 2 years, the San Diego RWQCB must re-evaluate water quality within its geographic region and identify those water bodies not meeting water quality standards. For those impaired water bodies, a TMDL must be prepared and implemented to reduce pollutant loads to levels that would not contribute to a violation of water quality standards. All development within the Santa Margarita River Watershed is subject to the water quality standards outlined in the Basin Plan and must comply with any established TMDLs. The continuing review process would ensure that cumulative development within the watershed would not substantially degrade water quality.

As discussed in detail in Section 4.16, wastewater treated by cumulative development would be treated by the applicable future wastewater treatment provider to a standard that is consistent with the water quality requirements imposed upon it by the San Diego RWQCB and EPA prior to discharge into the Santa Margarita River Watershed.

The project would generate a wastewater stream that is similar to other wastewater streams generated throughout the Santa Margarita River Watershed region. As discussed in detail in Section 4.16, the project's future wastewater treatment provider (i.e., Eastern Municipal Water District) has indicated that it has the capacity and capability to treat all project-generated wastewater at its regional wastewater treatment plants. Given the excess capacity available at Eastern Municipal Water District wastewater treatment plants (see Section 4.16), the project would not combine with other cumulative development to result in a scenario where wastewater treatment providers could not treat wastewater to applicable standards.

Because the project would not require the use of local groundwater and would not result in adverse effects to groundwater quality, the project would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table. It follows that the project would not combine with other cumulative development to result in a cumulatively considerable impact to groundwater quality.

In addition, other projects in the City would be subject to the City Municipal Code requirements and City's Stormwater Management Plan, and other projects in the Santa Margarita River Watershed would be subject to provisions, goals, and requirements of the Santa Margarita Region Watershed Protection Program and the Upper Santa Margarita IRWMP. Therefore, impacts associated with water quality standards and polluted runoff in the watershed would be minimized, and the project's contribution to cumulative impacts would not be cumulatively considerable.

Stormwater Drainage

The geographic context for the analysis of cumulative impacts related to storm drainage is the Santa Margarita River Watershed. Cumulative development within the watershed could potentially increase the amount of impervious surfaces that could cause or contribute to storm drain and creek bed capacity exceedance, alter existing creek bed profiles (i.e., create erosive downcutting and bank failure), and/or require construction of new or expanded flood control infrastructure. However, as the project decreases flows from the project site into the watershed as compared with the pre-development condition of the site, the project would not contribute to such exceedances and therefore impacts would not be cumulative considerable. New development within the watershed would be subject to the environmental review process and compliance with local stormwater regulations, such as the Construction General Permit, Section 1602 of the California Fish and Game Code, the Section 404 permit process of the CWA, local municipal code requirements, and local Water Quality Management Plan requirements. Similar to the project, other projects in the Santa Margarita River Watershed would incorporate hydromodification features such that drainage rates and volumes would be less than or equal to existing conditions. Therefore, impacts associated with changes in runoff in the watershed would be minimized, and the project's contribution to cumulative impacts would not be cumulatively considerable.

4.9.8 References Cited

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4.10 Noise

This section describes the existing noise setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). The analysis was completed, in part, based on noise data collected by Dudek (included as Appendix H of this Environmental Impact Report [EIR]) and a Traffic Impact Analysis prepared by Trames Solutions Inc. (Appendix I of this EIR).

4.10.1 Existing Conditions

Noise and Vibration Concepts

Sound may be described in terms of level or amplitude (measured in decibels [dB]), frequency or pitch (measured in hertz, or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech interference, sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and local agencies have established criteria to protect public health and safety, to prevent disruption of certain human activities, and to minimize annoyance caused by noise.

Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the equivalent noise level over a given period (L_{eq}), the day-night average noise level (L_{dn}), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA.

 L_{eq} is a sound energy level averaged over a specified time period (usually 1 hour). L_{eq} is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy contained in all the noise that occurred in that 1 hour. L_{eq} is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors. L_{max} is the greatest sound level measured during a designated time interval or event.

Unlike the L_{eq} metric, L_{dn} and CNEL metrics always represent 24-hour periods, usually on an annualized basis. L_{dn} and CNEL also differ from L_{eq} because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that L_{dn} and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7 a.m.-7 p.m.) receives no penalty. Noise during the evening (7 p.m.-10 p.m.) is penalized by adding 5 dB, and nighttime (10 p.m.-7 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is defined as 7 a.m.-10 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 to 1 dB; for that reason, the L_{dn} and CNEL noise metrics are often considered functionally equivalent to one another for most purposes.

Table 4.10-1 represents some typical noise levels found in the existing environment. Noise-sensitive uses near the project site include residential uses and a school (Vista Murrieta High School).

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	-
Gas lawn mower at 1 meter (3 feet)	90	-
Diesel truck at 15 meters (50 feet), at 80	80	Food blender at 1 meter (3 feet)
kph (50 mph)		Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime	70	Vacuum cleaner at 3 meters (10 feet)
gas lawn mower at 30 meters (100 feet)		
Commercial area	60	Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)		
Quiet urban daytime	50	Large business office
		Dishwasher, next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural night time	20	Bedroom at night, concert hall (background)
_	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Table 4.10-1. Typical Sound Levels in the Environment and Industry

Source: Caltrans 2013a.

Notes: dB = decibel; kph = kilometers per hour; mph = miles per hour.

There are three conceptual components to noise, including the source, the transmission path, and the receiver. Noise can be reduced by (1) reducing noise at its source; (2) lengthening or interrupting the transmission path through diversion, absorption, or dissipation; or (3) protecting the receiver through noise insulation. The most efficient and effective means of abating noise is to reduce noise at its source. Source noise can be controlled through regulation, such as restrictions outlined in noise ordinances; muffling techniques; or sound proofing. The transmission path can be interrupted through creation of a buffer between the source and the receiver, such as a noise wall, earth embankment, or a building. The receiver can be protected from noise impacts through insulation, building orientation, or shielded areas.

Noise sources can be classified in two forms: point sources, such as individual pieces of stationary or mobile equipment (e.g., pumps, heavy construction equipment), and line sources, such as a roadway with a large number of pass-by sources (e.g., motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dB for each doubling of distance from the source to the receptor. For example, a 60 dBA noise level measured at 50 feet from a point source would be 54 dBA at 100 feet from the source and 48 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dB and 4.5 dB per doubling of distance from the source from the source to the receptor. Typical sound levels generated by various activities are listed in Table 4.10-1.

Sound levels can also be attenuated by built or natural barriers. Intervening noise barriers, such as a solid wall or berm, typically reduce noise levels by 5 dB to 10 dB. Structures can also provide noise reduction by insulating interior spaces from outdoor noise. The exterior-to-interior noise attenuation provided by typical California building structures ranges from 15 dB to 25 dB for windows open and closed, respectively. Acoustically designed enclosures and buildings can provide up to approximately 50 dB of noise reduction, depending on the noise abatement treatments.

Vibration tolerance typically depends on the type of structures that are affected. Structural response to vibration is typically evaluated in terms of peak particle velocity (ppv), generally expressed in inches per second (in/sec), and is often used since it is related to the stresses that are experienced by buildings. Various general standards are contained in the International Standards Organization's Standards 3945, 4866, and 7626-1. Limits set by these standards indicate a low probability of structural damage occurring to common structures at a ppv of 2 in/sec. Older (and non-reinforced) masonry structures would have a limit of 0.75 to 1.0 in/sec (Caltrans 2013b). The U.S. Department of Transportation's Federal Transit Administration identifies a vibration damage threshold criterion of 0.20 in/sec for non-engineered timber and masonry buildings (i.e., fragile buildings) or 0.12 in/sec for buildings extremely susceptible to vibration (i.e., fragile historic buildings) (DOT 2018).

Existing Noise Environment

The project site is a westward-sloping 6.65-acre vacant lot at the northeast corner of Interstate 215 and Clinton Keith Road. The surrounding area includes a site to the east that has been subject to an ongoing mass grading operation (with the associated noise from heavy construction equipment) for several years to provide fill material/rock for construction purposes. That site is currently proposed for development of a commercial retail center, including a Costco Wholesale. Additionally, the surrounding roadways (Interstate 215, Clinton Keith Road, Whitewood Road) generate traffic noise. To the south and across Clinton Keith Road is a residential subdivision and a school, south of which lies open space associated with the Hogback Hills. Additionally, approximately 1,400 feet to the east of the project site is a residential subdivision. These adjacent residential and educational land uses also generate noise that contribute to ambient noise levels in the project area.

A sound level survey was conducted on February 23, 2018, to evaluate existing sound levels and assess potential project noise impacts on the surrounding area. A subsequent sound level survey was also conducted on August 13, 2019, to conduct an additional noise measurement. Short-term sound levels were measured at existing noise-sensitive receptors in the vicinity of the project site, as shown in Figure 4.10-1, Noise Measurement and Modeling Locations. Noise measurements were taken at the multifamily residences south of the project site (ST1), the high school south of the project site (ST2), the multifamily residences east of the project site (ST3), and the single-family residences east of the project site (ST4 and ST5).

Short-term (1 hour or less), attended sound level measurements were taken with a Rion NL-52 Sound Level Meter. This instrument is categorized as Type 1, Precision Grade. The sound measuring instrument used for the survey was set to the "slow" time response and the dBA scale for all noise measurements. To ensure accuracy, the laboratory calibration of the instrument was field checked before and after each measurement period using an acoustical calibrator. The accuracy of the acoustical calibrator is maintained through a program established through the manufacturer and traceable to the National Institute of Standards and Technology. The sound measurement instrument meets the requirements of American National Standards Institute Standards S1.4-1983 and International Electrotechnical Commission Publications 804 and 651. In all cases, the microphone height was 5 feet above the ground, and the microphone was equipped with a windscreen.

During the field measurements, physical observations of the predominant noise sources were noted. The primary noise source in the project area was vehicle traffic on Clinton Keith Road, located south of the project site. Other secondary noise sounds included noise from heating, ventilation, and air conditioning (HVAC) equipment, distant construction noise, rustling leaves, birds, distant aircraft overflights, and other community noises. The results of the sound level measurements are summarized in Table 4.10-2, and the field notes are provided in Appendix H. As shown in Table 4.10-2, measured noise levels ranged from 41 dBA L_{eq} at ST5 to 56 dBA L_{eq} at ST1, when rounded to whole numbers, as is customary for community noise measurements.

	Measurement Period			Measurement Results (dBA)							
Site ID	Measurement Location	Date	Start Time (a.m.)	Duration (minutes)	Noise Sources	Leq	L _{max}	Lmin	L90	L50	L10
ST1	Multifamily residential south of project site	02-23-2018	10:56	10	Traffic, birds, rustling leaves	55.6	71.3	46.3	48.9	52	55.4
ST2	Vista Murrieta High School, south of project site	02-23-2018	9:56	15	HVAC, pool pumps, distant traffic, birds, distant aircraft, distant construction noise	55	65.1	46.8	49.2	52	58.4
ST3	Multifamily residential east of project site	02-23-2018	10:18	10	Traffic, birds, rustling leaves	54.3	65.8	44.2	47.3	52.6	57.8
ST4	Single-family residential east of project site	02-23-2018	10:39	10	Construction noise, birds, distant aircraft, rustling leaves	52.1	63.6	43.9	45.4	48.2	55.9
ST5	Single-family residential east of project site	08-13-2019	10:34	15	Construction noise, birds, distant aircraft, distant traffic	40.6	49.7	37.5	38.7	40.1	42.1

Table 4.10-2. Short-Term Sound-Level Measurement Results

Source: Appendix H.

Notes: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level (energy-averaged sound level); L_{max} = maximum sound level during the measurement interval; L_{min} = minimum sound level during the measurement interval; L_{90} = sound level exceeded for 90% of the measurement period; L_{50} = sound level exceeded for 50% of the measurement period; L_{10} = sound level exceeded for 10% of the measurement period; HVAC = heating, ventilation, and air conditioning.

4.10.2 Relevant Plans, Policies, and Ordinances

Federal

Noise Control Act

The Noise Control Act of 1972 recognized the role of the federal government in dealing with major commercial noise sources that require uniform treatment. Since Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The federal government specifically preempts local control of noise from aircraft, railroads, and interstate highways. The U.S. Environmental Protection Agency has identified acceptable noise levels for various land uses to protect the public, with an adequate margin of safety, and to establish noise emissions standards for interstate commerce.

The Department of Housing and Urban Development's standards define day-night average sound levels (L_{dn}) at below 65 dBA for outdoors as acceptable for residential areas. Outdoor levels up to 75 dBA L_{dn} may be made acceptable through the use of insulation in buildings (HUD 2009).

State

California Code of Regulations, Title 24, Noise Insulation Standards

California Code of Regulations, Title 24, Noise Insulation Standards, establishes the acceptable interior environmental noise level for multifamily dwellings at 45 dBA L_{dn}. This may be extended by local legislative action to include single-family dwellings.

California Code of Regulations, Section 65302(f)

California Code of Regulations, Section 65302(f), requires local land use planning jurisdictions to prepare a general plan. The noise element is a mandatory component of general plans. It may include general community noise guidelines developed by the California Health and Human Services Agency and specific planning guidelines for noise/land use compatibility developed by the local jurisdiction. The state guidelines also recommend that the local jurisdiction consider adopting a local noise control ordinance. The California Health and Human Services Agency developed guidelines (OPR 2003) for community noise acceptability for use by local agencies. Selected relevant levels are as follows (OPR 2003):

- CNEL below 60 dBA normally acceptable for low-density residential use
- CNEL of 55 dBA to 70 dBA conditionally acceptable for low-density residential use
- CNEL below 65 dBA normally acceptable for high-density residential use
- CNEL of 60 dBA to 70 dBA conditionally acceptable for high-density residential use, transient lodging, churches, and educational and medical facilities
- CNEL below 70 dBA normally acceptable for playgrounds and neighborhood parks

"Normally acceptable" is defined as satisfactory for the specified land use, assuming that normal conventional construction is used in buildings. "Conditionally acceptable" may require some additional noise attenuation or special study. Under most of these land use categories, overlapping ranges of acceptability and unacceptability are

presented, leaving some ambiguity in areas where noise levels fall within the overlapping range. Table 4.10-3 presents the complete land use/noise compatibility matrix.

Table 4.10-3.	Land Use	Compatibility for	r Community	Noise Environments
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	Community Noise Exposure (CNEL)					
Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable		
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50-60	55-70	70-75	75-85		
Residential – Multifamily	50-65	60-70	70-75	70-85		
Transient Lodging – Motel, Hotels	50-65	60-70	70-80	80-85		
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-70	60-70	70-80	80-85		
Auditoriums, Concert Halls, Amphitheaters	N/A	50-70	N/A	65-85		
Sports Arenas, Outdoor Spectator Sports	N/A	50-75	N/A	70-85		
Playgrounds, Neighborhood Parks	50-70	N/A	67.5-77.5	72.5-85		
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	N/A	70-80	80-85		
Office Buildings, Business Commercial and Professional	50-70	67.5-77.5	75-85	N/A		
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	75-85	N/A		

Source: OPR 2003.

Notes: CNEL = community noise equivalent level; N/A = not applicable.

<u>Normally Acceptable:</u> Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

<u>Conditionally Acceptable:</u> New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

<u>Normally Unacceptable:</u> New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made, and needed noise-insulation features must be included in the design. <u>Clearly Unacceptable:</u> New construction or development should generally not be undertaken.

California Occupational Safety and Health Administration Occupational Noise Exposure Regulations

California additionally regulates noise emissions levels of licensed motor vehicles traveling on public thoroughfares, sets noise emissions limits for certain off-road vehicles and watercraft, and sets required sound levels for light-rail-transit vehicle warning signals.

The extensive state regulations pertaining to worker noise exposure are, for the most part, applicable only to the construction phase of any project,¹ or workers in a central plant and/or maintenance facility, or involved in the use of landscape maintenance equipment or heavy machinery.

Local

City of Murrieta Noise Ordinance

The City of Murrieta's (City) Noise Ordinance (Section 16.30 of the City's Municipal Code) sets interior and exterior noise standards for specific land uses (Sections 16.30.090 and 16.30.100) (City of Murrieta 1997). The City's Noise Ordinance also has general noise regulations (Section 16.30.130) that regulate noise from construction

¹ For example, the California Occupational Safety and Health Administration Occupational Noise Exposure Regulations (8 CCR, General Industrial Safety Orders, Article 105, Control of Noise Exposure, Section 5095, et seq.).

activities. Construction noise deemed to be disturbing is prohibited from 7 p.m. to 7 a.m., Monday through Saturday, or at any time on Sundays or holidays. Construction activities must be conducted in a manner that the maximum noise levels at the affected structures will not exceed those listed in Table 4.10-4.

Equipment Type	Single-Family Residential	Multifamily Residential	Commercial
Mobile Equipment			
Daily, except Sundays and holidays, 7 a.m. to 8 p.m.	75 dBA	80 dBA	85 dBA
Daily, except Sundays and holidays, 8 p.m. to 7 a.m.	60 dBA	64 dBA	70 dBA
Stationary Equipment			
Daily, except Sundays and holidays, 7 a.m. to 8 p.m.	60 dBA	65 dBA	70 dBA
Daily, except Sundays and holidays, 8 p.m. to 7 a.m.	50 dBA	55 dBA	60 dBA

Table 4.10-4. Ci	ity of Murrieta	Construction	Noise Standards
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Source: City of Murrieta 1997.

Note: dBA = A-weighted decibel scale

Operational noise generated between two properties within the City is regulated by the standards contained in Section 16.30.090 of the City's Noise Ordinance. The City's exterior noise level limits between properties are presented in Table 4.10-5. Pursuant to Section 16.30.090(C), if the location in question is on a boundary property between two zoning districts, the exterior noise standard is the arithmetic mean of the exterior noise levels (City of Murrieta 1997). For example, the exterior noise standard between the commercial zone of the project site and the residential area to the east would be 50 dBA from 10 p.m. to 7 a.m., and 55 dBA from 7 a.m. to 10 p.m.

Table 4.10-5. City of Murrieta Exterior and Interior Noise Limits

Noise Zone	Land Use (Receptor Property)	Time Period	Allowed Exterior Noise Level (dBA)		
Exterior No	bise Limits				
I	Noise-sensitive area	Anytime	45		
II	Residential properties	10 p.m. to 7 a.m.	45		
		7 a.m. to 10 p.m.	50		
	Residential properties within 500 feet of a kennel(s)	7 a.m. to 10 p.m.	70		
III	Commercial properties	10 p.m. to 7 a.m.	55		
		7 a.m. to 10 p.m.	60		
IV	Industrial properties	Anytime	70		
Interior Noise Limits					
All noise	Multifamily residential	10 p.m. to 7 a.m.	40		
zones		7 a.m. to 10 p.m.	45		

Source: City of Murrieta 1997.

Note: dBA = A-weighted decibel scale

Vibration Standards

The City's Noise Ordinance Section 16.30.130(K) prohibits the operation of any device that creates vibration above the City's established perception threshold of 0.01 ppv in/sec over the range of 1 to 100 hertz (City of Murrieta 1997).

Murrieta General Plan 2035

The following goals and policies from the Murrieta General Plan 2035 (General Plan) Noise Element would apply to the project (City of Murrieta 2011):

- **Goal N-1** Noise sensitive land uses that are properly and effectively protected from excessive noise generators.
 - Policy N-1.1Comply with the Land Use Compatibility for Community Noise Environments
[shown herein as Table 4.10-3].
 - Policy N-1.2 Protect schools, hospitals, libraries, churches, convalescent homes, and other noise sensitive uses from excessive noise levels by incorporating site planning and project design techniques to minimize noise impacts. The use of noise barriers shall be considered after all practical design-related noise measures have been integrated into the project. In cases where sound walls are necessary, they should help create an attractive setting with features such as setbacks, changes in alignment, detail and texture, murals, pedestrian access (if appropriate), and landscaping.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to noise are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the project would:

- 1. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- 2. Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- 3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

Neither the City's General Plan Noise Element nor the Municipal Code have quantified levels of increase in noise above ambient that are considered "substantial." Some guidance regarding the determination of a substantial permanent increase in ambient noise levels in the project vicinity above existing levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a qualitative measure of the adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment (FICON 1992).

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of L_{dn} (and by extension, CNEL). The changes in noise exposure that are shown in Table 4.10-6 are expected to result in equal changes in annoyance at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis to define a substantial increase in community noise levels related to all transportation noise sources and permanent non-transportation noise sources.

Ambient Noise Level Without Project (Ldn)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels by Amount Listed
<60 dBA	+ 5 dB or more
60-65 dBA	+ 3 dB or more
>65 dBA	+ 2 dB or more

Table 4.10-6. Measures of Substantial Increase for Community Noise Sources

Notes: $L_{dn} = day-night$ average noise level; dBA = A-weighted decibel scale; dB = decibel.

For stationary operational noise sources related to the proposed project, noise levels exceeding the standards contained in Table 4.10-5, City of Murrieta Exterior and Interior Noise Limits, are considered significant. For construction related to the proposed project, noise levels exceeding the standards contained in Table 4.10-4, City of Murrieta Construction Noise Standards, are considered significant. For groundborne vibration, project-related activities exceeding the City's vibration threshold of perception (0.01 in/sec ppv) are considered significant.

Threshold 3, proximity to a private air strip or airport land use plan, was evaluated in the Initial Study and determined to be "No Impact" because the closest airport to the project site is French Valley Airport, located at 37600 Sky Canyon Drive in Murrieta, California, approximately 2.5 miles southeast of the project site (Appendix A). The project would not be located within 2 miles of any airport and would not expose people residing or working in the project area to excessive noise levels associated with an airport. Therefore, this threshold is not evaluated further in this Project EIR.

4.10.4 Impacts Analysis

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

Implementation of the proposed project would result in two primary types of potential noise impacts: short-term (i.e., temporary) noise during construction and long-term noise during operation of the project.

Short-Term Construction Noise

Less-than-Significant Impact. Construction of the proposed project would occur in phases, including grading, site preparation, building construction, architectural coatings, and paving.

The types of construction equipment that would be used to construct the proposed project would include standard equipment that would be employed for any routine construction project of this scale, such as excavators, graders, trenchers, cranes, rubber-tired bulldozers, generators, and paving equipment. Construction equipment with substantially higher noise-generation characteristics (e.g., pile drivers, rock drills, blasting equipment) would not be necessary for proposed project components.

Construction equipment would typically be operating all over the project site, both near and far from any one location in the project vicinity. The nearest point of construction activities to the closest noise-sensitive receivers (the high school and the multifamily residences located south of the project site) would be approximately 175 feet, and the farthest would be approximately 1,300 feet. Because construction taking place within 175 feet would be temporary and intermittent, the distance from the nearby receivers to the "acoustic center" (the point from which the energy sum of all construction activity noise, near and far, would be centered on an average or typical basis) is utilized.

The nearest noise-sensitive receivers are located approximately 450 feet from what would be the acoustic center of construction activity. Thus, the distance to construction activities for the closest residences would be as near as 175 feet away, but would typically be approximately 450 feet away. For other nearby noise-sensitive land uses (such as the multifamily and single-family residences to the east), the nearest point of construction would be approximately 1,400 feet from adjacent noise-sensitive receivers, and the typical construction activity distance would be approximately 1,600 feet.

The Federal Highway Administration's Roadway Construction Noise Model (FHWA 2008) was used to estimate construction noise levels at these noise-sensitive land uses. Although the model was funded and promulgated by the Federal Highway Administration, the Roadway Construction Noise Model is often used for non-roadway projects because the same types of construction equipment used for roadway projects are also used for other project types. Input variables for the Roadway Construction Noise Model consist of the receiver/land use type, the equipment type and number of each (e.g., two graders, one loader, one tractor), the duty cycle for each piece of equipment (e.g., percentage of hours the equipment typically works per day), and the distance from the noise-sensitive receiver.

Noise levels from the proposed construction activities are summarized in Table 4.10-7. The complete set of Roadway Construction Noise Model input and output data for construction noise is provided in Appendix H. As shown in Table 4.10-7, at the nearest residences and at the school, located south of the project site, noise levels would range from approximately 66 to 77 dBA L_{eq} when construction would take place at or near the project boundary. More typical construction noise levels at the residences and the school south of the site would range from approximately 58 to 70 dBA L_{eq} . At the residences to the east of the project site, noise levels would range from approximately 48 to 60 dBA L_{eq} when construction would take place at or near the project levels, noise levels would range from approximately 48 to 60 dBA L_{eq} when construction would take place at or near the project levels, noise levels would range from approximately 47 to 59 dBA L_{eq} .

Project Phase	Noise-Sensitive Receiver	Nearest or Typical Activity Distance (feet)	L _{eq} (dBA)
Site Preparation	Residences and school to the south of	Nearest construction work (175)	71
	project site	Typical construction work (450)	63.3
	Residences to the east of project site	Nearest construction work (1,400)	53.3
		Typical construction work (1,600)	52.3
Grading	Residences and school to the south of	Nearest construction work (175)	76.5
	project site	Typical construction work (450)	69
	Residences to the east of project site	Nearest construction work (1,400)	58.9
		Typical construction work (1,600)	58
Building Construction	Residences and school to the south of	Nearest construction work (175)	77.2
	project site	Typical construction work (450)	70.4
	Residences to the east of project site	Nearest construction work (1,400)	60.2
		Typical construction work (1,600)	59.3
Trenching	Residences and school to the south of	Nearest construction work (175)	68.8
	project site	Typical construction work (450)	61
	Residences to the east of project site	Nearest construction work (1,400)	51
		Typical construction work (1,600)	50
Paving	Residences and school to the south of	Nearest construction work (175)	69.3
	project site	Typical construction work (450)	61.8
	Residences to the east of project site	Nearest construction work (1,400)	51.8
		Typical construction work (1,600)	50.8

Table 4.10-7. Construction Noise Modeling Results

Project Phase	Noise-Sensitive Receiver	Nearest or Typical Activity Distance (feet)	L _{eq} (dBA)
Architectural Coatings	Residences and school to the south of project site	Nearest construction work (175)	65.6
		Typical construction work (450)	57.6
	Residences to the east of project site	Nearest construction work (1,400)	47.7
		Typical construction work (1,600)	46.6

Table 4.10-7. Construction Noise Modeling Results

Source: Appendix H.

Notes: L_{eq} = equivalent sound level; dBA = A-weighted decibels.

Based upon the construction noise analysis, the unmitigated noise levels would not exceed the City's daytime construction noise standards for mobile equipment (75 dBA for single-family residences and 80 dBA for multifamily residences). To control construction noise levels to a level consistent with the City's General Plan Noise Element and Noise Ordinance, the City would require the limitation of hours of construction activity as a Standard Condition (SC-NOI-1). With implementation of this Standard Condition, impacts from construction noise would be less than significant.

Long-Term Operational Noise Impact

Traffic Noise Impacts

Less-than-Significant Impact. As a result of regional population growth and growth under the proposed project, traffic on local arterial streets is expected to increase relative to current conditions. Potential noise impacts from vehicular traffic were assessed using the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004). Data used to model noise from vehicular traffic were derived from the project-specific Traffic Impact Analysis (Appendix I). Information used in the model included the Existing, Existing plus Project, Existing plus Ambient plus Cumulative, and Existing plus Ambient plus Cumulative plus Project. Noise levels were modeled at representative noise-sensitive receivers. The receivers were modeled to be 5 feet above the local ground elevation. Six receptors (ST1 through ST5 and M1) represent existing off-site residences, as shown in Figure 4.10-1.

The information provided from this modeling was compared to the noise impact significance criteria to assess whether project-related traffic noise would cause a significant impact and, if so, where these impacts would occur. The results of the comparisons for the noise-sensitive land uses for the existing and future year conditions are presented in Table 4.10-8, Project-Related Traffic Noise: Existing and Future. The Traffic Noise Model input and output sheets are provided in Appendix H.

As shown in Table 4.10-8, the Existing plus Project traffic noise would generate a noise level increase of 1 dB CNEL or less (rounded to whole numbers) along the studied roads in the vicinity of the project site. Based on the FICON criteria shown in Table 4.10-6, Measures of Substantial Increase for Community Noise Sources, an increase of 1 dB is not considered a substantial increase for traffic noise levels of less than 65 dBA CNEL. The additional traffic volumes along the adjacent roads would not result in an exceedance of applicable compatibility standards (i.e., 60 dBA CNEL for low-density residential, 65 dBA CNEL for high-density residential, 70 dBA CNEL for playgrounds and park), and the project would not substantially increase the existing noise level in the project vicinity. Similarly, as shown in Table 4.10-8, the Existing plus Ambient plus Cumulative plus Project traffic noise would generate a noise level increase of less than 1 dB CNEL (rounded to whole numbers), and the additional traffic volumes along the adjacent roads would not result in an exceedance of applicable compatibility standards. Therefore, project-related traffic noise would be less than significant, and no mitigation measures would be required.

Table 4.10-8. Project-Related Traffic Noise: Existing and Future

Modeled Receptor	Existing without Project (dBA CNEL)	Existing plus Project (dBA CNEL)	Increase (with Project vs. without Project) (dBA)	Existing plus Ambient plus Cumulative without Project (dBA CNEL)	Existing plus Ambient plus Cumulative plus Project (dBA CNEL)	Increase (with Project vs. without Project) (dBA)
ST1 – Multifamily residences south of project site, adjacent to Clinton Keith Road	61	61	0	63	63	0
ST2 – Vista Murrieta High School, south of project site, adjacent to Clinton Keith Road	60	60	0	62	62	0
ST3 – Multifamily residential east of project site, adjacent to Clinton Keith Road	59	60	1	62	62	0
ST4 – Single-family residential east of project site, approximately 500 feet north of Clinton Keith Road	53	53	0	55	55	0
ST5 – Single-family residential east of project site, approximately 1,100 feet north of Clinton Keith Road	46	46	0	47	47	0
M1 – Single-family residences east of project site, adjacent to Whitewood Road	57	57	0	58	58	0

Source: Appendix H.

Notes: dBA = A-weighted decibels; CNEL = community noise equivalent level

On-Site Mechanical, Parking Lot, and Drive-Through Noise

Less-than-Significant Impact. Mechanical HVAC equipment associated with the proposed project would have the potential to generate significant noise levels. Based on information provided by the project applicant, the HVAC equipment (consisting of 5- and 10-ton capacity units) would be located on the rooftops of the proposed buildings, and the HVAC equipment would be visually and acoustically shielded by parapet walls. Noise emissions information from the HVAC manufacturer, along with standard acoustical formulas for addition of multiple sources, attenuation with distance, and attenuation from structural shielding, were used to estimate the resulting noise levels at the nearest residences, south of the project site. As shown in Table 4.10-9, the resultant combined noise level with all HVAC units running would be approximately 41 dBA at the nearest noise-sensitive land uses. The noise from HVAC equipment would be below the City's Municipal Code noise standards for a residential zone (50 dBA during daytime hours [7 a.m. to 10 p.m.] and 45 dBA during nighttime hours [10 p.m. to 7 a.m.]). Noise from HVAC equipment related to the proposed project would be less than significant.

	HVAC Units		Distance from	D		
Building Designation	Quantity	Capacity (in tons)	Residents (approximate worst case) (feet)	Resultant Unattenuated Noise Level (dBA)	Attenuation from Parapet (dB)	Resultant Noise Level with Attenuation (dBA)
Building Y	3	20	186	45.2	7.7	37.5
Building X	2	10	240	38.9	7.4	31.5
Building W1	3	15	340	37.6	7.1	30.6
Building W2	5	30	407	39.8	6.5	33.3
Building W3	3	15	470	34.8	6.2	28.7
Building V	7	35	680	35.3	5.7	29.6
Building U	5	25	840	32.0	5.5	26.5
Building T	4	20	1040	29.2	5.3	23.8
Co	ombined nois	e level at nea	rest noise-sensitive	e receivers (worst-c	case) (dBA L _{eq})	41.0

Table 4.10-9. Project-Related Heating, Ventilation, and Air Conditioning Noise

Source: Appendix H.

Notes: HVAC = heating, ventilation, and air conditioning; dBA = A-weighted decibel; dB = decibel L_{eq} = equivalent noise level over a given period.

As detailed in Chapter 3, Project Description, included among the proposed retail/commercial uses would be a tire store and auto-related services/retail store. The proposed 4,000-square-foot auto-related services/retail store would sell materials related to general vehicle maintenance, such as oil- and synthetic-based lubricants, headlight replacements, and batteries. No maintenance activities would be allowed within parking areas; thus, no automotive maintenance-related noise would occur. The proposed 5,000-square-foot tire store would have four bays and hydraulic lifts where customers could have new tires installed on their vehicles. Oil-change services and tune ups could also be offered on site, but services that are more intensive would not be permitted (e.g., bodywork, engine removal). The tire store would be located approximately 850 feet from the nearest residential land uses and would be physically separated from those residences by Clinton Keith Road and the proposed retail structures to the south, which would likely provide some degree of structural shielding by blocking the direct view of the work area.

Noise-generating equipment at the tire store would most likely include tire changers, wheel balancers, air compressors, and various tools. The primary noise sources would be the power and pneumatic tools, as well as noise from hitting and banging car parts such as hubcaps, tires, car hoods, and car doors being closed. The tire

store would operate during the daytime hours only (i.e., between the hours of 7 a.m. and 10 p.m. Additionally, it is anticipated that the tire center would receive periodic tire deliveries via heavy trucks.

Based on a prior noise study conducted at an existing Costco Wholesale tire shop (Giroux & Associates 2015), the noise level during a noisy period (with five air guns in intermittent operation) was approximately 53 dBA L_{eq} at a distance of 70 feet directly in front of the open bay doors. Very brief, maximum noise levels of approximately 67 dBA L_{max} at 70 feet were measured. All related work would take place within the building, which would have a solid wall with no openings to the residences to the east. However, there would be service bay doors on the south side of the building, and these would likely be open much of the time for ventilation and in order to move the cars in and out of the facility.

The closest residential properties would be approximately 850 feet or more from the tire store and would be acoustically shielded by the project's structures, which would provide a minimum of 5 dB noise reduction. At this distance, the average noise levels from the tire store would be approximately 26 dBA L_{eq} . This noise level would be well below the City's Noise Ordinance standard for residential uses of 50 dBA L_{eq} from 7 a.m. to 10 p.m. Very brief, maximum (L_{max}) noise levels of approximately 40 dBA at residences are estimated; these would likely not be readily audible, because the existing ambient maximum noise levels are substantially higher (a noise level of 71 dBA L_{max} was measured at ST2). Therefore, noise from auto-related services would be less than significant. Similarly, the tire delivery noise, occurring 850 feet or more from nearby noise-sensitive uses, would be negligible.² No mitigation would be required.

Parking for the project would be provided in the interior portion of the retail center, with stores on the perimeter. Primary access to the proposed parking lots would be via Creighton Avenue from Clinton Keith Road to the south, and secondary access would be via Antelope Road from the north. Noise sources from parking lots include car alarms, door slams, radios, and tire squeals. The instantaneous sound pressure levels from these sources typically range from approximately 30 dBA to 66 dBA at a distance of 100 feet (Gordon Bricken & Associates 1996) and are generally short-term and intermittent. Parking lots have the potential to generate instantaneous noise levels that exceed 60 dBA depending on the location of the source; however, noise sources from the parking lot would be different from each other in kind, duration, and location, so that the overall effects would be separate, and in most cases would not affect noise-sensitive receptors at the same time. Other parking lot activities such as periodic parking lot cleaning, which could occur prior to or after retail business hours, would create additional noise; however, such activities would be brief at any one location on site, and would be conducted in accordance with the City of Murrieta Municipal Code. Furthermore, the proposed parking areas would, for the most part, be shielded from a direct view of residences to the south by the intervening proposed retail buildings, and horizontally separated by the same buildings, as well as Clinton Keith Road. Therefore, noise impacts from parking lot noise would be less than significant.

Additionally, the proposed detached fast-food restaurant, located near the project site's southern boundary, would include a drive-through lane on the west and south of the building. The drive-through area would be located approximately 200 feet from the residences to the south, and horizontally separated by Clinton Keith Road. Based upon noise measurements conducted by others for a proposed fast-food restaurant project (Illingworth and Rodkin 2010), customers and drive-through staff using the intercom system typically resulted in noise levels of approximately 62 dBA to 67 dBA on an L_{max} basis at a distance of 20 feet; vehicles generated typical noise levels of 56 dBA to 58 dBA L_{max} at 20 feet, with particularly loud vehicles (e.g., diesel pickups or vehicles with loud exhaust systems) generating levels of up 72 dBA L_{max} at 20 feet. On an average basis, the noise level from the drive-through

² A study published cargo truck delivery noise levels of 96 dBA (L_{max}) at 1 meter (3.28 feet) from the boundary of the truck activity area (Baltrënas et al. 2004). At a distance of 850 feet, the resulting noise level would be approximately 48 dBA L_{max}. Average delivery truck noise levels would be substantially lower.

activities was approximately 63 dBA L_{eq} as measured at a distance of 20 feet. Based upon these measurements, speaker noise levels at the residences to the south would range from approximately 42 dBA to 47 dBA L_{max}. Typical vehicle noise would be approximately 36 dBA to 38 dBA L_{max}, while louder vehicles could create brief noise levels of approximately 50 dBA to 52 dBA L_{max}. On an average basis, the noise level from the drive-through activities would be approximately 43 dBA L_{eq} at the nearest residences. These levels would be less than measured ambient noise levels and would not exceed applicable City noise standards. Therefore, noise from proposed drive-through activities, similarly to other proposed operational noise, would be less than significant.

Would the project result generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground that diminishes (attenuates) fairly rapidly over distance. Anticipated groundborne vibration from heavy equipment operations during construction of the proposed project was evaluated and compared to relevant vibration impact criteria using the U.S. Department of Transportation's Transit Noise and Vibration Impact Assessment Manual, which provides vibration impact criteria and recommended methodologies and guidance for assessment of vibration effects (DOT 2018).

At a distance of approximately 175 feet, the vibration level from heavy construction machinery (such as a large bulldozer) would be approximately 0.005 ppv in/sec. Vibration levels would be below the City's vibration standard of 0.01 ppv in/sec., and well below the U.S. Department of Transportation's threshold of potential damage for normal structures (0.20 ppv in/sec). Additionally, the majority of construction work would take place at distances substantially farther than 175 feet away from vibration-sensitive uses and would not be perceptible. Therefore, short-term construction-related vibration impacts would be less than significant.

Once operational, the project would not generate substantial levels of groundborne vibration. Off-site delivery trucks, for example, are not anticipated to generate significant levels of vibration, because vehicles traveling on pneumatic tires with flexible suspension systems are not an efficient source of groundborne vibration, provided that the road surface is relatively smooth (Caltrans 2013b). Thus, impacts associated with vibration would be less than significant.

4.10.5 Mitigation Measures

No mitigation measures are required for noise as part of this project. The City of Murrieta has a standard condition for noise, which would be applicable to this project.

Standard Conditions

The following standard condition (SC) applies to the project:

SC-NOI-1The applicant shall ensure that construction activities be limited to within the hours of 7 a.m. to 7 p.m.,
Monday through Saturday, except in the event of emergency declared by City, state, or federal officials.
These conditions shall be listed on the project's final design plans to the satisfaction of the City.

4.10.6 Level of Significance After Mitigation

No mitigation measures are required for noise as part of this project. With implementation of SC-NOI-1, short-term construction impacts associated with exposure of persons to or generation of noise levels in excess of established standards would be less than significant.

4.10.7 Cumulative Impacts

Non-transportation noise sources (e.g., project operation) and construction noise impacts are typically projectspecific and highly localized (i.e., these do not generally affect the community noise level at distances beyond several hundred feet). Construction activities associated with proposed or future development within the project area would contribute to cumulative noise levels, but in a geographically limited and temporary manner. As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, fixed-noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. However, such sources do not significantly contribute to cumulative noise impacts at distant locations, and were thus not evaluated on a cumulative level.

The future (i.e., Existing plus Ambient plus Cumulative) traffic volumes used for the analysis of traffic noise include cumulative growth.

As shown in Table 4.10-8, Project-Related Traffic Noise: Existing and Future, the project's future traffic-related impacts would not result in a significant noise level increase along adjacent roadways. Table 4.10-10 compares Future (Year 2035) Cumulative with Project Conditions traffic noise to the Existing without Project traffic noise scenario.

Modeled Receptor	Existing without Project (dBA CNEL)	Existing plus Ambient plus Cumulative plus Project (dBA CNEL)	Maximum Cumulative Increase (dBA)
ST1 – Multifamily residences south of project site, adjacent to Clinton Keith Road	61	63	2
ST2 – Vista Murrieta High School, south of project sites, adjacent to Clinton Keith Road	60	62	2
ST3 – Multifamily residential east of project site, adjacent to Clinton Keith Road	59	62	3
ST4 – Single-family residential east of project site, approximately 500 feet north of Clinton Keith Road	53	55	2
ST5 – Single-family residential east of project site, approximately 1,100 feet north of Clinton Keith Road	46	47	1
M1 – Single-family residences east of project site, adjacent to Whitewood Road	57	58	1

Table 4.10-10. Project-Related Traffic Noise: Cumulative Impacts (Future with Project vs. Existing)

Notes: dBA = A-weighted decibel scale; CNEL = community noise equivalent level.

As shown in Table 4.10-10, the cumulative noise increase is estimated to range from 1 dB to 3 dB. The resulting increase would not be substantial based upon the FICON noise thresholds. Therefore, impacts would not be cumulatively considerable and would be less than significant.

4.10.8 References Cited

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SOURCE: Bing Maps 2020



500 Feet FIGURE 4.10-1 Noise Measurement and Modeling Locations Vineyard III Retail Development Project INTENTIONALLY LEFT BLANK

4.11 Population and Housing

This section describes the existing population and housing trends in Southern California, Riverside County (County), and the City of Murrieta (City). This section evaluates consistency with applicable plans, policies, and regulations as they relate to population and housing. It also evaluates potential impacts to population and housing related to the proposed Vineyard III Retail Development Project (project). Data sources for this section include Southern California Association of Governments (SCAG), U.S. Census Bureau, California Department of Finance, the County, and the City.

4.11.1 Existing Conditions

The following provides an overview of existing conditions related to population and housing in Southern California, the County, and the City.

Regional Conditions

SCAG is the nation's largest metropolitan planning organization, representing 6 counties, 191 cities, and approximately 19 million residents (SCAG 2019a). Table 4.11-1 indicates the SCAG growth forecasts for the region in terms of population, housing, and employment. The SCAG region is the second most populous metropolitan region in the nation. Approximately 6% of the national population lives in the SCAG region, and for over half a century, the region has been home to approximately half the population of California (SCAG 2016).

According to data from the six counties in the SCAG region, there were 5.9 million households and 8 million jobs in the region in 2015. The highest population densities occur in Los Angeles County, and the lowest densities occur in the unincorporated territories of the other five counties. The average household size grew from 3.0 in 2010 to 3.1 in 2015 (SCAG 2016).

Employment trends in Southern California have long followed a "boom and bust" cycle. Much of the 2000s saw a boom of housing development, particularly in the Inland Empire, only to be followed by a bust starting in 2008, which affected employment, particularly in the construction and service sectors. After the loss of approximately 800,000 jobs, the SCAG region returned to a pre-recession level of 8 million jobs, with a much lower unemployment rate of 6.6% compared to 12.3% in 2010. The population to employment (P-E) ratio is used to measure the balance between population and employment in the region and by county. The P-E ratio is high during a recession and low during a better business cycle. The SCAG region experienced a P-E ratio of 2.5 in 2010, while it decreased to 2.3 in 2015.

Table 4.11-1. 2014-2040 Population,	Households, and Employment	Projections in the SCAG Region
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	2014	2020	2035	2040	Total Projected Growth 2014- 2040
Population	18,545,063	19,395,000	21,475,000	22,122,000	3,576,937
Housing	6,029,326	6,415,000	7,169,000	7,406,000	1,376,674
Employment	8,327,300	8,507,000	9,572,000	9,872,000	1,544,700

Source: SCAG 2016.

Riverside County Conditions

Population

As of July 2019, the total population of the County was 2,443,454 (DOF 2019a), which has increased by 244,951 people over the past 19 years. This increase represents a population growth rate of 11%, which is slightly lower than the SCAG region growth rate of 15.9%. The largest ethnic group is Hispanic, making up 48% of the population. The Non-Hispanic demographic groups that make up the remainder of the County population include White (36.6%), Black (6%), Asian (6.1%), Native American (0.4%), and other (2.9%) (SCAG 2019b). The County has a population density of 334 people per square mile, while the average population density in the SCAG region is 494 people per square mile (SCAG 2019b).

The median age in the County is 35 years. The 35 to 54 age group contributed the most to the County population during the 18-year period from 2000 to 2018, adding 254,685 people to the population (SCAG 2019b). According to the most recent census data, 81.1% of people residing in the County, age 25 years or older, have a high school diploma, while 21.5% have a bachelor's degree or higher (U.S. Census Bureau n.d.).

Housing

As of 2018, there were 840,904 housing units in the County, with a homeownership rate of 52.4%. The average household size in the County is 3.3, which is greater than the SCAG region average household size of 3.1. Of the households in the County, 68.2% are single-family detached, 6.2% are single-family attached, 16.1% are multifamily, and 9.5% are mobile homes (SCAG 2019b).

Employment

In 2017, there were 762,114 jobs in the County, with employees earning an average salary of \$45,085. With a large population and a demand for jobs, only 46.9% of County residents commute to work within the County. Others commute outside of Riverside County to Los Angeles County (13.7%), San Bernardino County (13.9%), Orange County (12.7%), San Diego County (7%), and other destinations (5.5%) (SCAG 2019b). Additionally, the County has the highest P-E ratio in the SCAG region at 3.7 in 2010 and 3.1 in 2015.

Local Conditions

Population

As of January 2019, the City had a population of approximately 118,125, and is the fourth largest city in the County (DOF 2019b). From 2000 to 2018, the City's population grew by a rate of 156.4%, which is much higher than the County's growth rate of 56.3% during this same time period. The City's population makes up 4.7% of the population of the County (SCAG 2019c).

According to the SCAG 2019 Local Profile of the City, the median household income in the City is \$80,373. As of 2018, the median age is 33.7 years old, and approximately 91.7% of residents age 25 and older graduated from high school, while 30% hold a bachelor's degree or higher. In 2018, the ethnic composition of the population of the City consisted of White (49.7%), Hispanic (28.7%), Asian (9%), Black (5.9%), Native American (0.3%), and other (6.4%) (SCAG 2019c).

Housing

There are 34,498 households in the City, and the average household size is 3.3 persons. As of 2018, the City has a homeownership rate of 66.5%. Between 2000 and 2018, the total number of households in the City increased by 140.9%, or 20,178 units. Of the households in the City, 74.2% are single-family detached, 3.4% are single-family attached, 17.8% are multifamily, and 4.6% are mobile homes (SCAG 2019c).

Employment

In 2017, there were 32,712 jobs in the City with an average salary of \$44,023. The majority of residents commute outside of the City for employment. Only 15.3% work at jobs in the City. The top places that residents commute to include the City of Temecula (15.1%), San Diego County (9.4%), Riverside County (4.1%), Los Angeles County (2.9%), City of Lake Elsinore (2.1%), City of Menifee (1.8%), City of Irvine (1.8%), City of Hemet (1.6%), and other locations (45.9%). As of 2017, education sector jobs make up the largest percentage (27.8%) of jobs in the City, followed by retail (15.9%) (SCAG 2019c).

4.11.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal programs, policies, or regulations related to housing that are applicable to the project.

State

Department of Housing and Community Development

State law requires that jurisdictions provide their fair share of regional housing needs. The California Department of Housing and Community Development is mandated to determine the statewide housing need. In cooperation with the California Department of Housing and Community Development, local governments and councils of governments are charged with making a determination of the existing and projected housing need as a share of the statewide housing need of their city or region. The housing construction need is determined for four broad household income categories: very low (households making less than 50% of median family income), low (50% to 80% of median family income), moderate (80% to 120% of median family income), and above moderate (more than 120% of median family income). The intent of the future needs allocation by income groups is to relieve the undue concentration of very low and low-income households in a single jurisdiction and to help allocate resources in a fair and equitable manner.

The "fair share" allocation process begins with the California Department of Finance's projection of statewide housing demand for an 8-year period, which is then apportioned by the California Department of Housing and Community Development among each of the state's official regions. The regions are represented by an agency typically termed a council of government. In the six-county Southern California region, which includes the City and other incorporated cities and unincorporated areas of the County, the agency responsible for assigning these fair share goals to each jurisdiction is SCAG. A local jurisdiction's fair share of regional housing need is the number of additional dwelling units that will need to be constructed during a given 8-year planning period.

SCAG estimates each jurisdiction's future housing need using the following four factors:

- 1. The number of units needed to accommodate forecasted household growth
- 2. The number of units needed to replace demolitions due to attrition in the housing stock (i.e., fire damage, obsolescence, redevelopment, and conversions to non-housing uses)
- 3. Maintenance of ideal vacancy rate for a well-functioning housing market
- 4. An adjustment to avoid an over-concentration of lower-income households in any one jurisdiction

The new construction need must be allocated to the four household income categories described above. The allocations are further adjusted to avoid over-concentration of lower income households in any one jurisdiction. The fair share allocation must also consider the existing "deficit" of housing resulting from lower income households that pay more than 30% of their incomes for housing costs. This is the threshold used by the U.S. Department of Housing and Urban Development to determine housing affordability (City of Murrieta 2013).

Regional

Southern California Association of Governments

SCAG is the agency responsible for developing and adopting regional housing, population, and employment growth forecasts for local governments within the SCAG region. To facilitate regional planning efforts, SCAG's planning area is further organized into 14 subregions. The City is located in the Western Riverside Council of Governments' subregion.

Current regional growth forecasts are included in SCAG's 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted April 2012. The forecasts included in SCAG's RTP/SCS are provided by the County Center for Demographic Research. SCAG's demographic data is developed to enable the proper planning of infrastructure and facilities to adequately meet the needs of the anticipated growth. Growth forecasts contained in the RTP/SCS for the County, the Western Riverside Council of Governments, and the City are used in this section in order to analyze population, housing, and employment forecasts.

Local

Murrieta General Plan 2035

The Housing Element of the Murrieta General Plan 2035 (General Plan) includes goals, policies, and programs to ensure that residents have decent, safe, sanitary, and affordable housing regardless of income. The following five goals have been established to guide the development, redevelopment, and preservation of a balanced inventory of housing to meet the needs of present and future residents of the City (City of Murrieta 2013):

- 1. Increased opportunities for affordable housing
- 2. Conservation of the City's existing housing stock
- 3. Removal of constraints to the constructions of affordable housing
- 4. Equal housing opportunity
- 5. Identification of adequate site to achieve a variety and diversity of housing

Riverside County General Plan

The Housing Element of the County General Plan identifies and establishes the County's policies with respect to meeting the needs of existing and future residents in the County. It establishes policies that will guide County decision making and sets forth an action plan to implement its housing goals. The commitments are in furtherance of the statewide housing goal of "early attainment of decent housing and a suitable living environment for every California family," as well as a reflection of the concerns unique to the County (County of Riverside 2017).

4.11.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to population and housing would occur if the project would:

- 1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- 2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

As determined in the Initial Study (Appendix A), the project would not displace substantial numbers of existing housing or people because the site is vacant. Thus, the project would have no impact on Threshold 2. Threshold 1 is the only threshold addressed in this Project Environmental Impact Report.

4.11.4 Impacts Analysis

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

Less-than-Significant Impact. The project includes the construction of a new retail development, which includes a bank, tire store, retail pad, auto-related services/retail store, three-tenant food and retail pad, fast-food restaurant, and circulation improvements, on approximately 6.65 acres in the City as shown on the proposed site plan in Chapter 3, Project Description (Figure 3-2, Site Plan). The project would be constructed in one phase, with grading and construction expected to take place between February 2021 and May 2021. It is anticipated that the development will employ approximately 20 full-time employees. Conservatively, this analysis assumes that all 20 employees are new employees that would move to the City.

The population has increased throughout the region, and the population of the City in particular has grown drastically, with a growth rate of 156.4% from 2000 to 2018 (SCAG 2019c). According to the California Department of Finance, from 2017 to 2018 the City's population increased by 1% (DOF 2019b). The City is expected to see continued population growth. SCAG is responsible for determining growth forecasts in the region and local jurisdictions. The SCAG growth forecasts in Table 4.11-2 were primarily derived using a bottom-up local input process to ascertain the projected growth for population, households, and employment from 2012 to 2040 in the City.

Projected Growth Areas	2012	2040
Population	105,600	129,800
Households	32,800	43,500
Employment	23,200	45,100

Table 4.11-2. City of Murrieta Projected Population, Household, and Employment Growth

Source: SCAG 2016.

The project could bring 20 full-time employees to the City. The expected number of full-time employees is only 0.09% of SCAG's overall growth projection of 21,900 employees being added to the labor force between 2012 and 2040, and 0.08% of the expected population growth during the same time period. Thus, the employee growth that can be attributed to the project is consistent with SCAG's overall growth projections and would not result in a substantial increase.

California's housing element law requires that each city and county develop local housing programs designed to meet its fair share of existing and future housing needs for all income groups. This effort is coordinated by the jurisdiction's Council of Governments (the City is in the Western Riverside Council of Governments) when preparing the state-mandated Housing Element of its General Plan. This fair share allocation concept seeks to ensure that each jurisdiction accepts responsibility for the housing needs of, not only its resident population, but for all households that might reasonably be expected to reside within the jurisdiction, particularly lower income households. This assumes the availability of a variety and choice of housing accommodations appropriate to their needs, as well as certain mobility among households within the regional market. Table 4.11-3 indicates the 2014 to 2021 fair share housing needs for the City.

Table 4.11-3. City of Murrieta's Fair Share Housing Needs 2014–2021, in Number of Dwelling Units

Very Low	Low	Moderate	Above Moderate	Total Adjusted Need
395	262	289	627	1,573

Source: City of Murrieta 2013.

Thus, the City's fair share allocation for the planning period is 1,573 units. This indicates that between the years 2014 and 2021, the City needs to add at least 1,573 housing units, consisting of a variety of housing types to accommodate very low, low, moderate, and above moderate income households to keep pace with housing demand. In addition, a list of approved and proposed projects in the area indicates that there are 942 single- and multifamily dwelling units currently planned for development in the area (see Table 3-2, Related Projects). According to the City's General Plan Housing Element, the City has historically been successful in meeting its fair share housing allocation and achieving the other goals set forth in the General Plan Housing Element. The potential need to provide housing for the 20 full-time employees of the project is well within the City's housing stock.

While the project is growth inducing (in that an expected 20 new full-time employees would result from the project), its growth is not considered a substantial or significant population growth. The expected number of employees make up a small percentage of the overall expected growth in the City. Further, the project itself would aid in improving the jobs-housing imbalance that currently exists in the City. As previously discussed in Section 4.11.1, Existing Conditions, 84.7% of residents commute outside of the City for work. This is due to a lack of employment opportunities and an abundance of housing, which creates a jobs-housing imbalance. By bringing more jobs into the City, the project would help to improve the population-employment ratio and reduce this imbalance. Thus, the project would not directly or indirectly result in substantial population growth in the City. Impacts would be less than significant, and no mitigation would be required.
4.11.5 Mitigation Measures

The project would not result in significant impacts, and no mitigation measures are necessary.

4.11.6 Level of Significance after Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.11.7 Cumulative Impacts

Cumulative impacts to population and housing would result from a combination of projects that induce population growth. Individually, the project would result in minimal population growth in the City; however, as previously discussed, this growth projection is consistent with SCAG's growth projections for the City. A list of approved and proposed projects in the project area was provided by the Cities of Murrieta and Menifee, as shown in Table 3-2. The list consists of a combination of retail, residential, and one industrial project. The most comparable to the project include Vineyard Shopping Center and Mitchell Crossing, which consist of smaller retail facilities and are anticipated to employ fewer full-time employees than the larger retail facilities such as Walmart and Costco Wholesale.

Of the proposed or approved projects in the area, six consist of residential development. These projects would have the most obvious impact on population growth in the area. As previously discussed, these projects are expected to produce 942 dwelling units. Compared to the growth forecast of 10,700 additional units by 2040, this addition is nominal. When considering the project in combination with these projects, it is unlikely that substantial population growth would occur.

The region is expected to see continued population growth, and the cumulative projects consist of many retail development projects that would also aid in reducing the jobs-housing imbalance. The cumulative growth induced by the project combined with other approved and proposed projects is unlikely to result in substantial population growth beyond that which is already planned for in the City and region. In combination with the project, cumulative impacts to population growth or housing availability would not be considerable.

4.11.8 References Cited

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4.12 Public Services

This section describes the existing public services conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). Information presented in this section was gathered from a variety of publicly available sources, including the Murrieta General Plan 2035 (General Plan), the City of Murrieta Parks and Recreation Master Plan (Parks Master Plan), and the County of Riverside General Plan.

4.12.1 Existing Conditions

Fire Protection and Emergency Medical Services

The Murrieta Fire and Rescue (MFR) is the primary provider of fire suppression and fire prevention services in the City of Murrieta (City), while the Sphere of Influence is served by the Riverside County Fire Department. Additionally, the MFR participates in the California Master Mutual Aid Agreement, as well as an Automatic Aid Agreement with the California Department of Forestry and Fire (CAL FIRE) and the Riverside County Fire Department to expedite service delivery to the eastern portion of the City. The MFR may also provide service to the Sphere of Influence by means of this Automatic Aid Agreement. In the event of a major fire, outside resources can be brought into the City as needed (City of Murrieta 2011a).

The MFR currently has five fire stations and is the primary provider of fire suppression, pre-hospital emergency medical care, disaster preparedness coordination, hazard mitigation, and fire prevention services in the City (City of Murrieta 2011a). Table 4.12-1 identifies each of the fire stations and their locations.

Station	Location	Approximate Distance to Project Site (miles)
Fire Department Administration	41825 Juniper Street	4.7
Fire Station No.1	41825 Juniper Street	4.7
Fire Station No.2	40060 California Oaks Road	2.6
Fire Station No.3	39985 Whitewood Road	4.5
Fire Station No.4	28155 Baxter Road	1.8
Fire Station No.5	38391 Vineyard Parkway	5.5

Table 4.12-1. Murrieta Fire and Rescue Stations and Locations

Source: City of Murrieta 2011a.

The project site is located within the primary response area for Fire Station No. 4, located approximately 1.8 miles (driving distance) north of the project site. Fire Station No. 4 would be the first responder for all fire-related incidents at the project site. Fire Station No. 4 is staffed with one captain, one engineer, one firefighter/paramedic, and one battalion chief. Fire Station No. 4 apparatus includes one Type I engine, one cross-staffed Type III engine, and one battalion chief vehicle (Jensen, pers. comm. 2019a).

In the event of a large fire, the four other fire stations in the City would respond as well, assuming resources are available and not responding to other emergencies. The City participates in the California Master Mutual Aid Agreement, as well as an Automatic Aid Agreement with CAL FIRE and Riverside County Fire Department, which would allow these outside jurisdictions to provide aid and expedite service in an emergency event.

Initial response in the event of a large fire in a residential area would include four engines, a ladder, and the battalion chief; and in a commercial area response would include four engines, a ladder, the battalion chief, and two Medic-Patrol Type VI apparatus staffed with two personnel each. It should be noted that simultaneous calls for service and for medical emergencies would impact the resources sent on any call type and could deplete the response force for any additional calls for service in the City (Jensen, pers. comm. 2019a).

The MFR response time goals are based off the National Fire Protection Association 1710 goal of 6 minutes and 20 seconds, and the Community Risk Assessment/Standards of Cover goal of 10 minutes. The MFR evaluates response times based on the 90th percentile performance mark by considering the overall performance of each station. Fire Station No. 4 currently has a 90th percentile performance response time of 9 minutes 54 seconds. Based on the 90th percentile performance measurement, Fire Station No. 4 met the National Fire Protection Association response time goal 56.1% of the time, and the Community Risk Assessment/Standards of Cover response time goal 90.3% of the time (Jensen, pers. comm. 2019a). Stations in the outlying regions, such as the eastern portion of the City along Winchester Road and in the area between Winchester and Interstate 215 north of Clinton Keith Road, experience longer average response times. A sixth fire station in this area is contemplated to help achieve the target response time (City of Murrieta 2011a). The addition of a sixth station could alleviate some calls to Fire Station No. 4 and result in improved response times for this station.

Emergency Services

Emergency 911 services are provided by the Murrieta Police Department (MPD) as a joint police/fire dispatch center, dispatching Murrieta fire, police, paramedics, and ambulance services. Emergency services are also interconnected with the fire apparatus via systems that allow for backup forms of communication between the dispatch center, vehicles, and personnel.

Firefighters are cross-trained to provide services for medical emergencies. All fire suppression personnel are firefighter paramedics and those that are not paramedics are National Registry Emergency Medical Technicians. Firefighters, engineers, and captains are trained as paramedics. The MFR's engine companies are equipped for paramedic service.

The MFR maintains an Urban Search and Rescue team of professional firefighters/paramedics that are certified by the Federal Emergency Management Agency. They serve the larger community as part of California Task Force 6, supervised by the Riverside City Fire Department and composed of representatives from several Inland Empire fire agencies. The Urban Search and Rescue team members regularly train with other agencies for rapid deployment to local, regional, and national incidents (City of Murrieta 2011a).

Police Protection

The MPD provides police protection services within the City. Besides responding to incidents involving safety and law enforcement, the MPD actively promotes safety through education programs, community partnerships, and the provision of advice on incorporating Crime Prevention through Environmental Design (CPTED) principles into development projects (City of Murrieta 2011a).

The built environment can present opportunities for crimes to occur, or it can discourage crimes. For instance, design can influence the amount of surveillance provided by residents or passersby, and whether there is an easy escape for someone who commits a crime. Design of public spaces and the relationships between buildings and public space are important considerations in CPTED. CPTED is a set of approaches to the design of the built environment that seek to minimize opportunities for crime.

Led by Chief Sean Hadden, the MPD currently has 93 sworn officers and is anticipated to grow to 103 sworn officers over the next calendar year (Hadden, pers. comm. 2019). The Operations Division consists of the patrol unit, K-9 unit, off-road motorcycle enforcement unit, SWAT unit, armored rescue vehicle, traffic bureau, parole/probation compliance team, homeless outreach team, and field police service technicians (City of Murrieta 2020a). The Support Division consists of the detective bureau, special enforcement team, juvenile investigations team, school resource officers, dispatch records, and code enforcement (City of Murrieta 2020b).

Call priorities are assigned from greatest urgency (Priority 1) through non-emergency calls (Priority 3). Priority 1 calls are emergency calls that require immediate response in order to preserve life and/or apprehend a felony suspect. Priority 2 calls require immediate response where the need to apprehend suspects is great or apprehension would be imminent. Priority 3 calls require police response in a timely manner. Table 4.12-2 identifies the target response time for each call type and the average response times experienced by the MPD.

Table 4.12-2	. Murrieta	Police	Department	Target	Response	Times
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Call Type	Target Response Time	Average Response Time
Priority 1	6 minutes	6 minutes
Priority 2	15 minutes	13 minutes
Priority 3	30 minutes	30 minutes

Source: Hadden, pers. comm. 2019.

As individual projects are proposed within the City, the MPD service levels and staffing requirements would be evaluated to determine if additional staffing and/or facilities would be required.

Schools

The City is served by four public school districts. The primary school district is the Murrieta Valley School District, with the exception of residents in the areas east of I-215 and north of Clinton Keith Road, which are served by the Menifee Union School District, Perris Union High School District, and Hemet Unified School District. The project site is located in the northern portion of the Murrieta Valley Unified School District boundary (Exhibit 5.19-1 in City of Murrieta 2011a). Table 4.12-3 provides the enrollment capacity and current enrollment at each of the public school districts that serve the City.

Table 4.12-3. City of Murrieta School Districts and Enrollment

School Name	School Address	Capacity	Total Enrollment (2018–2019)	Enrollment as Percent of Capacity
Murrieta Valley School Distri	ct			
Alta Murrieta Elementary School	39475 Whitewood Rd.	1,200	876	73%
Antelope Hills Elementary	36105 Murrieta Oaks Ave.	1,000	821	82%
Avaxat Elementary School	24300 Las Brisas Rd.	1,125	676	60%
Cole Canyon Elementary School	23750 Via Alisol	1,200	1,087	90%
Daniel L. Buchanan Elementary School	40121 Torrey Pines Rd.	1,450	942	64%
Vineyard III Retail Development Pro	ject			10773
October 2020 4 12-5				4,12-3

School Name	School Address	Capacity	Total Enrollment (2018-2019)	Enrollment as Percent of Capacity		
E. Hale Curran Elementary School	40855 Chaco Canyon Rd.	1,125	584	51%		
Lisa J. Mails Elementary	35185 Briggs Rd.	975	1005	103%		
Monte Vista Elementary School	37420 Via Mira Mosa	1,325	895	65%		
Murrieta Elementary School	24725 Adams Ave.	1,025	839	81%		
Rail Ranch Elementary School	25030 Via Santee	925	674	72%		
Tovashal Elementary School	23801 Saint Raphael	900	790	87%		
Dorothy McElhinney Middle School	35125 Briggs Rd.	1,701	1,454	85%		
Shivela Middle School	24515 Lincoln Ave.	1,674	1,414	84%		
Thompson Middle School	24040 Hayes Ave.	1,620	1,697	104%		
Warm Springs Middle School	39245 Calle de Fortuna	1,809	918	50%		
Murrieta Mesa High School	24801 Monroe	2,214	2,466	111%		
Murrieta Valley High School	42200 Nighthawk Way	3,429	2,255	65%		
Vista Murrieta High School	28251 Clinton Keith Rd.	3,564	3,554	99%		
Murrieta Canyon Academy	24150 Hayes Ave.	Data Unavailable	287	_		
Menifee Union School District Serving Murrieta and Sphere of Influence						
Oak Meadows Elementary School	nentary 28600 Poinsettia St.		884	85%		
Bell Mountain Middle School	28525 La Piedra Rd., Menifee	1,546	1,204	77%		
Perris Union High School Dist	trict Serving Murrieta and S	phere of Influer	ice			
Paloma Valley High School	31375 Bradley Rd., Menifee	2,500	3,146	125%		
Hemet Unified School District Serving Murrieta and Sphere of Influence						
Winchester Elementary School	28751 Winchester Rd., Winchester	650	479	73%		
Rancho Viejo Middle School	985 North Cawston Ave., Hemet	1,400	1,291	73%		
Tahquitz High School	4425 West Commonwealth, Hemet	2,400	1,671	69%		

Sources: City of Murrieta 2011a; Ed-Data 2018-2019.

The California State Allocation Board Office of Public School Construction (State Allocation Board) regulates enrollment projections for the state's public school districts. The State Allocation Board defines a number of options to generate student enrollment projections and provides an approved methodology for determining the elementary, middle, and high school students that would be generated by new residential units. This methodology is based on historical student generation rates of new residential units constructed within the school district during the previous 5 years.

When multiple districts with multiple yield factors are analyzed, a region's projected enrollment may be calculated using the statewide average yield factors as provided by the State Allocation Board. These estimates are a result of statewide sampling that incorporates widely varying dwelling unit types, households, and other demographic characteristics across the state. This methodology is appropriate for considering any residential units that may be constructed as a result of increased employment at any of the retail and commercial businesses, as those employees may require varied dwelling unit types ranging from affordable housing to high-end single-family units.

Parks

In June 2009, the City adopted an updated Parks Master Plan (Parks Master Plan). The purpose of the Parks Master Plan is to provide a realistic guide for the creative, orderly development and management of recreation facilities and programs for the City, now and into the future. The Parks Master Plan is an implementation tool that provides strategies for addressing the goals and policies of the City's General Plan.

The Parks Master Plan lists six categories of City parks: City-Wide Parks, Community Parks, Neighborhood Parks, Neighborhood Play Areas, Special Use Parks, and Nature Parks. Private recreation facilities in Murrieta include three homeowners' association parks and recreation facilities in the gated communities of Bear Creek and Warm Springs, including a members-only golf course in Bear Creek. The Parks Master Plan does not count private facilities toward the City's goals for parks and recreation (City of Murrieta 2009). The City has approximately 1,350 acres of trails, open space, streetscape, slope and parkland, including 50 parks and a number of natural areas (City of Murrieta 2020c).

Within approximately 6 miles of the City boundaries, Murrieta residents have access to open space in the Santa Ana Mountains and three aquatic recreational areas: Lake Elsinore, a natural freshwater lake in the City of Lake Elsinore; and Lake Skinner and Diamond Valley Lake, reservoirs operated by the Metropolitan Water District of Southern California. All three water bodies and the surrounding areas are open for a variety of recreational uses including fishing, boating, camping, horseback riding, and hiking.

The Parks Master Plan calls out trails as a key issue in the recreation facility recommendations, specifically, the development of an effective, connected, multi-use trail system for walking, jogging, hiking, biking, and equestrian uses. The Parks Master Plan recommends that increased trail connectivity and opportunities should be emphasized, focusing on corridors and links to adjacent natural open space, parks, schools, and commercial areas (City of Murrieta 2009). Adjacent to the City are numerous planned Riverside County (County) trails with access to hiking areas such as the Santa Rosa Plateau Ecological Reserve. There are also trails in the nearby Cleveland National Forest (City of Murrieta 2011a).

4.12.2 Relevant Plans, Policies, and Ordinances

Federal

There are no applicable federal plans, policies, or ordinances.

State

California Code of Regulations Title 24 California Building Standards Code

California Building Code

Part 2 of Title 24 of the California Code of Regulations, the California Building Code (CBC), contains minimum standards for construction and the built environment intended to safeguard public health, safety, and general

welfare. The CBC incorporates by adoption the International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC.

Typical requirements of the CBC include provisions for building materials, accessibility and means of ingress/egress, energy efficiency, fire protection, and lifesaving systems. The project would be required to comply with the standards set forth in the CBC in order to maintain a safe commercial environment and one that does not hinder the ability of local public services, such as fire and police, to serve the project site and surrounding area.

California Fire Code

Part 9 of Title 24, the California Fire Code (CFC), contains fire safety-related building standards. The CFC incorporates by adoption the International Fire Code with necessary California amendments. The CFC establishes minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. The CFC includes general provisions for fire protection features and systems, ingress/egress, and building materials, as well as provisions specific to certain uses and building types.

The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission. The 2016 CFC took effect on January 1, 2017. The City of Murrieta adopted the 2016 CFC with local amendments in August 2018.

State Responsibility Area Fire Safe Regulations

The basic wildland fire protection standards of the California Board of Forestry are found in CAL FIRE's Fire Safe Regulations. They have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in State Responsibility Areas. Title 14, Natural Resources, regulates that the future design and construction of structures, subdivisions, and developments in a State Responsibility Area shall provide basic emergency access and perimeter wildfire protection measures.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, including regulations for building standards (also set forth in the CBC), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose size requirements; restrictions on the use of compressed air; requirements for access roads; and guidelines for testing, maintaining, and using all firefighting and emergency medical equipment.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever local resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities, but can give and receive help whenever needed.

Local

Murrieta 2035 General Plan

The City General Plan Safety Element includes goals and policies that address fire protection services and identify the need to provide adequate resources to respond to health and fire emergencies with the City, including adequate staffing of fire response personnel and trained medical technicians. The following goals and policies from the Safety Element may be applicable to the proposed project (City of Murrieta 2011b):

Goal SAF-5 Damage from fire hazards is minimized through preventive measures, education, and fire protection services. Policy SAF-5.3 Continue to coordinate fire protection services with Riverside County, CAL FIRE, and all other agencies and districts with fire protection powers. Policy SAF-5.4 Ensure that outlying areas in the City can be served by fire communication systems as new development occurs. Goal SAF-6 The Murrieta Fire and Rescue provides a timely response to fire and other emergencies. Policy SAF-6.1 Respond to 90 percent of medical and fire incident calls within 6¹/₂ minutes from dispatch. Policy SAF-6.2 Ensure that each Paramedic Assessment Engine Company provides the capacity to treat moderate or greater injuries, transport patients to hospitals, advance a hose line for fire control, and to effect a rescue of trapped occupants. Policy SAF-6.3 Provide adequate levels of fire suppression personnel for all areas. Policy SAF-6.5 Locate, staff, and equip Fire Department units to provide service to all areas within the City within a maximum of 12 minutes total response time for 90 percent of all mass casualty incidents or major structure fires. Policy SAF-6.8 Maintain and implement a Fire Department Strategic Plan to address staffing and facility needs, service goals, deployment strategies, and other department goals. Policy SAF-6.9 Strive to achieve an Insurance Services Office (ISO) Public Protection Classification of 3 in areas with fire hydrants and 9 in areas that are not connected to an existing water district supply system.

- **Goal SAF-9** High-quality and timely police services are provided to all residents and businesses in Murrieta.
 - **Policy SAF-9.1** Seek to reach and maintain police officer and civilian support employee staffing levels to effectively and efficiently address the public safety needs, measured through established response times, crime statistics, crime clearance rates, and community quality of life issues.
 - **Policy SAF-9.2** Endeavor to respond within six minutes for all Priority 1 calls, 15 minutes for Priority 2 calls, and 35 minutes for Priority 3 calls.
 - **Policy SAF-9.3** Consider options for locating field stations throughout the City to improve response times for Priority 1 calls and foster relationships with local residents.
 - Policy SAF-9.4 Maintain and implement a Police Department Strategic Plan to address staffing and facility needs, service goals, deployment strategies, and other department goals.
- **Goal SAF-10** The Police Department coordinates with neighborhoods and community members to enhance safety and continually improve services.
 - **Policy SAF-10.1** Collaborate with school districts, businesses, nonprofit organizations, and community members, including neighborhood watch groups, to maintain safety throughout the City.
- **Goal SAF-11** Design of the physical environment promotes community safety and reduces opportunities for criminal activity.
 - **Policy SAF-11.1** Involve the Police Department in the development review process to address safety concerns, access issues, and potential traffic conflicts, and identify opportunities to apply CPTED principles.
 - **Policy SAF-11.3** Coordinate efforts between the Police Department and Planning Department to develop guidelines for implementation of (Crime Prevention Through Environmental Design) CPTED principles.
 - **Policy SAF-11.4** Continue to ensure that each development or neighborhood in the City has adequate emergency ingress and egress.

City of Murrieta Municipal Code

The City Municipal Code contains many policies governing the safety and security of the City, as carried out by the public services provided by police and fire departments. Title 8 establishes regulations related to health and safety. Title 9 establishes regulations related to public peace, morals, and welfare. Title 15 and Title 16 contain regulations related to buildings, construction, and development, including fire code standards (City of Murrieta 2019a).

City of Murrieta Development Impact Fee

New developments are subject to the payment of a Development Impact Fee (DIF), which would help cover the cost of new or expanded public facilities. The DIF amount is determined through evaluation of the need for new public service facilities as it relates to the level of service demanded by new development (City of Murrieta 2019b). The current fee schedule for the City indicates the fee for commercial development is \$11.49 per square foot, with allocations distributed to law enforcement, fire protection, road infrastructure, storm drainage, and general facilities. Commercial development is not charged a fee for parks, libraries, or the community center.

County of Riverside General Plan

The County General Plan Safety Element provides a framework by which safety considerations are introduced into the land use planning process, identifies hazards mitigation strategies and policies for new and existing development, and strengthens hazard preparedness in the County. The following policy from the Safety Element pertaining to code enforcement and development regulations may be applicable to the project (County of Riverside 2019):

Policy S 1.4 Implement the County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan.

The following policies from the County General Plan Multipurpose Open Space Element pertain to open space, parks, and recreation, and may be applicable to the project (County of Riverside 2015):

Policy OS 20.2 Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas. Policy OS 20.3 Discourage the absorption of dedicated park lands by non-recreational uses, public or private. Where absorption is unavoidable, replace park lands that are absorbed by other uses with similar or improved facilities and programs. Policy OS 20.4 Provide for the needs of all people in the system of the County recreation sites and facilities, regardless of their socioeconomic status, ethnicity, physical capabilities or age. Policy OS 20.5 Require that development of recreation facilities occurs concurrent with other development in an area. Policy OS 20.6 Require new development to provide implementation strategies for the

funding of both active and passive parks and recreational sites.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to public services would occur if the project would:

1. 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.
- b. Police protection.
- c. Schools.
- d. Parks.
- e. Other public facilities.

4.12.4 Impacts Analysis

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

Fire protection?

Less-than-Significant Impact. The need for new or expanded public services (such as fire protection facilities) is typically associated with a population increase. The proposed project does not involve construction of new residential development, which is typically associated with a direct increase in population. As discussed in Section 4.11, Population and Housing, the project would employ a total of 20 full-time employees. Conservatively assuming that all new employees would move to the City, this number is consistent with the City and Southern California Association of Governments' growth projections for the City. Project employment could result in slight residential population growth within the MFR's jurisdiction; however, the project would not induce substantial unplanned population growth (see Section 4.11 of this EIR for details). Ultimately, the increase in on-site activity and slight population growth could result in increased calls for fire protection services to the project area.

As previously discussed, the City is currently served by five existing fire stations, the closest of which is Fire Station No. 4, located at 28155 Baxter Road, approximately 1.6 miles (driving distance) north of the project site. The annual emergency calls received by MFR as a whole, and specifically by Fire Station No. 4, from 2014 to 2018 are shown in Table 4.12-4.

Year	Call Volume		
Murrieta Fire and Rescue – All Stations			
2014	7,734		
2015	8,326		
2016	8,470		
2017	9,072		
2018	9,456		
Fire Station No. 4 Annual Call Volume			
2014	865		
2015	991		

Table 4.12-4. Annual Emergency Call Volume

Table 4.12-4.	Annual	Emergency	Call	Volume
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Year	Call Volume
2016	1,012
2017	1,224
2018	1,510

Source: Jensen, pers. comm. 2019b.

Total call volume, as documented by MFR, has increased annually as the City's population has also increased. Total annual calls for 2019 are anticipated to reach over 10,000 calls. Given that the potential population growth anticipated to result from implementation of the project would be well within the expected population and employment growth for the City and the region, it is not expected that the population increase resulting from the project would result in a significant increase in calls to MFR.

As previously discussed, Fire Station No. 4 currently has a measured 90th percentile performance response time of 9 minutes 54 seconds, meeting the National Fire Protection Association response time goal 56.1% of the time, and the Community Risk Assessment/Standards of Cover response time goal 90.3% of the time (Lantzer, pers. comm. 2019). In the event that Fire Station No. 4 could not meet the immediate needs of a call for services independently or does not have capability to address the full extent of a larger incident, the four other fire stations in the City, followed by CAL FIRE and/or the closest available fire stations in neighboring jurisdictions, could respond or provide support through the Mutual Aid Agreements with the City.

The project would result in an increase in the intensity of use on the project site, which could result in increased calls for service to the fire department. However, the project would be designed and constructed in accordance with all applicable provisions of the fire code, which would reduce the likelihood of fire ignition on the project site. Applicable provisions of the fire code include requirements for adequate fire flows, width of emergency access routes, turning radii, automatic sprinkler systems, fire alarms, and floor-to-sky height limits along emergency access routes. Further, per Section 15.24.290 of the Murrieta Municipal Code (as well as CFC Chapter 49 Section 4906 and 4907; California Public Resources Code, Section 4291; and California Government Code Section 51182), a 100-foot fuel modification zone (FMZ) is required around structures in fire hazard areas, to the extent possible (i.e., not beyond the property line).

The project would be subject to the payment of a DIF, which would be used for future facility improvements necessary to ensure that the development contributes its fair share of the cost of facilities and equipment determined to be necessary to adequately accommodate new development in the City. The DIF amount is determined through evaluation of the need for new public service facilities as it relates to the level of service demanded by new development, which varies in proportion to specific land uses. A portion of the DIF would be used exclusively toward fire protection services. According to the City's 2018–2019 fee schedule, the DIF for commercial development is \$11.49/square foot, with \$0.31/square foot specific to fire services (City of Murrieta 2019b). Additionally, the project would be consistent with or would not hinder implementation of the City General Plan goals and policies pertaining to fire protection services listed in Section 4.12.2, Relevant Plans, Policies, and Ordinances.

As discussed, the project site is located within the MFR's response area, and the department would provide service to the project site (Jensen, pers. comm. 2019a). As noted above, response times for Fire Station No. 4 are not meeting goals consistently. However, with the nearby services of Fire Station No. 4 and other fire stations in the City and neighboring jurisdictions, it is not anticipated that the project would result in need for a new or physically altered fire station. In addition, the project would implement fire safety measures consistent with the CFC into

building design, such as sprinklers, emergency access, and fire alarms. Moreover, the project would pay its fairshare of the City's DIF to cover costs associated with public services, including fire and police protection, and would also generate revenues to the City's General Fund (e.g., in the form of property taxes, sales revenue, or other.) that could be applied toward the provision of firefighting resources and related staffing, including capital improvements such as the construction of fire department facilities, as deemed appropriate. In any case, the need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate.¹ Payment of the DIF would ensure the project contributes its fair share towards future facility improvements, expansion, or construction. Therefore, the project would not result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts.

Police protection?

Less-than-Significant Impact. As with fire services, increases in activities, visitors, employees, and events at the project site as a result of the project could increase the frequency of emergency and non-emergency calls to the MPD from the project site, as compared with existing conditions. For example, the project would introduce a commercial retail component to the project site, which would create the potential for crimes such as theft and robbery. Increased calls to the MPD and/or increased need for MPD support at the project site would have the potential to increase the need for police services.

A need for new or expanded public services, such as police facilities, is typically associated with a population increase. The project does not include the construction of new homes. While the project would lead to increased employment on the site, it was determined that the project would not induce substantial unplanned population growth (see Section 4.11 of this EIR). Furthermore, the project would incorporate operational practices and CPTED design elements to increase on-site safety and to reduce the potential for crime to occur. During construction, the contractor would implement temporary security measures including security fencing, lighting, locked entry, and private security officers. During operation, practices to increase safety could include security lighting, alarms, and security cameras. Project design would also employ CPTED elements such as defensible design, lighting, and landscaping, as well as open fencing. These techniques would minimize spaces that are hidden from public view, which would help prevent loitering and crime. Building entries, parking areas, and walkways would be sufficiently lit, which would facilitate safe pedestrian movement. These design practices and operational practices would lessen the demand for police protection services at the project site by reducing the potential for crime to occur.

Police units are continuously mobile, and service calls are responded to by the nearest available mobile unit. As previously discussed, the MPD's average response times are currently at or better than the department's target response times. The City is expected to continue to experience population growth, and the MPD is anticipated to grow accordingly, with an increase of 10 additional sworn officers in 2019. Further, the police service ratio (number of officers per 1,000 residents) is anticipated to increase to 1 by December 2020, up from the current service ratio of 0.81 in January 2019 (Hadden, pers. comm. 2019). Therefore, it is not anticipated that the project would hinder the MPD from continuing to meet or exceed target response times and provide adequate service levels.

Additionally, the project would be consistent with or would not hinder implementation of the City General Plan goals and policies pertaining to police protection services listed in Section 4.12.2. As substantiated in this analysis, the project is not anticipated to adversely affect service ratios or response times for police services such that new or

¹ See City of Hayward v Board of Trustees of The California State University (2015) 242 CalApp.4th 833. "[T]he obligation to provide adequate fire and emergency medical services is the responsibility of the City. (Cal. Const., art. XIII, § 35, subd. (a)(2) ['The protection of the public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services'])."

expanded police facilities would be required. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, or the need for new or physically altered police facilities; impacts would be less than significant.

Schools?

Less-than-Significant Impact. The project includes development of the Vineyard III Retail Development Project. The project does not include a residential component, and therefore would not directly generate new student enrollment. The project would generate approximately 20 new full-time employment opportunities. As shown in Table 4.12-3, City of Murrieta School Districts and Enrollment, as of 2019 the majority of schools in each school district are currently operating at or under capacity, with the exception of the following four schools that are over capacity: Lisa J. Mails Elementary School, Thompson Middle School, Murrieta Mesa High School, and Paloma Valley High School. The schools operating over capacity are located within the Murrieta Valley Unified School District, with the exception of Paloma Valley High School, which is located in the Perris Union School District. The project site is located in the northern portion of the Murrieta Valley Unified School District boundary (Exhibit 5.19-1 in City of Murrieta 2011a). The area where the project site is located (north of Clinton Keith Road and east of I-215) is served by multiple school District, and Hemet Union School District (City of Murrieta 2011a). Each of the four school districts that service the City annually assess the need for new or expanded school facilities and take into consideration new development projects and approximate student generation.

Since the project area is served by multiple school districts, the region's projected enrollment may be calculated using the statewide average yield factors as provided by the State Allocation Board. This methodology is appropriate for considering any residential units that may be constructed as a result of increased employment at the project site. The statewide average student yield factor for unified school districts is 0.7 students per dwelling unit. Conservatively assuming all 20 new employees would relocate to the area and occupy 20 additional dwelling units, and using the statewide average student yield factor of 0.7 students per dwelling unit, it is anticipated that the project could generate up to approximately 14 new students (20 new employees \times 0.7 students per dwelling unit = 14 new students generated).

Per Senate Bill 50 (1998) and per the California Education Code (Title 1, Chapter 6, Section 17620), the governing board of any school district may charge a development fee on any new construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. As the project is located within the boundaries of Murrieta Valley Unified School District, the district charges \$0.61 per square foot of new commercial development (MVUSD 2019). The project would include construction and operation of approximately 32,120 square feet of new commercial development. Therefore, Murrieta Valley Unified School District may charge up to \$19,593.20 in developer school fees for project development. Therefore, with payment of the developer school fees, the project would offset any potential increase in school enrollment. Further, as discussed in Section 4.11, the analysis conservatively assumes that all 20 new employees would relocate to the Murrieta, which is within the City's and Southern California Association of Governments' growth projections for the City and region. Since the need for new or expanded schools based on future growth in the City would be adequately accounted for and all of the schools within the relevant school districts are currently operating at or below capacity (with the exception of four), it is not anticipated that the project would result in the need for new or physically altered school facilities. Further, the project would be required to pay school fees pursuant to Senate Bill 50, which would constitute full mitigation for any impacts should they occur. As such, impacts related to school facilities would be less than significant, and no mitigation is required.

Parks?

Less-than-Significant Impact. As discussed in Section 4.11, the project would not induce substantial population growth in the area, as it does not involve a housing component or use that would typically result in substantial population growth. The project would generate new employment opportunities, which could indirectly contribute to increased park usage. However, the anticipated employment is well within the employment growth forecast for the City.

As discussed in Section 4.13, Recreation, the project would not require the construction or expansion of recreational facilities beyond which the City is already planning. The existing parks closest to the project site include Antelope Hills Park, located 0.64 miles southwest of the project site, Los Alamos Hills Sports Park, located 0.9 miles south of the project site, and Oak Terrace Park, located approximately 1 mile southwest of the project site. These parks are not expected to experience a substantial increase in use as a result of the project. Park use is primarily generated by residential uses, as reflected in the City's fee schedule, which does not require a fee for park land facilities to be paid by new commercial, office, or industrial development; fees for parks are only required from new residential development (City of Murrieta 2019b). The project does not include any residential development and would not indirectly result in an unplanned increase in residential development. Further, the analysis in Section 4.11 conservatively assumes that all 20 employees would relocate to Murrieta, and the residential units they occupy would be required to pay into the City's DIF toward park facilities.

Therefore, it is unlikely that the project would result in the need for additional park space, and unlikely that it would increase the use of existing parks or recreational facilities. Therefore, impacts to park facilities and services would be less than significant.

Other public facilities?

Less-than-Significant Impact. The project would provide new employment opportunities, and thus could induce a slight population increase in the area, some of whom may use other public facilities. However, any increased use in public facilities by additional employees is expected to be minimal. As previously discussed, the anticipated slight population increase that could result from the project is well within the growth forecast for the City, and therefore the City is otherwise preparing for such growth. Further, the project would be subject to the City's DIF, which allocates the funds collected from new commercial development to law enforcement, fire protection, streets and bridges, traffic signals, storm drainage, and general public facilities. Therefore, with payment of the City's DIF, impacts to other public facilities would be less than significant.

4.12.5 Mitigation Measures

Impacts related to public services would be less than significant and no mitigation measures are necessary.

4.12.6 Level of Significance After Mitigation

Impacts related to public services would be less than significant and no mitigation measures are necessary.

4.12.7 Cumulative Impacts

As indicated above, the project would have a less-than-significant impact with respect to public services. However, a significant adverse cumulative impact related to public services could occur if the service demands of the

proposed project were to combine with those of related projects, triggering a need for new or physically altered public service facilities, the development of which could cause significant environmental impacts. A significant adverse cumulative impact could also occur if the proposed project were to make a considerable contribution to a previously existing deficit in public services in the City.

Fire and Police

As discussed in Section 4.12.1, Existing Conditions, the project site is served by the MFR and MPD for fire and police services, respectively. The project alone would not have a significant effect on fire or police protection services, and the project would not cause the need for new or physically altered government facilities in order to maintain acceptable levels of service related to fire and police protection. The 10 related projects located in the City (see Table 4.14-12, Trip Generation for Approved/Proposed Projects) would also be served by MFR and MPD in the project area. The three related projects located outside of the City (located in the City of Menifee) would be served by their respective fire and police departments. The City of Menifee would contract with the Riverside County Sheriff's Department for police services and the Riverside County Fire Department and CAL FIRE for fire services. Because multiple fire stations, police stations, and parks are located within and surrounding the City, a variety of City and County facilities would be available to serve the related projects. It is assumed that the related projects would incorporate security measures, such as nighttime lighting, and fire safety measures consistent with the CFC into their building design, such as sprinklers, emergency access, and fire alarms. Further, new development would also generate revenues (in the form of property taxes, sales tax revenue, etc.) that could be applied toward the provision of firefighting resources and related staffing, as deemed appropriate. Finally, the City General Plan Safety Element contemplates a future addition of a sixth fire station to serve the eastern portion of the City; however no plans are in place and no site has been secured for this purpose. Further analysis would therefore be speculative and beyond the scope of this document. As the project would have a less-than-significant impact with respect to police and fire services it would not make a cumulatively considerable contribution to any cumulative police or fire services impacts, and no mitigation is required.

Additionally, consistent with the *City of Hayward v. Board Trustees of California State University* (2015) 242 Cal.App.4th 833 ruling and the requirements stated in the California Constitution, Article XIII, Section 35(a)(2), the obligation to provide adequate fire protection and emergency medical services is the responsibility of the City. Through the City's regular budgeting efforts, MFR and MPD's resource needs, including staffing, equipment, trucks and engines, ambulances, other special apparatuses, and possibly station expansions or new station construction, would be identified and allocated according to the priorities at the time.

Parks, Schools, and Other Public Facilities

Cumulative impacts to schools would be offset by the payment of the developer school fee per Senate Bill 50 and per the California Education Code (Title 1, Chapter 6, Section 17620), which allows school districts to charge fees on new development within the district's boundaries. Further, increased use of parks and other public facilities, such as libraries, are generally attributed to residential development, as reflected in the City's fee schedule. As previously discussed, the project does not include residential uses. Cumulative projects in the City would be required to pay into the City's DIF program, which allocates funds to law enforcement, fire protection, streets and bridges, traffic signals, storm drainage, general facilities, park land facilities, the community center, and the public library. Further, six of the related projects include residential components, and therefore would contribute to parks, schools, libraries, and other public facilities through the DIF program. Therefore, through the payment of development impact fees, which is considered an appropriate means of mitigating impacts, cumulative project impacts to public services would be less than significant.

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4.13 Recreation

This section describes the existing recreation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vinevard III Retail Development Project (project). Information presented in this section was gathered from a variety of publicly available sources, including the Murrieta General Plan 2035 (General Plan), the City of Murrieta Parks and Recreation Master Plan (Parks Master Plan), and the County of Riverside General Plan.

Existing Conditions 4.13.1

The project site is an approximately 6.65-acre vacant lot in the City of Murrieta (City). There are no existing recreational opportunities on site. The project site is surrounded by commercial development, residential development, Vista Murrieta High School, and vacant land. Directly adjacent to the east of project site is vacant land that is separately proposed for development as a Costco Wholesale and retail shopping center. Additionally, the project site is bound by Interstate 215 freeway to the west, Clinton Keith Road to the south, and Antelope Road to the north and east.

Off-Site Recreational Opportunities

County of Riverside Recreational Facilities

There are a wide range of open space areas, parks, and recreational areas within Riverside County (County), including Joshua Tree National Park and major state parks such as Anza-Borrego, the Salton Sea State Recreation Area, and Chino Hills State Park. A variety of County parks serve residents and visitors, including in the desert, mountain, and Colorado River regions. Riverside County maintains 35 regional parks encompassing roughly 23,317 acres. Other local parks fall under the jurisdiction of the Riverside County Recreation and Park Districts and serve the following areas: Beaumont-Cherry Valley; Coachella Valley; Jurupa; and the Valley-wide area incorporating San Jacinto Valley, Winchester, Menifee Valley, and Anza Valley (County of Riverside 2015). There are no County or other regional parks within the City of Murrieta.

City of Murrieta Recreational Facilities

The City encompasses approximately 1,350 acres of trails, open space, streetscape, slope, and park land. This includes 489.68 acres of parkland within 50 parks, as well as additional recreational facilities such as the Senior Center, Youth Center, Community Center, Community Pool, Skate Park, and Equestrian Park (City of Murrieta 2011a, 2019a). There are six types of parks in the City, including City-Wide Parks, Community Parks, Neighborhood Parks, Special Use Parks, and Nature Parks (described in Table 4.13-1) (City of Murrieta 2009). The City has also established a Joint Use Agreement with 10 schools in the Murrieta Valley Unified School District, giving the City and the school district first priority to use each other's facilities. Some of the schools function as parks when school is not in session, and others are used by sports organizations (City of Murrieta 2009).

Table 4.13-1. Parks and Recreation Facility Types

Facility Type	Typical Size	Typical Features
City-Wide Parks	More than 50 acres	City-Wide Parks serve larger community populations and provide recreation facilities or open space in significant numbers or sizes. Los Alamos Hills Sports Park is currently the only City-Wide Park.

Table 4.13-1. Parks and Recreation Facility Types

Facility Type	Typical Size	Typical Features
Community Parks	Up to 50 acres	Community Parks can provide a broad range of both passive and active recreational opportunities, but their primary purpose is to provide active recreational opportunities for use by a larger segment of the population than neighborhood parks. Community Parks are generally considered to serve several neighborhoods within a 2-mile radius. If a Community Park is located within a residential area, it can also serve a neighborhood park function, and, therefore, is included in the service area analysis for Neighborhood Parks. Recreation centers are important features in some Community Parks. These are building facilities that may contain features such as gymnasiums, multipurpose rooms, classrooms, and offices for recreation staff. Other facilities often found at Community Parks might include sports fields, sports courts, amphitheaters, and group picnic areas. Large special events such as concerts and festivals might also be held in larger Community Parks. There are seven Community Parks in Murrieta: Alta Murrieta Sports Park, California Oaks Sports Park, Copper Canyon Park, Glen Arbor Park, Hunt Park, Mira Mesa Park, and Pond Park.
Neighborhood Parks	Up to 15 acres	Neighborhood Parks are intended to serve City residents who live close by, but they also contribute to the overall park system available to the entire community. Ideally, everyone in the City would live within convenient walking distance (typically 0.5 miles) of a Neighborhood Park. This is defined as the "service radius" or "service area" of a Neighborhood Park. Neighborhood Parks should address daily recreation needs of the surrounding neighborhood. Features of neighborhood parks might include playgrounds, multipurpose open turf areas, practice sports fields, picnic tables and/or picnic shelters, walking paths, attractive landscaping, and recreation features such as basketball courts. A size of 5 acres or more is considered appropriate for a Neighborhood Park to serve a neighborhood of approximately 5,000 within its service area.
Neighborhood Play Areas	Up to 5 acres	Neighborhood Play Areas are intended to serve City residents who live close by, but they also contribute to the overall park system available to the entire community. Ideally, everyone in the City would live within convenient walking distance (typically 0.5 miles) of a Neighborhood Park or Neighborhood Play Area. Neighborhood Play Areas should address daily recreation needs of the surrounding neighborhood. Features of neighborhood parks might include playgrounds, vista points, multipurpose open turf areas, picnic tables and/or picnic shelters, walking paths, attractive landscaping, and recreation features such as basketball courts.
Special Use Facilities	No size specification	Special Use Facilities generally possess a unique character or function focused on a single type of activity. An equestrian facility, disc golf course, off-road cycling course, museum, vista points, or community buildings (without an associated park) might be considered Special Use Facilities. Special Use Facilities are not usually included in the service area analysis for Neighborhood Parks. The 1999 Parks and Recreation Master Plan included joint-use school sites under the Special Use Facility category.

Facility Type	Typical Size	Typical Features
Nature Parks	No size specification	Nature Parks are mostly undeveloped, and the undeveloped portions contain vegetation, topography, or features that are important to retain in their natural state. Physical public access to natural areas via trails should be encouraged where feasible and appropriate. For the purposes of defining this park type, "natural" refers to vegetation and land forms indigenous to the area; turf, irrigated manufactured slopes, detention basins, weedy disturbed areas, and areas landscaped with ornamental vegetation would be considered part of the developed portion of a Nature Park. Nature Park is a new category of park facility that was previously included under Special Use Facilities.

Table 4.13-1. Parks and Recreation Facility Types

Source: City of Murrieta 2009.

The City has adopted a standard of 5 acres of local parkland per 1,000 residents. According to the City's Parks Master Plan, based on the City's standard of 5 acres of parkland per 1,000 residents. In June 2009, the City had a deficit of 34 acres and an anticipated deficit of 133 acres at build out of the City if no new parkland is added and the City continues to grow as anticipated. Further, based on resident surveys, the Parks Master Plan estimated a need for an additional 240.3 acres at build out of the City to accommodate the City's identified needs for recreational facilities such as sports fields and courts (City of Murrieta 2009). However, the Parks Master Plan indicates that these are not significant shortages (City of Murrieta 2009). Further, since the adoption of the Parks Master Plan in 2009, additional parks have been added, are in the design phase, or constructed (City of Murrieta 2011a). Nonetheless, the Environmental Impact Report for the City's General Plan identifies this deficit as a significant and unavoidable impact to recreational resources (City of Murrieta 2011b). The City charges a Parkland Facilities Development Impact Fee for residential units, as allowed by the Quimby Act (California Government Code Section 66477), which is used for park and recreational facility development and improvements. Thus, it is anticipated that more parkland and recreational facility areas would become available within the City, and as residential developments are built and constructed, projects would be subject to all provisions of the Quimby Act to set aside land or pay in-lieu fees to provide park and recreation facilities (City of Murrieta 2011b).

Recreational Facilities Near the Project Site

The nearest parks and recreational facilities to the project site are Antelope Hills Park, Oak Terrace Park, and Los Alamos Hills Sports Park (City of Murrieta 2019b).

Antelope Hills Park

Antelope Hills Park is a 1.5-acre park located at 27385 Carlton Oaks Street. The park is approximately 0.64 miles southwest of the project site. Existing recreational facilities and amenities at the park include an amphitheater, barbeques, open grass areas, picnic tables, shelter/shade areas, mature trees, a playground, water fountains, and a basketball court (City of Murrieta 2019b).

<u>Oak Terrace Park</u>

Oak Terrace Park is a 7.5-acre park located at 27301 Sweetspire Terrace. The park is approximately 1 mile southwest of the project site. Existing recreational facilities and amenities include open grass areas, playground, picnic tables, and mature trees (City of Murrieta 2019b).

Los Alamos Hills Sports Park

Los Alamos Hills Sports Park is Murrieta's only City-Wide Park, with 47 acres of parkland. Located at 37000 Ruth Ellen Way, it is 0.9 miles south of the project site. Existing recreational facilities and park amenities include barbeques, athletic fields (baseball, football, soccer), bike/walking paths, picnic tables, open grass areas, a parking lot, restrooms, shelter/shade areas, multipurpose trails, water fountains, a concession building, and a playground (City of Murrieta 2019b). Future plans for the park call for a community center and may include a gymnasium and outdoor facilities including a swimming pool and tennis courts (City of Murrieta 2011a).

4.13.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans, policies, or ordinances related to recreation that are applicable to the project.

State

There are no state plans, policies, or ordinances related to recreation that are applicable to the project.

Local

Murrieta 2035 General Plan

The Recreation and Open Space Element of the City's General Plan identifies the following Community Priorities related to parkland (City of Murrieta 2011a):

- Protect the natural beauty of the mountains, hills, and waterways
- Provide abundant parks and facilities for recreational activities, and cultural amenities
- Provide ample activities for all ages of youth, and jobs for teens

The following policies from the Recreation and Open Space Element of the City's General Plan may be applicable to the project (City of Murrieta 2011a):

Policy ROS-1.1	Maintain a minimum standard of 5 acres of local parkland per 1,000 population.
Policy ROS-8.4	When reviewing new development or redevelopment projects, refer to the Trails Plan to determine whether right-of-way is needed for trails on the project site.
Policy ROS-9.2	Encourage new and existing commercial, office, and industrial development to provide outdoor green spaces that may be used by employees.
Policy ROS-9.3	Encourage new development and redevelopment projects to incorporate gardens and green spaces with various cultural influences throughout the community to bridge cultures and provide education opportunities.

- **Policy ROS-9.4** Encourage green spaces planted with a diverse plant palette in order to promote natural variety, ecosystem services, and enhance the well-being of community residents.
- **Policy ROS-9.5** Review and modify as necessary, open space requirements for different types of development projects.

The City of Murrieta Parks and Recreation Master Plan

The City's Parks Master Plan guides the planning for parks, recreation facilities, and programs in the City. The Parks Master Plan provides information about the park and recreation facilities in the City, including a needs assessments and gap analysis, recommendations for meeting current and future park needs, and a financial implementation plan. The Parks Master Plan is drawn from the objectives and policies within the City's General Plan (City of Murrieta 2009).

County of Riverside General Plan

The County of Riverside General Plan Multipurpose Open Space Element addresses providing recreational opportunities for the County's residents, as well as protecting and preserving natural resources, agriculture, and open space areas; managing mineral resources; and preserving and enhancing cultural resources (County of Riverside 2015). The following policies related to open space, parks, and recreation may be applicable to the proposed project.

The following policies pertain to open space (County of Riverside 2015):

Policy OS 20.1	Preserve and maintain open space that protects County environmental and other nonrenewable resources and maximizes public health and safety in areas where significant environmental hazards and resources exist.
Policy OS 20.2	Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas.

The following policies pertain to parks and recreation (County of Riverside 2015):

- **Policy OS 20.3** Discourage the absorption of dedicated park lands by non-recreational uses, public or private. Where absorption is unavoidable, replace park lands that are absorbed by other uses with similar or improved facilities and programs.
- **Policy OS 20.4** Provide for the needs of all people in the system of the County recreation sites and facilities, regardless of their socioeconomic status, ethnicity, physical capabilities or age.
- **Policy OS 20.5** Require that development of recreation facilities occurs concurrent with other development in an area.
- **Policy OS 20.6** Require new development to provide implementation strategies for the funding of both active and passive parks and recreational sites.

4.13.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to recreation are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to recreation would occur if the project would:

- 1. 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.
- 2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.13.4 Impacts Analysis

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

Less-than-Significant Impact. It is anticipated that the project would employ a maximum of 20 full-time employees. This analysis conservatively assumes that all 20 employees would be new employees who would move to the City and use existing parks and recreational facilities. It is more likely that some of the future employees are already residents of the City and are already using City parks and recreational facilities. However, even conservatively assuming that all 20 are new residents to the City, the analysis in Section 4.11, Population and Housing, of this Environmental Impact Report found that the project would not induce substantial unplanned population growth, and that growth as a result of the project is consistent with Southern California Association of Governments' overall growth projections for the City as well as the City's General Plan, which identifies the site for commercial development. As such, the City is planning for the addition of parks and recreation facilities to keep up with the demand of an increasing population by assessing Quimby Act fees on new residential development. If new employees elect to reside in the City, available and proposed housing stock is subject to the payment of development impact fees, including local park development fees (i.e., Quimby Act fees). These fees are used by the City for the acquisition and construction of new parklands, or maintenance and improvement of existing facilities. The General Plan Recreation and Open Space Element identifies park site opportunities in Exhibit 9-3. There are no park site opportunities identified within or immediately adjacent to the project site (City of Murrieta 2011a).

The Parks Master Plan quantifies 467.24 acres of parkland in 48 parks in the City, which includes all parks with the exception of golf courses and joint-use facilities. The analysis in the Parks Master Plan identified a deficit of 133 acres or parkland at build out of the City if no new parks are added and the City continues to grow as anticipated (City of Murrieta 2009). Table 9-1 of the City's General Plan Recreation and Open Space Element reflects several new parks and recreational facilities that have been added since the 2009 Parks Master Plan, for a total of 489.68 acres of parkland in 50 parks (City of Murrieta 2011a). Despite the increase in park acreage since the adoption of the Parks Master Plan in 2009, the City has not met its desired parkland ratio of 5 acres per 1,000 residents. As such, the City is in need of additional parkland regardless of the project. Additionally, according to the City Parks and Recreation Department, existing parkland is supplemented by facilities that are not included in this analysis. The City Parks and Recreation Department identifies 1,350 acres of trails, open space, streetscape, slope, and parkland in the City (City of Murrieta 2019a).

As discussed in Section 4.11 of this Environmental Impact Report, the expected number of full-time employees is only 0.09% of Southern California Association of Governments' overall growth projection of 21,900 employees being added to the labor force between 2012 and 2040, and 0.08% of the expected population growth during the same time period. Conservatively assuming that all 20 employees would be new residents in the City, the growth that can be attributed to the project represents a small percentage of the overall expected growth and is well within Southern California Association of Governments' growth projections for the City.

Although the City is currently experiencing a deficit in the desired parkland ratio, this does not indicate that existing facilities have reached capacity for use, and does not suggest that increased use associated with projected project employees would result in substantial physical deterioration of the facilities. There are three parks within 1 mile of the project site that would be available for use, and the City's Parkland Facilities Development Impact Fee, as allowed by the Quimby Act (California Government Code Section 66477), applies specifically to residential developments. If all 20 new employees move to the City, the Parkland Facilities Development Impact Fee paid by the residential development in which they live would contribute to park and recreational facility development and improvements.

The City's current and ongoing plans for additional parkland would offset any increased use of parkland and recreational facilities as a result of the project. As such, the anticipated population increase associated with the project and use of parks and recreational facilities by project employees would not result in substantial physical deterioration of any one park or recreational facility in the City. Therefore, the project would not contribute to substantial deterioration of existing facilities, and impacts to recreational facilities would be less than significant.

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

Less-than-Significant Impact. The project would not include recreational facilities. As discussed in Section 4.13.1, Existing Conditions, the parks nearest to the project site are Antelope Hills Park, Oak Terrace Park, and Los Alamos Hills Sports Park (City of Murrieta 2019b). Los Alamos Hills Sports Park is Murrieta's largest park (45 acres), with plans for expansion in two additional phases of development. This expansion is planned in accordance with the City's goals to increase parkland acreage, regardless of the project. As previously discussed, the project would not include recreational facilities or require the construction or expansion of recreational facilities; therefore, impacts would be less than significant.

4.13.5 Mitigation Measures

The project would result in less-than-significant impacts to recreation, and no mitigation measures are necessary.

4.13.6 Level of Significance After Mitigation

The project would result in less-than-significant impacts to recreation, and no mitigation measures are necessary.

4.13.7 Cumulative Impacts

Cumulative impacts to recreation would result from a combination of projects that induce a substantial and detrimental increased use of parks and recreational facilities. Individually, the project would result in population growth in the City; however, as previously discussed, this growth projection is consistent with Southern California Association of Governments' growth projections for the City and the City's General Plan, and would not result in

substantial physical deterioration of existing facilities. A list of approved and proposed projects in the project area was provided by the City of Murrieta and the City of Menifee, as shown in Table 3-2, Related Projects. The list consists of a combination of retail, residential, and one light industrial project.

Of the proposed or approved projects in the area, six consist of residential development. These projects would have the most obvious growth-inducing impacts, but would also be subject to the City's Parkland Facilities Development Impact Fee for residential units, as allowed by the Quimby Act (California Government Code Section 66477), which is used for park and recreational facility improvements. These contributions would aid the City in creating or improving recreational facilities.

As discussed in Section 4.11 of this Environmental Impact Report, the cumulative growth induced by these projects would be within the growth projections for the City. The cumulative growth induced by the project combined with other approved and proposed projects is unlikely to result in substantial impacts to recreational facilities or require the construction or expansion of recreational facilities beyond what the City and region are already planning for. In combination with related projects, cumulative impacts to recreation would not be considerable.

4.13.8 References Cited

- City of Murrieta. 2009. Parks and Recreation Master Plan. June 2009. https://www.murrietaca.gov/ civicax/filebank/blobdload.aspx?blobid=3301.
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4.14 Transportation

This section describes the existing transportation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). Traffic impacts associated with the project were derived from the project-specific Traffic Impact Analysis (TIA) prepared by Trames Solutions Inc. and provided as Appendix I of this Environmental Impact Report (EIR).

4.14.1 Existing Conditions

The City of Murrieta (City) is located in southwestern Riverside County (County) and is composed of 26,852 acres (41.96 square miles), 21,511 acres (33.61 square miles) of which are located within the City limits and 5,341 acres (8.34 square miles) of which are located within the City's Sphere Of Influence. Surrounding cities include the City of Menifee to the north; the City of Temecula to the south and east; the City of Wildomar to the west; and unincorporated Riverside County to the north, south, and east. The San Diego County border is south of Temecula, and Orange County lies to the west of the Santa Ana Mountains. Regional access to the City is provided by Interstate (I) 15 and I-215.

Much of the transportation system in the City—such as the local, collector, and arterial street system, and most of the traffic signals—is owned and controlled by the City. However, some of the facilities are owned and controlled by other agencies, including the California Department of Transportation (Caltrans) and the County, or shared with other jurisdictions, such as the Cities of Temecula and Wildomar. Similarly, while much of the funding for the transportation system is local, significant funds for improvement and maintenance also come from other sources, including state, federal, and County-level funding sources. Finally, transportation planning and programming is the responsibility of a number of agencies, including the City, the County, the Riverside County Transportation Commission (RCTC), and the Southern California Association of Governments (SCAG). At the state level, Caltrans is the agency responsible for funding and maintaining the State Highway System and Interstate Highway System.

The regional planning agencies of the RCTC and SCAG are responsible for regional transportation planning, traffic forecasting, developing regional plans, and distributing regional transportation funds. At the County level, the County operates some County facilities and also administers Measure A, the local county half-cent sales tax for transportation. Several transportation plans and project lists are prepared by the various agencies, including the Regional Transportation Plan (RTP) by SCAG, with input from other agencies, the State Transportation Improvement Program (STIP), and Regional Transportation Improvement Program (RTIP). The Western Riverside Council of Governments (WRCOG) developed and administers the Transportation Uniform Mitigation Fee (TUMF) program (City of Murrieta 2011a).

Project Setting

The 6.65-acre project site is located in the northern portion of the City. Specifically, the project site is located on a vacant lot, north of Clinton Keith Road and east of the I-215. The City's General Plan Land Use Map designates the project site as Commercial (C) (City of Murrieta 2011a). The City's Zoning Map shows the site as being zoned Regional Commercial (RC) (City of Murrieta 2017). Land uses adjacent to the site include vacant land to the north, residential development to the south, vacant land to the east, and the I-215 to the west. The vacant land to the east of the project site is proposed for commercial development. The project does not propose any changes to existing zoning. Primary access to the project site would be provided through Clinton Keith Road and Antelope Road. Because the project site is currently vacant, it is not generating trips.

Surrounding Roadway Facilities

I-215

I-215 is a north–south interstate highway that provides regional access to the City of Menifee and connects to I-15 to the south. Interchanges along I-215 near the project site are provided at Clinton Keith Road (just south of the site) and Scott Road (approximately 3 miles north of the site). In the study area, I-215 provides three travel lanes in each direction.

I-15

I-15 is a north–south interstate highway that provides regional access to the Cities of Corona and Temecula. Interchanges along I-15 near the project site are provided at Clinton Keith Road and the interchange with I-215. In the study area, I-15 provides three travel lanes in each direction.

Clinton Keith Road

Clinton Keith Road is an east–west roadway providing primary access to the project site. This roadway is classified as an arterial to the west of the project site, with six lanes separated by a median in some areas, and an urban arterial to the east, with six lanes separated by a median. On July 27, 2018, an extension of Clinton Keith Road was completed. This six-lane roadway connects Clinton Keith Road from Whitewood Road to Leon Road.

Whitewood Road

Whitewood Road is a four-lane major north-south roadway located east of the project site. Whitewood Road serves several residential neighborhoods to the north and south of Clinton Keith Road, and an extension of Whitewood Road from Baxter Road to Keller Road has recently been completed.

Antelope Road

Antelope Road is a north-south local roadway without access to Clinton Keith Road. It is a two-lane roadway without sidewalks. The portion of Antelope Road between Clinton Keith Road and the northern boundary of the project site was vacated when the Clinton Keith Road Interchange was reconstructed in 2012 and just north of the site, Antelope Road is a cul-de-sac.

Warm Springs Parkway

Warm Springs Parkway is a planned north-south roadway, providing direct access to the adjacent area (proposed Costco/Vineyard II Retail Development Project site), to the east of the project site. The roadway would be completed to the northern edge of the adjacent property (Costco/Vineyard II Retail Development Project) boundary. The proposed alignment of the Warm Springs Parkway will be constructed as a four-leg intersection at Clinton Keith Road, directly across from the existing High School West (Stadium) Driveway.

Alternative Transportation Facilities

Transit Service

Public transit service in and around the City is provided by the Riverside Transit Agency. The Riverside Transit Agency currently offers five fixed bus routes in the City. Of these, Riverside Transit Route 61 provides service on Clinton Keith Road through a bus stop at the intersection of Clinton Keith Road and the main entrance to the Vista Murrieta High School. This bus line operates from Sunday to Saturday and provides connections to Menifee and Temecula. During the weekday morning, headways are approximately 30 minutes in the northbound direction and 60 minutes

in the southbound direction. During the weekday evening, headways are approximately 60 to 70 minutes in both directions. On the weekend, headways are approximately 85 minutes. Route 23 also offers service to the project site. Normal operation of Route 23 does not include direct access to the project site; however, an alternate route has a stop at Vista Murrieta High School and operates once daily at 2:45 p.m. when school is in session.

Bicycle and Pedestrian Facilities

In the immediate vicinity of the project site, pedestrian facilities include sidewalks and crosswalks. Roadways near the project site that currently have sidewalks include Whitewood Road and portions of Clinton Keith Road. No sidewalks are provided west of the project site over I-215 along the north edge of the bridge over the freeway. Crosswalks are provided across all side streets along Clinton Keith Road. Crosswalks are limited crossing Clinton Keith Road and are only provided at the Vista Murrieta High School entrance and Whitewood Road.

Class II bike lanes are provided along Clinton Keith Road from Copper Craft Drive to Whitewood Road and on Whitewood Road south of Clinton Keith Road within the study area. The Murrieta General Plan 2035 (General Plan) Circulation Element (City of Murrieta 2011b) identifies the need for complete streets that promote bicycle and pedestrian connectivity and safety. Under existing conditions, the City's circulation system aims to provide connections between neighborhoods and commercial corridors, providing an enhanced network of sidewalks and bicycle lanes and trails that improve accessibility and encourage people to opt for alternative modes of transportation.

Existing Traffic

Existing AM and PM peak-hour traffic volumes for the study intersections were obtained through manual turningmovement counts in November/December 2017 and May 2018. The counts were conducted on a typical weekday during the evening (4 p.m. to 6 p.m.) peak period and on a typical Saturday during the midday peak period (12 p.m. to 2 p.m.). Intersection peak-hour volumes were used to provide a conservative analysis.

Figure 4.14-1, Study Intersections, shows the selected study intersections in the project's study area. The study intersections were identified through the City scoping process, and are as follows:

- 1. McElwain Road and Clinton Keith Road
- 2. I-215 Southbound Ramps and Clinton Keith Road
- 3. I-215 Northbound Ramps and Clinton Keith Road
- 4. Creighton Avenue and Clinton Keith Road
- 5. Whitewood Road and Clinton Keith Road
- 6. Vista Murrieta HS W. Driveway and Clinton Keith Road (Future)
- 7. Bronco Way and Clinton Keith Road
- 8. Antelope Road and Baxter Road

In addition to these intersections, the following roadway segments were analyzed:

- 1. Clinton Keith Road, west of Creighton Avenue
- 2. Clinton Keith Road, east of Creighton Avenue

Intersections

Table 4.14-1 summarizes the existing delay and level of service (LOS) calculations for the key study intersections based on current street geometrics and traffic controls.

			Intersection A	Approach Lanes	S ²		Delay ³ (se	cs.)		LOS ³			
ID	Intersection	Traffic Control ¹	Northbound	Southbound	Eastbound	Westbound L T R	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	
1	McElwain Rd. & Clinton Keith Rd.	TS	110	210	231	1 3 1>	26.7	32.8	25.6	С	С	С	
2	I-215 SB Ramps & Clinton Keith Rd.	TS	000	012	031	0 3 1>>	18.7	26.5	13.3	В	С	В	
3	I-215 NB Ramps & Clinton Keith Rd.	TS	101	000	0 3 1>>	0 3 1>>	32.7	16.6	16.2	С	В	В	
4	Creighton Ave. & Clinton Keith Rd.	TS	101	000	10 3 1	130	11.1	7.3	5.4	В	A	A	
5	Whitewood Rd. & Clinton Keith Rd.	TS	110	120	211	110	31.5	33.1	28.5	С	С	С	
6	Vista Murrieta HS W. Dwy. & Clinton Keith Rd.	CSS	001	000	030	030	18.5	14.8	0.0	С	В	A	
7	Bronco Wy. & Clinton Keith Rd.	TS	201	000	1U 3 d	130	22.4	17.2	5.8	C	В	A	
8	Antelope Rd. & Baxter Rd.	TS	011	110	000	101	26.0	26.8	-	С	С	—	

Table 4.14-1. Intersection Analysis for Existing Conditions

Source: Appendix I.

Notes: LOS = level of service; MD = midday; I = Interstate; SB = southbound; NB = northbound; HS = high school.

1 TS = traffic signal; CSS = cross street stop.

When a right turn is designated, the lane can either be striped or unstriped. To function as a right-turn lane there must be sufficient width for right-turning vehicles to travel 2 outside the through lanes.

L = left; T = through; R = right; 1! = shared left-through-right lane; 0.5 = shared lane; d = defacto right-turn lane; > = right-turn overlap; >> = free right-turn lane.

Delay and LOS calculated using the following analysis software: Synchro Software. 3

Vineyard III Retail Development Project

As indicated in Table 4.14-1, all study intersections are currently operating at a satisfactory LOS (LOS D or better) during AM and PM peak hours with existing geometry and traffic controls.

Queuing Analysis

Existing queues at study intersections were evaluated to demonstrate the available queue storage capacities. Available queue storage and 95th percentile queue lengths for turning lanes at each study intersection are shown in Table 4.14-2. As shown in the table, there is sufficient storage capacity at the study intersections. In the instances where the 95th percentile queue is anticipated to exceed the available storage length, the excess queue length can be accommodated with the transition lane.

		Turning		95th Percentile Queue Length Per Lane (feet) ¹						
ID	Intersection	Lane	Storage Length Provided ² (feet)	Weekday AM	Weekday PM	Saturday MD				
1	McElwain Road & Clinton Keith Rd.	EBL EBR WBL WBR NBL SBL	200 100 200 160 50 250	134 0 12 25 17 162	218 ³ 0 49 55 40 205	146 0 47 37 27 209				
2	I-215 SB Ramps & Clinton Keith Rd.	EBR WBR SBR	400 150 >1000	34 1 136	35 0 223	34 0 93				
3	I-215 NB Ramps & Clinton Keith Rd.	NBL NBR	960 960	138 346	329 215	269 119				
4	Creighton Ave. & Clinton Keith Rd.	EBU EBR WBL WBR NBL	240 200 230 150 200	16 10 47 0 129	21 18 51 0 86	21 11 19 0 70				
5	Whitewood Rd. & Clinton Keith Rd.	EBL NBL SBL	250 310 100	133 249 12	258 ³ 325 ³ 12	187 170 97				
7	Bronco Wy. & Clinton Keith Rd.	EBU WBL NBL NBR	200 315 355 355	199 260 157 11	35 183 57 31	6 55 24 10				
8	Antelope Road & Baxter Rd.	WBL WBR NBR SBL	520 520 50 150	55 40 19 174 ³	59 42 8 71	_ _ _ _				

TUDIC TITT Z. QUCUING ANALYSIS CUMMENT IN EXISTING COMUNICITIES

Source: Appendix I.

Notes: MD = midday; EBL = eastbound left; EBR = eastbound right; WBL = westbound left; WBR = westbound right; NBL = northbound left; SBL – southbound left; I = Interstate; SB = southbound; SBR = southbound right; NB = northbound; NBR = northbound right; EBU = eastbound U-turn.

¹ Queue length calculated using Synchro 8.

² Existing pocket length storage (for turning movements) or link distance (for through movements).

³ 95th percentile queue is anticipated to exceed available storage length. However, the excess queue length can be accommodated within the transition lane.

Roadway Segments Analysis

An assessment of average daily traffic (ADT) was conducted for the two roadway segments listed below for existing conditions:

- 1. Clinton Keith Road, West of Creighton Avenue
- 2. Clinton Keith Road, East of Creighton Avenue

Roadway segment analysis has been evaluated based on the Link Volume Capacities/Level of Service for the City of Murrieta Roadways. Roadway segment analysis has been assessed based on average daily traffic (ADT) volumes. As indicated in Table 4.14-3, both roadway segments operate at acceptable levels of service (at or better than LOS D capacity thresholds) with existing geometry.

		General		Roadway Capacity LOS Crite (Max. Tw ADT)	y v and eria² vo-Way	Existing Conditions ⁴						
Roadway	Segments	Plan Roadway	Through Travel Lanes ¹	S	S	Weekday	Saturday					
		Classification		υĽ	ШĽ	ADT	V/C³	LOS	ADT	V/C3	LOS	
Clinton Keith Rd.	West of Creighton Ave.	Urban Arterial	6	43,100	53,900	25,264	0.47	A	20,276	0.38	A	
	East of Creighton Ave.	Urban Arterial	6	43,100	53,900	25,264	0.47	A	20,276	0.38	A	

Source: Appendix I.

Notes: LOS = level of service; ADT = average daily traffic.

1 = Existing number of through lanes; $\underline{1}$ = Improvement.

² Source: City of Murrieta Daily Roadway Capacity Values.

³ V/C = ADT/LOS "E" Roadway Capacity.

⁴ Source: For the purpose of this analysis, ADT counts from Kittelson & Associates Inc. 2020.

Freeway Ramp and Basic Segment Analysis

An assessment of LOS was conducted for the following freeway ramps for existing conditions:

- Northbound: Clinton Keith Road off-ramp
- Northbound: Clinton Keith Rd. loop on-ramp
- Northbound: Clinton Keith Slip on-ramp
- Southbound: Clinton Keith Rd. off-ramp
- Southbound: Clinton Keith Road loop on-ramp
- Southbound: Clinton Keith Slip on-ramp

Additionally, the following freeway segments were analyzed:

- I-215 Southbound: North of Clinton Keith Road
- I-215 Southbound: South of Clinton Keith Road
- I-215 Northbound: South of Clinton Keith Road
- I-215 Northbound: North of Clinton Keith Road

The existing freeway ramp and freeway segment analysis results are summarized in Tables 4.14-4 and 4.14-5. As indicated below, the existing freeway ramps and basic freeway segments operate at an acceptable LOS (LOS D or better) during peak AM and PM hours.

			No. of Lanes on	Ramp Volumes			Densi	ty²		LOS ³		
		No. of Lanes on		Weekday		Saturday	Weekday		Saturday	Weekday		Saturday
Freeway	Ramp Location	Ramp ¹	Freeway1	АМ	PM	MD	АМ	PM	MD	АМ	PM	MD
l-215 Southbound	Clinton Keith Rd. Off-Ramp	1	3	739	898	674	31.6	27.3	29.7	D	С	D
	Clinton Keith Rd. Loop On- Ramp	1	3	313	217	260	25.0	18.8	23.2	С	В	С
	Clinton Keith Rd. Slip On- Ramp	1	3	473	431	424	27.6	21.1	25.4	С	С	С
l-215 Northbound	Clinton Keith Rd. Off-Ramp	1	3	680	771	677	20.9	30.2	27.1	С	D	С
	Clinton Keith Rd. Loop On- Ramp	1	3	753	732	512	17.2	25.5	21.2	В	С	С
	Clinton Keith Rd. Slip On- Ramp	1	3	145	55	110	16.7	24.2	21.1	В	С	С

Source: Appendix I.

Notes: LOS = level of service; MD = midday; I = Interstate.

¹ Existing number of lanes.

² Density measured by passenger cars per lane (pc/mi/ln).

³ Density and LOS calculated using the following analysis software: HCS2010, Version 6.65.

Table 4.14-5. Basic Freeway Segment Analysis for Existing Conditions

			Freeway	s	Density		LOS ²					
		No. of Lanes on	Weekda	у	Saturday	Weekday		Saturday	/ Weekday		Saturday	
Freeway	Ramp Location	Freeway ¹	AM	PM	MD	AM	PM	MD	AM	PM	MD	
l-215 Southbound	North of Clinton Keith	3	4,491	3,693	4,269	25.5	19.5	22.9	С	С	С	
	Rd.											

Table 4.14-5. Basic Freeway Segment Analysis for Existing Conditions

	Ramp Location	No. of Lanes on Freeway ¹	Freeway	s	Density		LOS ²					
			Weekday		Saturday	Weekday		Saturday	Weekday		Saturday	
Freeway			AM	PM	MD	AM	PM	MD	AM	PM	MD	
	South of Clinton Keith Rd.	3	4,538	3,443	4,279	25.8	18.1	23.0	С	С	С	
I-215 Northbound	South of Clinton Keith Rd.	3	2,493	4,245	3,665	13.3	22.9	19.4	В	С	С	
	North of Clinton Keith Rd.	3	2,711	4,261	3,610	14.5	23.0	19.1	B	C	C	

Source: Appendix I.

Notes:

LOS = level of service; I = Interstate.

¹ Density measured by passenger cars per lane (pc/mi/ln).

² Density and LOS calculated using the following analysis software: HCS2010, Version 6.65.

4.14.2 Relevant Plans, Policies, and Ordinances

Federal

There are no applicable federal regulations related to traffic that would apply to the project.

State

California Department of Transportation

As a general rule, Caltrans "endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities" (Caltrans 2002); however, Caltrans does not require that LOS D be maintained and acknowledges that this LOS goal may not always be feasible. Instead, Caltrans recommends that the lead agency consult with them to determine the appropriate target LOS for a particular state highway facility.

California State Senate Bill 375

California State Senate Bill (SB) 375 became law effective January 1, 2009, as implementing legislation of Assembly Bill 32, which requires the state to reduce greenhouse gas emissions across all industry sectors back to 1990 levels by the year 2020. Both laws are administered and enforced through the California Air Resources Board.

Given that the transportation sector is the largest contributor to greenhouse gas pollution throughout California, SB 375 targets reduction of greenhouse gas emissions specific to cars and light trucks. The law requires each of the state's 18 metropolitan planning organizations to develop a Sustainable Communities Strategy, which would include specific strategies for improving land use and transportation efficiency. SCAG is the metropolitan planning organization for six counties (Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial) and includes 184 cities. The primary strategy for reducing greenhouse gas emissions includes the identification and development
of higher density mixed-use projects around public transportation system stations. Other supported strategies relate to the integration of intelligent transportation systems to improve circulation on freeways and arterials.

Every Sustainable Communities Strategy to be developed under SB 375 is required to be integrated into each metropolitan planning organization's RTP, encouraging local jurisdictions to comply. Transportation improvement projects not listed in the RTP become ineligible to receive funding from some state and federal programs (City of Murrieta 2011a).

State Transportation Improvement Program

STIP is a multiyear capital improvement program for transportation projects on and off the State Highway System, funded with revenues from the Transportation Investment Fund and other funding sources. STIP programming generally occurs every 2 years. The programming cycle begins with the release of a proposed fund estimate in July of odd-numbered years, followed by California Transportation Commission adoption of the fund estimate in August (odd years). The fund estimate serves to identify the amount of new funds available for the programming of transportation projects. Once the fund estimate is adopted, Caltrans and the regional planning agencies prepare transportation improvement plans for submittal to the California Transportation Commission by December 15 (odd years). Caltrans prepares the Interregional Transportation Improvement Program, and regional agencies prepare the RTIPs. Public hearings are held in January (even years) in both Northern and Southern California. The STIP is adopted by the California Transportation Planning Agency to nominate projects for inclusion in the STIP. Once projects are programmed, agencies may begin the project implementation process. Regional Transportation Agencies, such as the RCTC, are allocated 75% of STIP funding for regional transportation projects in their Regional Improvement Program, and Caltrans is allocated 25% for interregional transportation projects in the Interregional Improvement Program (City of Murrieta 2011a).

Regional Transportation Plan

The RTP is developed, maintained, and updated by SCAG, Southern California's metropolitan planning organization. SCAG encompasses the six counties in Southern California including Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. On May 8, 2008, the 2008 Regional Transportation Plan: Making the Connections was adopted by the Regional Council of SCAG.

The RTP is divided into three sections. At the center is the RTIP (discussed above), which forms the foundation of the RTP project investment strategy and represents the first 6 years of already-committed funding. The RTP also contains an additional financially constrained set of transportation projects above and beyond the RTIP. Finally, the RTP contains an unconstrained, illustrative list of potential projects that the region would pursue given additional funding (SCAG 2008).

Senate Bill 743

On September 27, 2013, Governor Edmund G. "Jerry" Brown signed SB 743, which went into effect in January 2014, directed the Governor's Office of Planning and Research (OPR) to develop revisions to the California Environmental Quality Act (CEQA) Guidelines by July 1, 2014, to establish new criteria for determining the significance of transportation impacts and define alternative metrics for traffic LOS. This started a process that changes transportation impact analysis under CEQA. These changes include elimination of automobile delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California. Additionally, as part of SB 743, parking impacts for particular types of development projects in areas well served by transit are not considered significant impacts on the environment.

According to the legislative intent contained in SB 743, these changes to current practice were necessary to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

Commencing July 1, 2020, state law mandates that in determining the environmental impact of a proposed project with respect to transportation, lead agency must utilize methodologies that analyze vehicle miles traveled (VMT), rather than LOS or other measures of transportation impacts. Section 15064.3 of the CEQA Guidelines describes specific considerations for evaluating a project's transportation impacts and concludes that VMT is generally the most appropriate measure of transportation impacts. VMT is defined by the CEQA Guidelines Section 15064.3(a) as "the amount and distance of automobile travel attributable to a project" and may take into account "the effects of the project on transit and non-motorized travel." CEQA Guidelines Section 15064.3 also indicates that for development projects, "a project's effect on automobile delay shall not constitute a significant environmental impact."

The requirement to analyze VMT is prospective only and does not apply to environmental review documents released prior to July 1, 2020. Accordingly, this EIR continues to utilize the LOS methodology adopted by the lead agency based on the City's General Plan.

Local

Riverside County Measure A

Regional transportation in the City is overseen by the RCTC, the transportation planning agency responsible for regional planning in the County. As the County transportation authority, the RCTC administers Measures A, the voter-approved half-cent transportation sales tax adopted by County voters in 1976 and extended to the year 2039 by voters in 2002. Since its implementation, Measure A has provided a steady source of revenue for transportation improvements in the County, raising nearly \$1 billion from 1989 through 2009.

Western Riverside Council of Governments Transportation Uniform Mitigation Fee

The City is a member of WRCOG. WRCOG is a voluntary association that represents member local governments in order to provide cooperative planning, coordination, and technical assistance for issues of mutual concern that cross jurisdictional lines. WRCOG addresses issues of regional importance in the area of goods movement, rail crossings, and growth. WRCOG also developed and administers the TUMF program, which ensures that new development pays its fair share for the increased traffic that it creates. The TUMF program will provide significant additional funds from new development to make improvements to the regional system, complementing funds generated by Measure A, local transportation fee programs, and other potential funding sources. The establishment of this fee on new development creates a manner by which developers contribute their fair share to the regional transportation system. TUMF fees are allocated as follows (City of Murrieta 2011a):

- **Regional Transit Improvements** 2.6% of TUMF funds are allocated to the Riverside Transit Agency for regional transit improvements.
- **Regionally Significant Transportation Improvements** 48.7% of TUMF funds are allocated to the RCTC for programming improvements to arterials of regional significance.
- Zones The WRCOG area is split into five zones; the City is located in the Southwest TUMF Zone, along with unincorporated County area and the Cities of Temecula, Wildomar, Canyon Lake, and Lake Elsinore. 48.7% of TUMF funds are allocated to the five zones for improvements to the Regional System of Highways and Arterials. The amount of TUMF funds allocated to each zone is proportionate to the amount of TUMF revenue generated from each zone.

Riverside County Congestion Management Program

The passing of Proposition 111 in June 1990 established a process for each metropolitan county in California with an urbanized area of more than 50,000 population, including the County, to prepare a Congestion Management Plan (CMP). The CMP, which was prepared by the RCTC in consultation with the County and cities within the County, is an effort to more directly align land use, transportation, and air quality management efforts and to promote reasonable growth management programs that effectively use statewide transportation funds while ensuring that new development pays its fair share of needed transportation improvements. Additionally, the passing of Proposition 111 provided additional transportation funding through an increase in the state gas tax of \$0.09 per gallon.

Although implementation of the CMP was made voluntary by the passage of Assembly Bill 2419, the CMP requirement has been retained in all five urbanized counties within the SCAG region. In addition to their value as a transportation management tool, CMPs have been retained in these counties because of the Federal Congestion Management System requirement that applies to large urban areas that are not in attainment of federal air quality standards. These counties recognize that the CMP provides a mechanism through which locally implemented programs can fulfill most aspects of a regional requirement that would otherwise have to be addressed by the regional agency (SCAG).

The focus of the CMP is the development of an enhanced traffic monitoring system in which real-time traffic count data can be accessed by the RCTC to evaluate the condition of the congestion management system and meet other monitoring requirements at the state and federal levels. Per the CMP-adopted LOS standard of E, when a congestion management system segment falls to LOS F, a deficiency plan is required. Preparation of a deficiency plan is the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency are also required to coordinate with the development of the plan. The plan must contain mitigation measures, including transportation demand management strategies and transit alternatives, and a schedule of mitigating the deficiency. To ensure that the congestion management system is appropriately monitored to reduce the occurrence of CMP deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the congestion management system. CMP facilities within the City are I-15, I-215, and State Route 79.

County of Riverside General Plan

The County General Plan Circulation Element includes a range of objectives and policies that address various aspects of circulation, including but not limited to roadways, public transportation, trucking, and non-motorized facilities. The following policies from General Plan Circulation Element may be applicable to the project (Riverside County 2015):

- Policy C 1.4Utilize existing infrastructure and utilities to the maximum extent practicable
and provide for the logical, timely, and economically efficient extension of
infrastructure and services.
- **Policy C 1.7** Encourage and support the development of projects that facilitate and enhance the use of alternative modes of transportation, including pedestrianoriented retail and activity centers, dedicated bicycle lanes and paths, and mixed-use community centers.

- Policy C 1.8Ensure that all development applications comply with the California Complete
Streets Act of 2008 as set forth in California Government Code Sections
65040.2 and 65302.
- Policy C 2.2Require that new development prepare a traffic impact analysis as warranted by the
Riverside County Traffic Impact Analysis Preparation Guidelines or as approved by
the Director of Transportation. Apply level of service targets to new development per
the Riverside County Traffic Impact Analysis Preparation Guidelines to evaluate
traffic impacts and identify appropriate mitigation measures for new development.
- Policy C 2.3 Traffic studies prepared for development entitlements (tracts, public use permits, conditional use permits, etc.) shall identify project related traffic impacts and determine the significance of such impacts in compliance with CEQA [California Environmental Quality Act] and the Riverside County Congestion Management Program Requirements.
- Policy C 2.4 The direct project related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service targets.
- Policy C 2.5 The cumulative and indirect traffic impacts of development may be mitigated through the payment of various impact mitigation fees such as County of Riverside Development Impact Fees, Road and Bridge Benefit District Fees, and Transportation Uniform Mitigation Fees to the extent that these programs provide funding for the improvement of facilities impacted by development.
- **Policy C 3.2** Maintain the existing transportation network, while providing for future expansion and improvement based on travel demand, and the development of alternative travel modes.
- Policy C 3.4 Allow roundabouts or other innovative design solutions such as triple left turn lanes, continuous flow intersections, or other capacity improvements, when a thorough traffic impact assessment has been conducted demonstrating that such an intersection design alternative would manage traffic flow, and improve safety, if it is physically and economically feasible.
- **Policy C 3.6** Require private developers to be primarily responsible for the improvement of streets and highways that serve as access to developing commercial, industrial, and residential areas. These may include road construction or widening, installation of turning lanes and traffic signals, and the improvement of any drainage facility or other auxiliary facility necessary for the safe and efficient movement of traffic or the protection of road facilities.
- Policy C 3.7Design interior collector street systems for commercial and industrial
subdivisions to accommodate the movement of heavy trucks.

- Policy C 3.9 Design off-street loading facilities for all new commercial and industrial developments so that they do not face surrounding roadways or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted by the Transportation Department.
- Policy C 3.10 Require private and public land developments to provide all on-site auxiliary facility improvements necessary to mitigate any development-generated circulation impacts. A review of each proposed land development project shall be undertaken to identify project impacts to the circulation system and its auxiliary facilities. The Transportation Department may require developers and/or subdividers to provide traffic impact studies prepared by qualified professionals to identify the impacts of a development.
- Policy C 3.11 Generally locate commercial and industrial land uses so that they take driveway access from General Plan roadways with a classification of Secondary Highway or greater, consistent with design criteria limiting the number of such commercial access points and encouraging shared access. Exceptions to the requirement for access to a Secondary Highway or greater would be considered for isolated convenience commercial uses, such as standalone convenience stores or gas stations at an isolated off ramp in a remote area. Industrial park type developments may be provided individual parcel access via an internal network of Industrial Collector streets.
- **Policy C 3.13** Design street intersections, where appropriate, to assure the safe, efficient passage of through traffic and the negotiation of turning movements.
- Policy C 3.14Design curves and grades to permit safe movement of vehicular traffic at the
road's design speed. Design speed should be consistent with and complement
the character of the adjacent area.
- **Policy C 3.15** Provide adequate sight distances for safe vehicular movement at a road's design speed and at all intersections.
- **Policy C 3.16** Dedicate necessary rights-of-way as part of the land division and land use review processes.
- Policy C 3.24Provide a street network with quick and efficient routes for emergency
vehicles, meeting necessary street widths, turn-around radius, secondary
access, and other factors as determined by the Transportation Department in
consultation with the Fire Department and other emergency service providers.
- **Policy C 3.28** Reduce transportation noise through proper roadway design and coordination of truck and vehicle routing.
- Policy C 3.29 Include noise mitigation measures in the design of new roadway projects in the County of Riverside.

- Policy C 4.1 Provide facilities for the safe movement of pedestrians within developments, as specified in the Riverside County Ordinances Regulating the Division of Land of the County of Riverside.
- Policy C 4.2 Maximize visibility and access for pedestrians and encourage the removal of barriers (walls, easements, and fences) for safe and convenient movement of pedestrians. Special emphasis should be placed on the needs of disabled persons considering Americans with Disabilities Act (ADA) regulations.
- Policy C 4.6 Consult the Riverside County Transportation Department as part of the development review process regarding any development proposals where pedestrian facilities may be warranted. The County of Riverside may require both the dedication and improvement of the pedestrian facilities as a condition of development approval.
- Policy C 4.7 Make reasonable accommodation for safe pedestrian walkways that comply with the Americans with Disabilities Act (ADA) requirements within commercial, office, industrial, mixed use, residential, and recreational developments.
- Policy C 5.3 Require parking areas of all commercial and industrial land uses that abut residential areas to be buffered and shielded by adequate landscaping.
- Policy C 6.1 Provide dedicated and recorded public access to all parcels of land, except as provided for under the statutes of the State of California.
- Policy C 6.2 Require all-weather access to all new development.
- Policy C 6.3 Limit access points and intersections of streets and highways based upon the road's General Plan classification and function. Require that access points be located so that they comply with Riverside County's minimum intersection spacing standards. Under special circumstances the Transportation Department may consider exceptions to this requirement.
- Policy C 6.7 Require that the automobile and truck access of commercial and industrial land uses abutting residential parcels be located at the maximum practical distance from the nearest residential parcels to minimize noise impacts.
- Policy C 8.2 Distribute the costs of transportation system improvements equitably among those who will benefit.
- Policy C 8.3 Use annexations, development agreements, revenue-sharing agreements, tax allocation agreements and the CEQA process as tools to ensure that new development pays a fair share of costs to provide local and regional transportation improvements and to mitigate cumulative traffic impacts.
- Policy C 21.4 Construct and improve traffic signals at appropriate intersections. Whenever possible, traffic signals should be spaced and operated as part of coordinated systems to optimize traffic operation and reduce congestion.

- Policy C 21.5Consider roadway expansion at public expense to relieve congestion only after
the determination has been made that TSM [Transportation System
Management] measures will not be effective.
- Policy C 21.6 Install special turning lanes whenever necessary to relieve congestion and improve safety.

City of Murrieta General Plan 2035

The City's General Plan Circulation Element represents the City's overall transportation plan to accommodate the movement of people and goods within and through the City. It establishes goals and policies to achieve a balanced transportation system that adequately serves the growth and development anticipated in the Land Use Element. The transportation plan consists not only of the physical transportation system itself—such as streets, highways, bicycle routes, trails, and sidewalks—but also the various modes of transportation, such as cars, rail, buses, trucks (goods movement), bicycles, and walking. The Circulation Element acknowledges the heavy use of the road and highway system by single-occupant automobiles, and promotes efforts to provide additional transportation choices and to use the system more efficiently through increased transit use, carpooling, walking, and bicycling. The City's circulation system contributes to the form and character of the community by providing connections between neighborhoods and commercial corridors, an enhanced network of sidewalks and trails that take advantage of the natural environment and recreational opportunities, and a pedestrian-friendly streetscape environment that encourages people to walk (City of Murrieta 2011b).

The Circulation Element establishes minimum LOS standards for streets and intersections within the City. The City's current LOS standard for intersections is LOS D for peak-hour intersection operations and LOS E at freeway interchanges. An intersection is considered significantly impacted under the following circumstances (City of Murrieta 2011b):

- If the existing traffic conditions exceed the General Plan target LOS
- If project traffic, when added to existing traffic, will deteriorate the LOS to below the target LOS, and impacts cannot be mitigated through project conditions of approval
- If cumulative traffic exceeds the target LOS, and impacts cannot be mitigated through existing infrastructure funding mechanisms

The City's current LOS standard for roadway segments is LOS C. As an exception, LOS D may be allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the project site and study roadways. The City Council can also approve a project that would not meet minimum LOS standards if it determines that the project has overriding benefits.

The following Circulation Element policies may be applicable to the project (City of Murrieta 2011b):

- Policy CIR-1.2Maintain a Level of Service "D" or better at all intersections during peak hours.Maintain a Level of Service "E" or better at freeway interchanges during peak hours.
- Policy CIR-1.3 Maintain an average daily traffic (ADT) Level of Service "C" or better for all roadway segments. As an exception, LOS "D" may be allowed in the North Murrieta Business Corridor, Clinton Keith/Mitchell, Golden Triangle North (Central Murrieta), South Murrieta Business Corridor, or the Multiple Use 3 Focus Areas, or other employment centers. LOS "D" may be allowed only at intersections of any

combination of Secondary roadways, Major roadways, Urban Arterial roadways, Expressways, conventional state highways, or freeway ramps.

- **Policy CIR-1.4** Continue to improve signal coordination and advanced traffic management systems at major intersections and along roadway corridors in order to optimize traffic flow through the City and reduce traffic queuing.
- **Policy CIR-1.5** Maintain a set of street standards and require that all new road facilities be constructed or upgraded, where feasible, to meet City standards.
- **Policy CIR-1.6** Coordinate with Caltrans to implement necessary improvements at intersections where the agencies have joint jurisdiction.
- **Policy CIR-1.8** Identify and evaluate the major intersections requiring special design treatment to increase their vehicular capacity.
- **Policy CIR-1.11** Support the implementation of complete streets through a multi-modal transportation network that balances the needs of pedestrians, bicyclists, transit riders, mobility-challenged persons, older people, children, and vehicles while providing sufficient mobility and abundant access options for existing and future users of the street system.
- Policy CIR-2.8 Encourage driveway consolidation and the use of shared driveways in commercial areas.
- **Policy CIR-2.9** Ensure new roadways and intersections provide adequate sight distances for safe vehicular movement.
- **Policy CIR-2.14** Ensure that efficient and safe access for emergency vehicles is provided to all development.
- **Policy CIR-5.14** Encourage new large residential, commercial, or employment developments to locate on existing and planned transit routes.
- **Policy CIR-7.1** Encourage future developments to provide an internal system of sidewalks/pathways linking schools, shopping centers, and other public facilities with residences.
- **Policy CIR-8.3** Consider roadway design guidelines for new development and for capital improvement plans that enhance bicycle and pedestrian connectivity and safety.
- **Policy CIR-8.8** When different uses are developed adjacent to each other such as new commercial adjacent to new residential require them to provide high-quality pedestrian amenities and connections between each other to the greatest degree possible.

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if the project would:

- 1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- 2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- 3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- 4. Result in inadequate emergency access.

Analysis Methodologies

This report summarizes data provided in the TIA (Appendix I), which analyzed potential traffic impacts associated with the project. Per the City's Traffic Impact Analysis Preparation Guide (City of Murrieta 2020), the TIA evaluated the following conditions:

- Existing Traffic. This scenario is based on traffic counts collected in late 2017 and 2018 and has been included in Section 4.14.1, Existing Conditions. Saturday traffic volumes were obtained from the Murrieta Costco and Vineyard II TIA prepared by Kittelson & Associates Inc. (2020).
- Existing + Ambient Growth + Project. This scenario is based on traffic conditions prior to the time that the proposed development is completed. Conditions will be estimated by increasing existing traffic counts by an appropriate growth rate (2%), projected to the year that the project is estimated to be completed (2021). This will be the basis for determining near-term, no-project conditions.
- Cumulative Traffic (Existing + Ambient Growth + Project + Cumulative). This scenario is based on the cumulative traffic conditions analysis, and forecasts how the transportation system would operate with existing traffic volumes plus the traffic generated by other approved/proposed projects in the area.

A project-specific impact would occur if the project-related traffic causes an intersection, freeway interchange, or roadway segment to become deficient or worsens an already deficient road facility under Project plus Completion Conditions (Existing Conditions plus Ambient Growth plus Project conditions). A cumulative impact would occur under the same circumstances, but with the addition of cumulative traffic as analyzed under the Cumulative Conditions (Existing Conditions plus Ambient Growth plus Project Conditions plus Cumulative Traffic Conditions).

Study Intersections

The following eight intersections have been selected and analyzed to predict the Existing, Existing plus Project (2021), and Cumulative (2021) traffic conditions:

- 1. McElwain Road and Clinton Keith Road
- 2. I-215 Southbound Ramps and Clinton Keith Road
- 3. I-215 Northbound Ramps and Clinton Keith Road
- 4. Creighton Avenue and Clinton Keith Road
- 5. Whitewood Road and Clinton Keith Road

- 6. Vista Murrieta High School West Driveway and Clinton Keith Road
- 7. Bronco Way and Clinton Keith Road
- 8. Antelope Road and Baxter Road

Study Roadway Segments

Additionally, the following roadway segments were included to predict Existing, Existing plus Ambient plus Project (EAP) (2021), Existing plus Ambient plus Cumulative (EAC) (2021), and Existing plus Ambient plus Project plus Cumulative (EAPC) (2021) traffic conditions:

- 1. Clinton Keith Road, west of Creighton Avenue
- 2. Clinton Keith Road, east of Creighton Avenue

Study Freeway Ramps

In addition to intersections and roadway segments, the following freeway ramps and segments have been analyzed to assume Existing, EAP (2021), and EAPC (2021) traffic conditions:

- I-215 Southbound: Clinton Keith Road off-ramp
- I-215 Southbound: Clinton Keith Road loop on-ramp
- I-215 Southbound: Clinton Keith Road slip on-ramp
- I-215 Northbound: Clinton Keith Road off-ramp
- I-215 Northbound: Clinton Keith Road loop on-ramp
- I-215 Northbound: Clinton Keith Road slip on-ramp

The following basic freeway segments were analyzed:

- I-215 Southbound: North of Clinton Keith Road
- I-215 Southbound: South of Clinton Keith Road
- I-215 Northbound: South of Clinton Keith Road
- I-215 Northbound: North of Clinton Keith Road

City of Murrieta Significance Criteria

The City's General Plan Circulation Element establishes minimum LOS standards for streets and intersections within the City. The City's current LOS standard for intersections is LOS D for peak-hour intersection operations and LOS E at freeway interchanges. The City's current LOS standard for roadway segments is LOS C. As an exception, LOS D may be allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the project site and study area roadways (City of Murrieta 2011b).

The following traffic impacts are considered "significant" under CEQA based on the City's Traffic Impact Analysis Preparation Guide (City of Murrieta 2020):

- If existing traffic conditions exceed the General Plan target LOS.
- If project traffic, when added to existing traffic, will deteriorate the LOS to below the target LOS, and impacts cannot be mitigated through project conditions of approval.

- If cumulative traffic exceeds the target LOS, and impacts cannot be mitigated through existing infrastructure funding mechanisms.
- If City Council approved a development project if target LOS is not met and if the project has overriding benefits.

Turn Pocket Queuing

A queuing deficiency is identified in the no-project condition if the calculated 95th-percentile queue length exceeds the storage length by more than 25 feet (the average storage length for one additional vehicle) since the bay taper can typically store at least one vehicle. A significant queuing impact is determined if the project causes the calculated 95th-percentile queue length to exceed the existing or planned storage capacity at a signalized intersection by more than 25 feet. In storage lanes that are already deficient without the project, a significant queuing impact is determined if the project increases the calculated 95th-percentile queue length by at least 25 feet. Where left-turn lanes connect to two-way left-turn lanes, although the calculated queue may exceed the length of the painted left-turn pocket, the presence of the two-way left-turn lane provides additional storage and allows the queue to avoid spilling into through lanes. Therefore, queues exceeding the painted storage length in these situations are not highlighted as existing deficiencies because they do not contribute to operational problems.

The minimum LOS standards for intersections, freeway interchanges, and roadway segments are shown in Table 4.14-6.

Table 4.14-6. Minimum Level of Service Standards

Facility Type	Minimum LOS
Intersections	LOS D
Freeway interchanges	LOS E
Roadway segments	LOS C ¹

Notes: LOS = level of service.

¹ As an exception, LOS D may be allowed in certain areas, including the North Murrieta Business Corridor and Multiple Use 3 Focus Area, which encompass the proposed site and study roadways.

Riverside County Significance Criteria

Per the County General Plan Circulation Element (Riverside County 2015):

Policy C 2.1The following minimum target levels of service have been designated for the
review of development proposals in the unincorporated areas of Riverside
County with respect to transportation impacts on roadways designated in the
Riverside County Circulation Plan which are currently County maintained, or
are intended to be accepted into the County maintained roadway system:

LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.

LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and

those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.

LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.

Based on the above criteria, the LOS service standard in the study area is LOS D.

The County does not have established requirements or standards for queuing analysis and does not require said analysis for CEQA compliance. At the request of the City, supplemental queuing analysis was provided for informational purposes only and is not part of the significance criteria for impact evaluation.

Caltrans Significance Criteria

Per the Guide for the Preparation of Traffic Impact Studies, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D (see Appendix C-3 of Caltrans 2002) on state highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing state highway facility is operating at less than the appropriate target LOS, the existing measures of effectives should be maintained. In accordance with the I-215 Transportation Concept Report (Caltrans 2012), acceptable LOS for the project study area is LOS D.

Vehicle Miles Traveled

Under Section 15064.3, each lead agency is granted discretion to choose "the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project." Further, "if existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate." In order to provide information to the decision makers who may consider this project after July 1, 2020, a qualitative analysis of VMT impacts of the proposed project is provided utilizing the VMT calculations incorporated in Section 4.2, Air Quality, in this EIR, and guidance from OPR (2018) and the WRCOG (2019).

Vehicle Miles Traveled Significance Criteria

Project Impacts

Section 15064.3(b)(1) of the CEQA Guidelines provides that for land use projects, "VMT traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact."

In December 2018, OPR issued a Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR Technical Advisory). For retail projects, the OPR Technical Advisory recommended that "[g]enerally, lead agencies should

analyze the effects of a retail project by assessing the change in total VMT because retail projects typically re-route travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns" (OPR 2018, p. 5). The OPR Technical Advisory indicates:

[b]ecause new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts. By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant. (OPR 2018, pg. 16)

The WRCOG SB 743 Implementation Pathway Document Package (WRCOG Analysis) also recommends that retail land uses be screened based on whether a project is local serving, which could be based on size (e.g., less than 50,000 square feet) (WRCOG 2019). In addition, the WRCOG Analysis states that a project would have a significant impact with respect to VMT if it is inconsistent with the applicable Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (WRCOG 2019).

According to the City of Murrieta's Transportation Impact Analysis Preparation Guide (May 2020), there are certain types of projects that can be screened out from further VMT analysis, as their use and size would not generate a significant amount of VMT. Therefore, project impacts to VMT are presumed to be less than significant for the following projects:

- Local-serving retail projects less than 50,000 square feet
- Project generating less than 110 daily vehicle trips regardless of whether consistent with the General Plan or not. This generally corresponds to the following "typical" development types:
 - Residential parcel map
 - 11 single-family housing units
 - o 16 multi-family condominiums or townhouse units
 - 10,000 square feet of office
 - o 15,000 square feet of light industrial uses
 - 63,000 square feet of warehouse
 - o Local-serving retail that primarily serves the City and/or adjacent cities
 - Office and other employment-related land uses reducing commutes outside the local area
 - Local-serving daycare centers, pre-K, and K-12 schools
 - Local parks and civic uses
 - Local-serving gas stations, banks, and hotels (e.g., non-destination hotels)
 - o Local-serving community colleges that are consistent with SCAG RTP/SCS assumptions
 - Student housing projects

The proposed project fits the definition of less than 50,000 square feet of local-serving retail that primarily services the City and adjacent cities. Therefore, the project meets the screening criteria, which does not warrant a project-level VMT analysis.

4.14.4 Impacts Analysis

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

Less-than-Significant Impact with Mitigation Incorporated. The project site is located in the City, north of Clinton Keith Road and west of Antelope Road, immediately northeast of the intersection of I-215 and Clinton Keith Road. The project is expected to be completed in 2021. As shown in the Figure 3-2, Site Plan, primary access to the site would be provided from Clinton Keith Road.

Project Trip Generation

Table 4.14-7 presents trip generation estimates for the proposed project.

The trip generation for the retail development center is based upon the specific land use that has been planned for this development. For the purpose of this analysis, the following land use assumption has been evaluated:

- 4,000-square-foot automobile parts and service center
- 5,000-square-foot tire store
- 11,650-square-foot shopping center
- 3,000-square-foot high-turnover (sit-down) restaurant
- 5,000-square-foot fast food restaurant with drive-through
- 5,000-square-foot drive-through bank with ATM station and walk up ATM

The data includes information about pass-by trips, which are existing trips that are on roadways adjacent to the site that stop at the proposed project and then continue on to their ultimate destination when their shopping is concluded. The number of trips expected to be generated by the proposed project were estimated using rates in Trip Generation Manual, 9th and 10th Edition, published by the Institute of Transportation Engineers (ITE 2012, 2017). The Shopping Center land use (ITE Code 820) was used, since this use accounts for "an integrated group of commercial establishments," as is proposed for the site. The pass-by rate applied for the shopping center is based on ITE data as well.

The proposed development is projected to generate a total of approximately 4,433 trip-ends per day with 311 vehicles per hour during the AM peak hour and 395 vehicles per hour during the PM peak hour.

Table 4.14-7. Project Trip Generation

		Weekday						Saturday			
		AM Peak Hour			PM Peal	k Hour			MD Peak I	Hour	
Land Use Quantity		In	Out	Total	In	Out	Total	Daily	In	Out	Total
Automobile Parts and 4 TSF Service Center		6	2	8	4	5	9	65	12	14	26
Tire Store 5 TSF		9	5	14	9	12	21	124	12	13	25
Shopping Center 11.65 TSF		26	16	42	68	74	142	1,679	59	54	113
High-Turnover (Sit-Down) 3 TSF Restaurant		18	15	33	18	12	30	381	17	16	33
Fast Food w/ Drive-Through	5 TSF	116	111	227	85	78	163	2,481	140	134	274
-Pass-By Reduction (25%)		-29	-28	-57	-21	-20	-41	-620	-34	-34	-68
Drive-in Bank 5 TSF		34	26	60	61	61	122	741	216	216	432
-Pass-By Reduction (25%)					-16	-15	-31	-185	-54	-54	-108
-	Internal Capture (5% Reduction)	-9	-7	-16	-10	-10	-20	-233	-18	-17	-35
	Total	171	140	311	198	197	395	4,433	350	342	692

Source: Appendix I. Notes: MD = midday; TSF = thousand square feet.

Existing plus Ambient plus Project (2021) Traffic Conditions

EAP (2021) traffic conditions reflect expected conditions in the year 2021 prior to the construction of the project with 2% appropriate growth rate per year of existing traffic. This section will display the projected traffic volumes at the key study area locations for weekday AM and PM peak hours.

Intersections

Analyses of intersection operations at the study intersections and queues were assessed under EAP (2021) traffic conditions. The signal timing was provided by the City and Caltrans staff. Table 4.14-8 shows the project completion delays and LOS for the study intersections during AM and PM peak hours.

As shown in Table 4.14-8, all intersections are projected to operate at an acceptable LOS (LOS D or better) in 2021 with the following planned improvements:

Creighton Avenue and Clinton Keith Road (Intersection No. 4)

- Modify existing northbound right-turn lane to a shared through/right lane
- Construct one southbound left-turn lane and one southbound shared through/right lane
- Construct one westbound right-turn lane
- Install a "no right turn on red" sign for the southbound approach

Improvements at the Whitewood Road and Clinton Keith Road intersection were recently constructed. Therefore, the following configuration is shown as built for future conditions:

Whitewood Road and Clinton Keith Road (Intersection No. 5)

- Northbound Approach: One left-turn lane, one through lane, and one shared through/right lane
- Southbound Approach: One left-turn lane, one through lane, and one shared through/right lane
- Eastbound Approach: Two left-turn lanes, two through lanes, and one right-turn lane
- Westbound Approach: Two left-turn lanes, three through lanes, and right-turn lane

			Intersection A	Approach Lane	s²		Delay (sec	onds) ³		LOS			
		Traffic	Northbound	Southbound	Eastbound	Westbound	Weekday	Weekday	Saturday	Weekday	Weekday	Saturday	
ID	Intersection	Control ¹	LTR	LTR	LTR	LTR	AM	PM	MD	AM	PM	MD	
1	McElwain Road & Clinton Keith Rd.	TS	110	210	231	131>	14.1	20.1	19.8	В	С	В	
2	I-215 SB Ramps & Clinton Keith Rd.	TS	000	012	031	031>>	12.5	12.7	12.7	В	В	В	
3	I-215 NB Ramps & Clinton Keith Rd.	TS	101	000	031>>	031>>	33.8	23.4	21.1	С	С	С	
4	Creighton Ave. & Clinton Keith Rd.	TS	1 <u>1</u> 0	<u>1</u> 10	131	13 <u>1</u>	39.8	33.9	43.5	D	С	D	
5	Whitewood Rd. & Clinton Keith Rd.	TS	120	120	221	231	36.0	45.5	26.5	D	D	С	
6	Vista Murrieta HS W. Dwy & Clinton Keith Rd.	CSS	001	000	030	030	16.3	16.2	0.0	С	С	A	
7	Bronco Wy. & Clinton Keith Rd.	TS	201	000	1U 3 d	130	19.2	12.0	4.1	В	В	A	
8	Antelope Rd. & Baxter Rd.	TS	011	110	000	101	26.1	27.4	_	С	С	_	

Table 4.14-8. Intersection Analysis for EAP (2021) Traffic Conditions

Source: Appendix I.

Notes: EAP = Existing plus Ambient plus Project; LOS = level of service; MD = midday; I = Interstate; HS = high school.

¹ TS = traffic signal; CSS = cross street stop.

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right-turn lane there must be sufficient width for right-turning vehicles to travel outside the through lanes.

L = left; T = through; R = right; 1 = shared left-through-right lane; 0.5 = shared lane; d = defacto right-turn lane; > = right-turn overlap; >> = free right-turn lane; 1 = recently built in 2018 after counts were taken; 1 = lane improvement.

³ Delay and LOS calculated using the following analysis software: Synchro Software.

Vineyard III Retail Development Project

Roadway Segment Analysis

An assessment of roadway segment capacity was conducted for the following two segments for EAP (2021) traffic conditions:

- Clinton Keith Road, west of Creighton Avenue
- Clinton Keith Road, east of Creighton Avenue

As shown in Table 4.14-9, both roadway segments are expected to operate within LOS "C" capacity thresholds under EAP (2021) traffic conditions.

	Table 4.14-9.	Roadway Seg	ment Analysis	for EAP (2021) Traffic Conditions
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	Segment	General Plan Roadway	Travel Through	Roadway Capacity Criteria ² (Max. Tw Way ADT	/ & LOS /o-)	EAP Conditions						
						Weekday			Saturday			
Roadway	Limits	Classification	Lanes ¹	LOS C	LOS E	ADT	V/C3	LOS	ADT	V/C ³	LOS	
Clinton Keith Rd.	West of Creighton Ave.	Urban Arterial	6	43,100	53,900	29,945	0.56	A	26,558	0.49	A	
	East of Creighton Ave.	Urban Arterial	6	43,100	53,900	28,615	0.53	A	24,228	0.45	A	

Source: Appendix I.

Notes: EAP = Existing plus Ambient plus Project; LOS = level of service; ADT = average daily traffic.

1 =Existing number of through lanes.

² Source: City of Murrieta Daily Roadway Capacity Values.

³ V/C = ADT/LOS E Roadway Capacity.

Freeway Ramp Analysis

Tables 4.14-10 and 4.14-11 summarize the freeway ramp analysis for I-215 at the Clinton Keith Road interchange. The ramps analyzed include the following:

- I-215 Southbound: Clinton Keith Road off-ramp
- I-215 Southbound: Clinton Keith Road loop on-ramp
- I-215 Southbound: Clinton Keith Road slip on-ramp
- I-215 Northbound: Clinton Keith Road off-ramp
- I-215 Northbound: Clinton Keith Road loop on-ramp
- I-215 Northbound: Clinton Keith Road slip on-ramp

The following basic freeway segments were analyzed:

- I-215 Southbound: North of Clinton Keith Road
- I-215 Southbound: South of Clinton Keith Road

- I-215 Northbound: South of Clinton Keith Road
- I-215 Northbound: North of Clinton Keith Road

The freeway ramps and basic freeway segments are found to operate at an acceptable LOS (LOS D or better) during AM and PM peak hours.

				Ramp Volumes			Density ²			LOS ³		
Freeway	Ramp Location	No. of Lanes on Freeway ¹	No. of Lanes on Ramp ¹	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD
I-215 Southbound	Clinton Keith Rd. Off- Ramp	3	1	824	1,000	781	33.5	29.2	31.7	D	D	D
	Clinton Keith Rd. Loop On-Ramp	3	1	366	273	349	27.0	20.3	25.3	С	С	С
	Clinton Keith Rd. Slip On- Ramp	3	1	511	465	458	29.7	22.8	27.6	D	С	С
l-215 Northbound	Clinton Keith Rd. Off- Ramp	3	1	769	872	801	22.4	31.8	29.2	С	D	D
	Clinton Keith Rd. Loop On-Ramp	3	1	813	791	553	18.4	27.4	22.8	В	С	С
	Clinton Keith Rd. Slip On- Ramp	3	1	178	89	170	18.0	26.2	23.0	В	С	С

Table 4.14-10. Freeway Ramp Analysis for EAP (2021) Traffic Conditions

Source: Appendix I.

Notes: EAP = Existing plus Ambient plus Project; LOS = level of service; MD = midday; I = Interstate.

Existing number of through lanes. 1

2

Density is measured by passenger cars per lane (pc/mi/ln). Density and LOS calculated using the following analysis software: HCS2010, Version 6.65. 3

Table 4.14-11. Basic Freeway Segment Analysis for EAP (2021) Traffic Conditions

		No. of	Freeway Volumes			Density ¹			LOS ²			
Freeway	Ramp Location	Lanes on Freeway ¹	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	
I-215 Southbound	North of Clinton Keith Rd.	3	4,876	4,018	4,664	28.5	21.4	25.6	D	С	С	

Vineyard III Retail Development Project

	Ramp Location	No. of	Freeway Vo	lumes		Density ¹			LOS ²			
Freeway		Lanes on Freeway ¹	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	
	South of Clinton Keith Rd.	3	4,929	3,756	4,690	29.0	19.8	25.8	D	С	С	
I-215 Northbound	North of Clinton Keith Rd.	3	2,726	4,525	4,028	14.5	24.8	21.6	В	С	С	
	South of Clinton Keith Rd.	3	2,948	4,533	3,950	15.7	25.6	21.1	В	C	C	

Source: Appendix I.

Notes: EAP = Existing plus Ambient plus Project; LOS = level of service; MD = midday; I = Interstate.

¹ Density is measured by passenger cars per lane (pc/mi/ln).

² Density and LOS calculated using the following analysis software: HCS2010, Version 6.65.

Existing plus Ambient plus Cumulative (2021) Traffic Conditions

The EAC (2021) traffic conditions analysis forecasts how the transportation system would operate with existing traffic volumes plus the traffic generated by other approved/proposed projects in the area. The same ambient growth rate (2%) is applied to existing traffic volumes. The Cities of Murrieta, Menifee, and Wildomar provided a list of approved/proposed projects that would affect traffic volumes in the study area under year 2021 conditions (shown in Table 4.14-12).

Table 4.14-12. Trip Generation for Approved/Proposed Projects

				Peak Hour						
	Project			AM			PM			
ID	Name	Land Use	Quantity	In	Out	Total	In	Out	Total	Daily
1	Mitchell Crossing	Multifamily Specialty Retail	331 DU 30 TSF	33 40	136 27	169 67	132 60	73 76	205 136	2,201 2,216
			1 Subtotal	73	163	236	192	149	341	4,417

				Peak Hour								
	Project			AM			PM					
ID	Name	Land Use	Quantity	In	Out	Total	In	Out	Total	Daily		
2	Vineyard Shopping Center	Mixed-Use Pass-By (25%)		139 -28	87 -17	226 -45	334 -76	356 -83	690 -159	8,092 -1,838		
			2 Subtotal	111	70	181	258	273	531	6,254		
3	Makena Hills	Quality Restaurant Hotel	9.3 TSF 206 RM	64	_ 45	109	47 63	23 60	70 123	837 1,683		
	·	•	3 Subtotal	284	103	387	226	382	608	6,718		
4	Adobe Springs	Single-Family Detached Business Park Internal 5%	287 DU 208.5 TSF —	55 248 0	161 44 0	216 292 0	181 69 -6	106 194 -7	287 263 -13	2,732 2,594 -130		
			4 Subtotal	303	205	508	244	293	537	5.196		
5	Alderwood	Single-Family Detached	10 DU	2	6	8	6	4	10	95		
6	Golden Cities Phase 3	Single-Family Detached	69 DU	13	39	52	44	26	70	657		
7	Golden Cities Phase 4	Single-Family Detached	126 DU	24	71	95	80	47	127	1,200		
8	Golden Cities Phase 5	Single-Family Detached	199 DU	23	67	90	75	44	119	1,133		
9	Junction	Discount Club Home Improvement Superstore Retail Pass-By (25%)	148.663 TSF 140.76 TSF 237.377 TSF —	59 91 161 -78	24 77 103 -51	83 168 264 -129	315 162 532 -252	315 183 577 -269	630 345 1,109 -521	6,214 4,195 11,912 -5,580		
	1	<u>[] = = / 0/</u>	9 Subtotal	233	153	386	757	806	1,563	16,741		

Table 4.14-12. Trip Generation for Approved/Proposed Projects

Vineyard III Retail Development Project

				Peak Hour	eak Hour							
	Project			AM			PM					
ID	Name	Land Use	Quantity	In	Out	Total	In	Out	Total	Daily		
10	Walmart	473	405	878	1,482	1,443	2,925	15,702				
11	Costco & Shopping Center	Costco w/Fuel Center Costco Fuel Center (AM) Pass-By (AM 32.5%; PM	152.65 TSF 32 VFP	_ 224 -73	224 -73	_ 448 -146	535 — -183	567 — -183	1,102 — -366	12,502 		
		33.3%) C(ostco Subtotal	151	151	302	352	384	736	8.338		
		Shopping Center Pass-By (25%)	79.9 TSF	84 -17	52 -17	136 -34	247 -64	268 -64	515 -128	5,870 -1,468		
		Shopping Co	enter Subtotal	67	35	102	183	204	387	4,402		
		11 0	11 Subtotal	218	186	404	535	588	1,123	12,740		
	Total Cumulat	tive Projects T	rip Generation	1,757	1,468	3,225	3,094	3,270	6,364	70,853		
City of Menife	ee Cumulative	Projects										
12	TTM 33732	Single-Family Detached	266 DU	56	166	222	187	110	297	2,818		
13	PP 2009- 006; PP2016-126	Gen Light Industrial	827.777 TSF	670	91	761	100	704	804	5,770		
14	TR 36684	Single-Family Detached	10 DU	2	6	8	7	4	11	95		
City	of Murrieta To	otal Cumulativ	e Projects Trip Generation	728	263	991	294	818	1,112	8,683		
	Total Cumula	tive Projects T	rip Generation	2,485	1,/31	4,216	3,388	4,088	/,4/6	/9,536		

Table 4.14-12. Trip Generation for Approved/Proposed Projects

Source: Appendix I.

Notes: TSF = thousand square feet; DU = dwelling units; RM = room; VFP = vehicle fueling position.

Table 4.14-12 shows the EAC (2021) volumes for existing traffic with ambient growth, from approved/proposed projects during AM and PM peak hours. Cumulative developments are predicted to generate a total estimate of 79,536 trip-ends per day with 4,216 vehicles per hour during the AM peak hour and 7,476 vehicles per hour during the PM peak hour.

Intersections

Intersection operations at all study area intersections were assessed under EAC (2021) traffic conditions with the previously addressed improvements from the EAP (2021) traffic conditions and the following planned improvements:

Warm Springs Parkway - Vista Murrieta High School West Driveway and Clinton Keith Road (Intersection No. 6)

- Install traffic signal
- Northbound Approach: Provide two left-turn lanes, one through lane, and maintain existing right-turn lane
- Provide a southbound right-turn overlap phase
- Restrict eastbound U-turns

Bronco Way and Clinton Keith Road (Intersection No. 7)

- Modify existing northbound right-turn lane to provide one shared through/right lane
- Construct one southbound left-turn lane and one southbound shared through/right lane
- Provide one westbound right-turn lane

Both improvements are expected to be constructed in unison with the development of nearby cumulative projects (Costco/Vineyard II Retail Development Project).

Table 4.14-13 shows the EAC (2021) traffic conditions delays and LOS for the study intersections during AM and PM peak hours.

Table 4.14-13. Intersection Analysis for EAC (2021) Traffic Conditions

			Inters	Intersection Approach Lanes ²							Delay ³ (seconds)			LOS ³						
			North	orthbound			Southbound		Eastbound		Westbound			Weekday		Saturday	Week	day	Saturday	
ID	Intersection	Traffic Control ¹	L	Т	R	L	Τ	R	L	Τ	R	L	Т	R	AM	PM	MD	AM	PM	MD
1	McElwain Rd. & Clinton Keith Rd.	TS	1	1	0	2	1	0	2	3	1	1	3	1>	14.7	37.8	24.4	В	D	С
2	I-215 SB Ramps & Clinton Keith Rd.	TS	0	0	0	0	1	2	0	3	1	0	3	1>>	12.3	12.6	9.1	В	В	A
3	I-215 NB Ramps & Clinton Keith Rd.	TS	1	0	1	0	0	0	0	3	1>>	0	3	1>>	36.0	16.1	13.6	D	В	В
4	Creighton Ave. & Clinton Keith Rd.	TS	1	<u>1</u>	0	1	1	0	1	3	1	1	3	<u>1</u>	40.8	23.9	26.4	D	С	С
5	Whitewood Rd. & Clinton Keith Rd. ⁴	TS	1	2	0	1	2	0	2	2	1	2	3	1	39.5	71.0	36.8	D	E	D
6	Vista Murrieta HS W. Dwy. & Clinton Keith Rd.	<u>TS</u>	<u>2</u>	<u>1</u>	1	<u>2</u>	<u>1</u>	<u>2></u>	2	3	0	1	3	<u>1</u>	10.7	17.2	22.8	В	В	С
7	Bronco Wy. & Clinton Keith Rd.	TS	2	<u>1</u>	0	1	<u>1</u>	0	1	3	d	1	3	<u>1</u>	27.2	28.8	29.7	С	С	С
8	Antelope Rd. & Baxter Rd.	TS	0	1	1	1	1	0	0	0	0	1	0	1	29.5	28.0	—	С	С	—

Source: Appendix I.

Notes: EAC = Existing plus Ambient plus Cumulative; LOS = level of service; MD = midday; I = Interstate; SB = southbound; NB = northbound; HS = high school. 1 TS = traffic signal; CSS = cross street stop.

² When a right turn is designated, the lane can either be striped or unstriped. To function as a right-turn lane there must be sufficient width for right-turning vehicles to travel outside the through lanes.

L = left; T = through; R = right; 1! = shared left-through-right lane; 0.5 = shared lane; d = defacto right-turn lane; > = right-turn overlap; >> = free right-turn lane; 1 = recently built in 2018 after counts were taken; 1 = lane Improvement. Delay and LOS calculated using the following analysis software: Synchro Software. 3

⁴ The City's General Plan has identified this intersection to be deficient and accepts LOS E as an acceptable performance criteria.

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As shown in Table 4.14-13, the study area intersections are projected to operate at an acceptable LOS (LOS D or better) under EAC (2021) traffic conditions during peak hours with the previously mentioned planned improvements as well as the improvements listed under EAP (2021) traffic conditions, with the exception of Whitewood and Clinton Keith Road, which the City's General Plan identified to be deficient and accepted LOS E as an acceptable performance criteria.

Roadway Segment Capacity

An assessment of roadway capacity and LOS was conducted for the two roadway segments listed below for cumulative traffic conditions:

- Clinton Keith Road, west of Creighton Avenue
- Clinton Keith Road, east of Creighton Avenue

As shown in Table 4.14-14, the study area roadway segments are expected to continue to operate within LOS "C" capacity thresholds under EAC (2021) traffic conditions.

Table 4.14-14. Roadway Segment Capacity Analysis for EAC (2021) Traffic Conditions

ye	ut	l Plan ay	h Travel	Roadway (and LOS ((Max. Two	Capacity Criteria ² -Way ADT)	EAC Con	ditions				
adwa	gme	nera adwa	'oug			Weekday			Saturday		
Ro	Lin Se	Ge Ro	Thi	LOS C	LOSE	ADT	V/C³	LOS	ADT	V/C ³	LOS
Clinton Keith Rd.	West of Creighton Ave.	Urban Arterial	6	43,100	53,900	41,122	0.76	С	41,012	0.76	С
	East of Creighton Ave.	Urban Arterial	6	43,100	53,900	41,122	0.76	С	41,012	0.76	С

Source: Appendix I.

Notes: EAC = Existing plus Ambient plus Cumulative; LOS = level of service; ADT = average daily traffic.

1 = Existing number of through lanes.

² Source: City of Murrieta Daily Roadway Capacity Values.

 3 V/C = ADT / LOS "C" roadway capacity.

Freeway Ramps

Tables 4.14-15 and 4.14-16 summarize the EAC (2021) traffic conditions freeway ramp analysis for I-215 at the Clinton Keith Road interchange. These ramps were also used in the EAP (2021) traffic conditions analysis.

The freeway ramps and basic freeway segments are found to operate at an acceptable LOS (LOS D or better) under EAC (2021) traffic conditions during AM and PM peak hours.

Freeway I-215 Southbound		No. of	No. of	Ramp Volu	imes		Density ²			LOS ³			
Freeway	Ramp Location	Lanes on Freeway ¹	Lanes on Ramp ¹	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	
I-215 Southbound	Clinton Keith Rd. Off-Ramp	3	1	963	1,324	1,134	34.4	32.3	34.1	D	D	D	
	Clinton Keith Rd. Loop On- Ramp	3	1	430	494	452	27.6	23.0	26.2	С	С	С	
	Clinton Keith Rd. Slip On- Ramp	3	1	597	583	582	30.8	25.8	29.1	D	С	D	
I-215 Northbound	Clinton Keith Rd. Off-Ramp	3	1	895	1,201	995	23.4	34.7	30.6	С	D	D	
	Clinton Keith Rd. Loop On- Ramp	3	1	918	697	605	19.3	26.9	23.2	В	С	С	
	Clinton Keith Rd. Slip On- Ramp	3	1	267	346	373	19.3	28.1	24.9	В	D	С	

Source: Appendix I.

Notes: EAC = Existing plus Ambient plus Cumulative; LOS = level of service; MD = midday; I = Interstate. ¹ Existing number of through lanes.

2

Density is measured by passenger cars per lane (pc/mi/ln). Density and LOS calculated using the following analysis software: HCS2010, Version 6.65. 3

Table 4.14-16. Freeway Segment Analysis for EAC (2021) Traffic Conditions

			Freeway Vo	lumes		Density ²			LOS ²			
Freeway	Ramp Location	No. of Lanes on Freeway ¹	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	Weekday AM	Weekday PM	Saturday MD	
I-215	North of Clinton Keith Rd.	3	5,015	4,518	5,017	29.7	24.6	28.3	D	С	С	
Southbound	South of Clinton Keith Rd.	3	5,079	4,271	4,917	30.3	23.0	27.5	D	С	С	
I-215	South of Clinton Keith Rd.	3	2,852	5,013	4,222	15.2	28.5	22.8	В	D	С	
Northbound	North of Clinton Keith Rd.	3	3,142	4,855	4,205	16.8	28.0	22.7	В	D	С	

Source: Appendix I.

Notes: EAC = Existing plus Ambient plus Cumulative; LOS = level of service; MD = midday; I = Interstate.

1

Density is measured by passenger cars per lane (pc/mi/ln). Density and LOS calculated using the following analysis software: HCS2010, Version 6.65. 2

Existing plus Ambient plus Project plus Cumulative Traffic Conditions

The EAPC (2021) traffic conditions analysis forecasts how the transportation system would operate with existing traffic volumes plus the traffic generated by other approved/proposed projects in the area plus the traffic predicted to be generated by the project. The same ambient growth rate (2%) is applied to existing traffic volumes.

Intersections

Table 4.14-17 shows the EAPC (2021) traffic conditions delays and LOS for the study intersections during AM and PM peak hours.

			Intersection	Approach Lar	nes ²		Delav ³ (seco	nds)					1.0.53					
							With Full Pro	iect		Sensitivity A (Reduced Pr	nalysis oject Land U	lse)	With Full Pro	oject		Sensitivity A (Reduced Pr Land Use)	nalysis oject	
		Traffic	Northbound	Southbound	Eastbound	Westbound	Weekday		Saturday	Weekday		Saturday	Weekday		Saturday	Weekday		Saturday
ID	Intersection	Control ¹	LTR	LTR	LTR	LTR	AM	PM	MD	AM	PM	MD	AM	PM	MD	AM	PM	MD
1	McElwain Rd. & Clinton Keith Rd.	TS	1 1 0	2 1 0	231	1 3 1>	14.8	40.0	24.7	14.9	39.9	24.7	В	D	С	В	D	С
2	I-215 SB Ramps & Clinton Keith Rd.	TS	0 0 0	012	031	0 3 1>>	12.5	15.4	10.6	12.5	15.2	9.9	В	В	В	В	В	A
3	I-215 NB Ramps & Clinton Keith Rd.	TS	101	000	0 3 1>>	0 3 1>>	37.5	16.9	14.1	36.5	16.2	14.1	D	В	В	D	В	В
4	Creighton Ave. & Clinton Keith Rd.	TS	1 <u>1</u> 0	<u>1</u> 1 0	131	1 3 <u>1</u>	44.3	31.9	54.0	41.8	20.5	49.8	D	С	D	D	с	D
	coordination plan. -With second eastbound left- turn lane to accommodate potential excess in storage queue.	TS	1 <u>1</u> 0	110	<u>2</u> 31	13 <u>1</u>	44.2	26.4	53.6	_	_	_	D	С	D	_	_	_
5	Whitewood Rd. & Clinton Keith Rd. -With revised coordination plan.	TS	120	120	221	231	44.5	77.0	58.0	42.7	72.1	54.5	D	E	E	D	E	D
6	Vista Murrieta HS W. Dwy. & Clinton Keith Rd.	<u>TS</u>	<u>2</u> <u>1</u> 1	<u>2</u> <u>1</u> <u>2</u> >	<u>2</u> 30	<u>1</u> 3 <u>1</u>	10.8	20.2	31.9	10.8	19.9	32.0	В	С	С	В	В	С
7	Bronco Wy. & Clinton Keith Rd. -With revised coordination plan.	TS	2 <u>1</u> 0	<u>1</u> 10	1 3 d	<u>2</u> 3 <u>1</u>	43.8	29.5	30.4	43.6	29.1	30.0	D	C	С	D	C	C
8	Antelope Rd. & Baxter Rd.	TS	0 1 1	1 1 0	0 0 0	1 0 1	29.6	28.1	-	29.6	28.5	-	С	С	-	С	С	-

Table 4.14-17. Intersection Analysis for EAPC (2021) Traffic Conditions

Source: Appendix I.

Notes: EAPC = Existing plus Ambient plus Project plus Cumulative; LOS = level of service; MD = midday; I = Interstate; SB = southbound; NB = northbound; EAC = Existing plus Ambient plus Cumulative.

¹ TS = traffic signal; CSS = cross street stop.

When a right turn is designated, the lane can either be striped or unstriped. To function as a right-turn lane there must be sufficient width for right-turning vehicles to travel outside the through lanes.
 L = left; T = through; R = right; 1! = shared left-through-right lane; 0.5 = shared lane; d = defacto right-turn lane; > = right-turn lane; 1 = recently built in 2018 after counts were taken; 1 = lane improvement; 1 = with additional improvement in comparison to EAC conditions to provide adequate queuing storage.

³ Delay and level of service calculated using the following analysis software: Synchro Software.

⁴ The City's General Plan has identified this intersection to be deficient and accepts LOS E as an acceptable performance criteria.

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As shown in Table 4.14-17, the study area intersections are projected to operate at an acceptable LOS (LOS D or better) during peak hours with the planned improvements outlined under EAPC (2021) traffic conditions, with the exception of Whitewood and Clinton Keith Road, which the City's General Plan identified as deficient and accepts LOS E as an acceptable performance criteria. However, additional improvements are required to mitigate potential queuing issues at the following intersections:

Creighton Avenue and Clinton Keith Road

• Lengthen the eastbound left-turn pocket by 50 feet to provide 300 feet of stacking distance

Warm Springs Parkway - Vista Murrieta High School West Driveway and Clinton Keith Road

• Provide a southbound right-turn overlap phase

Bronco Way and Clinton Keith Road

• Provide a second westbound left-turn lane

Supplemental Queuing Analysis

Table 4.14-18 illustrates the available queue storage and 95th percentile queue lengths at the turn lanes for each study intersection under EAPC (2021) traffic conditions.

Table 4.14-18. Queuing Analysis for EAPC (2021) Traffic Conditions with Intersection Improvements

				95th Percentile Queue Length Per Lane (feet) ¹									
			Storage	With Full P	roject		Sensitivity (Reduced I	Analysis Project Land	d Use)				
		Movement	Length Provided ²	Weekday		Saturday	Weekday		Saturday				
ID	Intersection	Lane	(feet)	АМ	PM	MD	AM	PM	MD				
1	McElwain & Clinton Keith Rd.	EBL EBR WBL WBR NBL SBL	300 100 200 160 50 350	189 0 6 31 20 226	264 0 39 59 56 ³ 317	239 0 0 157 34 369 ³	189 0 6 30 20 222	303 ³ 0 39 57 56 ³ 312	239 0 145 34 363				
2	I-215 SB Ramps & Clinton Keith Rd.	EBR WBR SBR	400 150 >1000	23 10 296	65 0 396	147 0 185	24 9 292	49 0 395	55 0 185				
3	I-215 NB Ramps & Clinton Keith Rd.	NBL NBR	960 960	163 587	826 752	695 615	163 550	787 734	690 557				
4	Creighton Ave. & Clinton Keith Rd.	EBL EBR WBL WBR	300 200 230 150	205 47 55 19	257 2 64 77	546 0 13 161 ³	106 48 53 4	95 3 66 51	276 1 14 108				

Table 4.14-18. Queuing Analysis for EAPC (2021) Traffic Conditions with Intersection Improvements

				95th Percentile Queue Length Per Lane (feet) ¹ Sensitivity Analysis (Reduced Project Land L With Full Project Saturday Weekday Saturday Weekday Saturday Weekday Saturday MD AM PM M 224^3 83 101 218 ³ 83 33 92 309 525 34 217 101 97 178 $ -$ 101 97 178 $ -$					
			Storage	With Full P	roject		Sensitivity (Reduced I	Analysis Project Land	d Use)
		Turning Movement	Length Provided ²	Weekday		Saturday	Weekday		Saturday
ID	Intersection	Lane	(feet)	АМ	PM	MD	AM	PM	MD
		NBL SBL	200 245	224³ 92	83 <u>309</u>	101 <u>525</u>	218 ³ 34	83 217	91 <u>381</u>
	With additional second EBL turn improvement	EBL (2x)	300	101	97	178	_	_	_
5	Whitewood Rd. & Clinton Keith Rd.	EBL EBR WBL WBR NBL SBI	525 250 200 200 420 100	238 52 52 1 434 ³ 212	547 ³ 162 99 14 <u>609</u> ⁴ 208	358 79 106 0 <u>493</u> 180	231 51 52 1 406 212	532 ³ 152 99 14 <u>579</u> ⁴ 208	346 71 106 0 <u>448</u> 180
6	Warms Springs Pkwy. – Vista Murrieta High School W. Dwy. & Clinton Keith Rd.	EBL WBL WBR NBL NBR SBL SBR	600 150 240 100 390 350 350	190 22 50 21 0 83 30	555 2 2 3 0 243 138	732 0 0 0 0 275 152	189 22 53 21 0 83 29	571 2 2 3 0 243 138	731 0 0 0 275 152
7	Bronco Wy. & Clinton Keith Rd. -With second WBL turn improvement.	EBL WBL WBR NBL SBL WBL (2x)	200 315 85 355 150 315	31 <u>492</u> 0 195 42 31	139 308 9 84 154 ³ 139	183 74 56 53 206 183	31 <u>482</u> 0 195 42 31	140 308 9 84 154 ³ 139	181 38 74 53 206 181
8	Antelope Rd. & Baxter Rd.	WBL WBR NBR SBL	WBL 520 50 150	164 37 52 ³ 174 ³	133 44 46 113	 	164 37 49 174 ³	133 44 46 113	

Source: Appendix I.

Notes: EAPC = Existing plus Ambient plus Project plus Cumulative; MD = midday; EBL = eastbound left; EBR = eastbound right; WBL = westbound left; WBR = westbound right; NBL = northbound left; SBL = southbound left; I = Interstate; SB = southbound; SBR = southbound right; NB = northbound; NBR = northbound right.

¹ Queue length calculated using Synchro 8.

BOLD = exceeds storage lane

Existing/Proposed pocket length storage (for turning movements) or link distance (for through movements). 100 = existing; 100 = proposed; 100 = recommended.

- ³ 95th percentile queue is anticipated to exceed available storage length. However, the excess queue length can be accommodated within the transition lane.
- ⁴ It should be noted that a school access located along Whitewood Road is approximately 480 feet south of Clinton Keith Road and extending the NBL turn lane at Clinton Keith Road over 420 feet is not feasible. Therefore, the 95th percentile queue for the NBL is anticipated to continue to exceed available storage length.

As shown in Table 4.14-18, queues are projected to exceed storage capacity under EAPC (2021) Traffic conditions for one or more movements at the following study locations:

• Whitewood Road and Clinton Keith Road

In addition, the following intersections are expected to exceed storage capacity. However, the excess queue length can be accommodated within the transition lane.

- McElwain and Clinton Keith Road
- Bronco Way and Clinton Keith Road
- Antelope Road and Baxter Road

Roadway Segment Capacity

An assessment of capacity and LOS was conducted for the following two roadway segments for EAPC (2021) traffic conditions:

- Clinton Keith Road, west of Creighton Avenue
- Clinton Keith Road, east of Creighton Avenue

As shown in Table 4.14-19, the study area roadway segments are expected to continue to operate within LOS C capacity thresholds under EAPC (2021) traffic conditions.

		/ay	₿S ¹	Roadway	Capacity	EAPC Con	ditions				
	nits	n Roadw	ivel Lane	(Max. Two ADT)	-Way	Weekday			Saturday		
Roadway	Segment Li	General Pla	Through Tra	2 S07	TOS E	ADT	۲/C ^ع	S07	ADT	V/C ³	SOT
Clinton Keith Rd.	West of Creighton Ave.	Urban Arterial	6	43,100	53,900	43,782	0.81	D	43,672	0.81	D
	East of Creighton Ave.	Urban Arterial	6	43,100	53,900	42,452	0.79	С	42,342	0.79	С

Source: Appendix I.

Notes: EAPC = Existing plus Ambient plus Project plus Cumulative; LOS = level of service; ADT = average daily traffic

¹ 1 = Existing number of through lanes.

² Source: City of Murrieta Daily Roadway Capacity Values.

³ V/C = ADT / LOS E roadway capacity.

Vineyard III Retail Development Project

Freeway Ramps

Tables 4.14-20 and 4.14-21 summarize the EAPC (2021) traffic conditions of the freeway ramp analysis for I-215 at the Clinton Keith Road interchange. The ramps analyzed include the following:

- I-215 Southbound: Clinton Keith Road off-ramp
- I-215 Southbound: Clinton Keith Road loop on-ramp
- I-215 Southbound: Clinton Keith Road slip on-ramp
- I-215 Northbound: Clinton Keith Road off-ramp
- I-215 Northbound: Clinton Keith Road loop on-ramp
- I-215 Northbound: Clinton Keith Road slip on-ramp

The following basic freeway segments were analyzed:

- I-215 Southbound: North of Clinton Keith Road
- I-215 Southbound: South of Clinton Keith Road
- I-215 Northbound: South of Clinton Keith Road
- I-215 Northbound: North of Clinton Keith Road

The freeway ramps and basic freeway segments are found to operate at an acceptable LOS (LOS D or better) during AM and PM peak hours.

Table 4.14-20.	Freeway Ramp	Analysis for	EAPC (2021)	Traffic Conditions
	riconay namp	/ 1101/010 101		

Б				Ramp V	olumes		Density	2	LOS ³			
	mp Location	. of Lanes on eway ¹	. of Lanes on mp ¹		weekday	Saturday		Weekday	Saturday	Weekday		Saturday
Freeway	Ra	No Fre	No Rai	AM	PM	MD	AM	РМ	MD	AM	PM	MD
I-215 Southbound	Clinton Keith Rd. Off-Ramp	3	1	989	1,354	1,187	34.6	32.5	34.4	D	D	D
	Clinton Keith Rd. Loop On- Ramp	3	1	458	533	520	27.8	23.3	26.7	С	С	С
	Clinton Keith Rd. Slip On- Ramp	3	1	597	583	582	30.9	26.0	29.4	D	С	D
I-215 Northbound	Clinton Keith Rd. Off-Ramp	3	1	929	1,241	1,065	23.7	34.9	30.9	С	D	D
		np Location of Lanes on eway ¹	of Lanes on mp ¹	Ramp Volumes			Density ²			LOS ³		
---------	--	---	-----------------------------	--------------	-----	---------------------	----------------------	---------	----------	------------------	---------	----
	np Location			Weekday		Saturday Weekday		weekday	Saturday		Weekday	
Freeway	Rai	No	Rai	AM	PM	MD	AM	PM	MD	AM	PM	MD
	Clinton Keith Rd. Loop On- Ramp	3	1	918	697	605	19.3	26.9	23.0	В	С	С
	Clinton Keith Rd. Slip On- Ramp	3	1	288	376	424	19.5	28.4	25.1	В	D	С

Table 4.14-20. Freeway Ramp Analysis for EAPC (2021) Traffic Conditions

Source: Appendix I.

Notes: EAPC = Existing plus Ambient plus Project plus Cumulative; LOS = level of service; MD = midday; I = Interstate.

¹ Existing number of through lanes.

² Density is measured by passenger cars per lane (pc/mi/ln).

³ Density and LOS calculated using the following analysis software: HCS2010, Version 6.65.

Table 4.14-21. Basic Freeway Segment Analysis for EAPC (2021) Traffic Conditions

			Freeway	Freeway Volumes			Density ¹			LOS ²		
		No. of	Vichdaal		Saturday	vebdooM		Saturday	Weekdav		Saturday	
Freeway	Ramp Location	Freeway1	AM	PM	MD	AM	PM	MD	AM	PM	MD	
l-215 Southbo	North of Clinton Keith Rd.	3	5,041	4,548	5,070	30.0	24.8	28.7	D	С	D	
und	South of Clinton Keith Rd.	3	5,107	4,310	4,985	30.6	23.2	28.0	D	С	D	
l-215 Northbou	South of Clinton Keith Rd.	3	2,886	5,053	4,292	15.4	28.8	23.2	В	D	С	
nd	North of Clinton Keith Rd.	3	3,163	4,885	4,256	16.9	28.2	23.0	В	D	С	

Source: Appendix I.

Notes: EAPC = Existing plus Ambient plus Project plus Cumulative; LOS = level of service; MD = midday; I = Interstate.

¹ Density is measured by passenger cars per lane (pc/mi/ln).

² Density and LOS calculated using the following analysis software: HCS2010, Version 6.65.

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

Less-than-Significant Impact. CEQA Guidelines Section 15064.3(b) focuses on newly adopted criteria (VMT) for determining the significance of transportation impacts. It is further divided into the following four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology.

The proposed project is a local-serving retail project of less than 50,000 square feet, thus, a detailed VMT analysis is not required because local-serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel (City of Murrieta 2020). Therefore, project impacts to VMT are presumed to be less than significant.

As described in Section 4.2 of this EIR, the proposed project is consistent with the applicable RTP/SCS. Specifically, the proposed project is consistent with the City's existing General Plan Commercial designation and with the existing Regional Commercial zoning for the project site. As such, the project is also consistent with the RTP/SCS for the region. Thus, the project would not be considered to have a significant impact with respect to consistency with the RTP/SCS for the region.

The proposed project includes local-serving retail uses. As indicated in the OPR Technical Advisory and WRCOG Analysis, local-serving retail is generally presumed to have less-than-significant impacts.

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

No Impact. Project driveways and internal circulation elements have been designed to reduce vehicular and pedestrian conflicts, enhance safety, and increase line of sight. All intersections, circulation improvements, and access to the site would be designed consistent with City roadway standards and would not create a hazard for vehicles, bicycles, or pedestrians entering or exiting the site. Specifically, the project would be designed with one northbound lane from Clinton Keith Road for vehicles turning left onto Creighton Avenue.

Access to the site would be designed according to City standards and would not create sharp curves or dangerous intersections. Based on review of the site plan, the overall layout would not create any unsafe vehicle-pedestrian conflict points. Turning radii and drive aisle widths are designed for passenger cars, ambulances, shuttles, service/delivery trucks, and trash trucks. The alignment, spacing, and throating of the project driveways is adequate and the circulation around the building is adequate with sufficient sight distance along the drive aisles. The proposed site plan is subject to approval by the City and Murrieta Fire and Rescue (MFR) to ensure City roadway standards are met and no hazards are created or increased by the project.

Since the project would be consistent with City roadway standards, and for the reasons described above, the project would not increase hazards due to a design feature or incompatible uses and there would be no impact.

Would the project result in inadequate emergency access?

Less-than-Significant Impact. The project would result in the development of a currently undeveloped area, including the development of site access. The project would involve the construction of new structures, roadways, and intersections and would generate new trips to and from the project site. The project would be required to comply with the City's development review process, including review for compliance with the City's Development Code and compliance with applicable emergency access standards that would facilitate emergency vehicle access during project construction and operation. The project applicant would be required to design, construct, and maintain structures, roadways, and facilities to comply with applicable local, regional, state, and federal requirements related to emergency access. The proposed site plan is subject to approval by the City and the MFR. Further, the City and MFR would review any modifications to existing roadways to ensure that adequate emergency access or emergency response would be maintained. Additionally, emergency response procedures would be coordinated through the

City in coordination with the police and fire departments. Adherence to these requirements would ensure that potential impacts related to emergency access remain below a level of significance, and no mitigation is required.

4.14.5 Mitigation Measures

In accordance with the City, County, and Caltrans LOS criteria, the study area intersections, roadway segments, freeway segments and freeway ramps would operate at an acceptable LOS with the previously discussed planned improvements at Creighton Avenue and Clinton Keith Road. However, to maintain the adequate LOS at the previously analyzed study intersections, the project would implement **MM-TRA-1** through **MM-TRA-3**. Additionally, the project would implement **MM-TRA-4** to mitigate circulation impacts resulting from on-site construction.

- MM-TRA-1 Creighton Avenue and Clinton Keith Road Intersection Improvements: The project applicant shall be responsible for designing, funding, and installing a second eastbound left-turn lane at the intersection of Creighton Avenue and Clinton Keith Road when the development exceeds 13,000 square feet (5,000-square-foot tire center, 3,000-square-foot high-turnover restaurant, and 5,000-square-foot drive-through bank).
- **MM-TRA-2 Bronco Way and Clinton Keith Road Intersection Improvements:** In order to mitigate potential queuing impacts, the project applicant shall provide a second westbound left-turn lane at the intersection of Bronco Way and Clinton Keith Road. The project applicant shall be responsible for designing, furnishing, and installing the proposed lengthening of the turn pockets. The project shall be required to contribute a fair share amount to the City's Capital Improvement Project 8389 for the improvements to this intersection.
- MM-TRA-3 Whitewood Road and Clinton Keith Road Intersection Improvements: In order to mitigate potential queuing impacts, the project applicant shall be required to contribute a fair share amount to the City's Capital Improvement Project 8389 for the improvements to the Whitewood Road and Clinton Keith Road Intersection.
- **MM-TRA-4 On-Site Improvements:** Construction of on-site improvements shall occur in conjunction with adjacent project development activity or as needed for project access purposes, which include the following improvements:
 - On-site traffic signing and striping in conjunction with detailed construction plans for the project
 - Provision of minimum sight distance at the project access points
 - A traffic-calming circle to slow traffic on site

4.14.6 Level of Significance After Mitigation

All project impacts associated with design features, emergency access, and conflicts with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrian facilities would be less-than-significant. With implementation of **MM-TRA-1 through MM-TRA-4**, potential impacts associated with LOS resulting from the project would be mitigated to less-than-significant. Thus, impacts would be less than significant.

As described in Section 4.2 of this EIR, the proposed project is consistent with the applicable RTP/SCS. Specifically, the proposed project is consistent with the City's existing General Plan Commercial designation and with the existing

commercial zoning for the project site. As such, the project is also consistent with the RTP/SCS for the region. Thus, the project would not be considered to have a significant impact with respect to consistency with the RTP/SCS for the region.

The proposed project includes local-serving retail use because it provides goods and services of a local nature. As indicated in the OPR Technical Advisory and WRCOG Analysis, local-serving retail is generally presumed to have less-than-significant impact.

4.14.7 Cumulative Impacts

Cumulative impacts were considered by analyzing EAC (2021) traffic conditions. The related projects in Table 4.14-12, Trip Generation for Approved/Proposed Projects, were used to analyze cumulative impacts. As previously discussed, project impacts related to geometric design features; incompatible uses; emergency access; public transportation; bicycle and pedestrian policies; and plans, programs, and facilities would be less than significant, and it is not anticipated that the proposed project, combined with other related projects, would result in a cumulatively considerable impact to these areas.

Intersections

Based on the operational analysis previously discussed, the following eight intersections are projected to operate at an acceptable LOS under 2021 cumulative conditions:

- McElwain Road and Clinton Keith Road
- I-215 Southbound Ramps and Clinton Keith Road
- I-215 Northbound Ramps and Clinton Keith Road
- Creighton Avenue and Clinton Keith Road
- Whitewood Road and Clinton Keith Road
- Vista Murrieta High School West Driveway and Clinton Keith Road (Future)
- Bronco Way and Clinton Keith Road
- Antelope Road and Baxter Road

It is expected that the study area intersections would operate at an acceptable LOS (LOS D or better) under EAC (2021) traffic conditions during AM and PM peak hours, with the exception of Whitewood Road and Clinton Keith Road, which the City's General Plan identified as deficient and accepts LOS E as acceptable performance criteria, and with the previously mentioned improvements listed under EAP (2021) traffic conditions, as well as the planned improvements that are associated with the Costco Wholesale and Vineyard Shopping Center.

Roadway Segments

All study area roadway segments are projected to operate with acceptable LOS for the EAC (2021) traffic conditions. Under cumulative conditions, this segment is anticipated to operate within LOS C capacity thresholds during AM and PM peak hours.

Freeway

As previously described, a freeway ramp analysis was conducted for the I-215 at the Clinton Keith interchange. The freeway ramps and basic freeway segments are found to operate at an acceptable LOS (LOS D or better) under EAC (2021) traffic conditions during AM and PM peak hours.

It is assumed that related cumulative projects in the study area would be subject to the same federal, state, and local standards, regulations, and requirements that the project must comply with, which would further reduce the opportunity for cumulative impacts in the broader project area. Additionally, due to the less-than-significant impacts with mitigation to study intersections, the project, in combination with related projects, would result in less-than significant impacts.

4.14.8 References Cited

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SOURCE: Trames Solutions Inc

FIGURE 4.14-1 Study Intersections Vineyard III Retail Development Project

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4.15 Tribal Cultural Resources

This section describes the existing tribal cultural resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). The following analysis is based, in part, on the Cultural Resources Inventory Report, included as Appendix D of this Environmental Impact Report.

4.15.1 Existing Conditions

As discussed in Section 4.4, Cultural Resources, on January 10, 2018, a cultural resources inventory was completed to identify all cultural resources within the project site and within a 1-mile (1,608 meters) buffer (study area). The Cultural Resources Inventory Report (Appendix D) documents the results of a California Historical Resources Information System (CHRIS) records search, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, informal tribal consultation, and an intensive-level pedestrian survey.

The records search identified 46 previously recorded resources within 1 mile (1,608 meters) of the project site; none of these resources were identified within the project site. However, an NAHC SLF search was positive for the presence of Native American cultural resources, as further discussed below.

Native American Heritage Commission and Tribal Correspondence

On January 12, 2018, Dudek contacted the NAHC to request a review of the SLF. The NAHC replied through email on February 20, 2018, stating that the results of the SLF search indicated the presence of Native American cultural resources within the project site and stated that the Pechanga Band of Luiseño Indians should be contacted for additional information on the resources identified within the project site. The NAHC provided a list of 25 Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the project site (see Appendix D, Table 3). Subsequent outreach letters were sent to all 25 Native American individuals and/or tribal organizations. This outreach was conducted for informational purposes only, and does not constitute formal government-to-government consultation as specified by Assembly Bill (AB) 52.

Assembly Bill 52 Consultation

Under AB 52, a tribal cultural resource must have tangible, geographically defined properties that can be impacted by project implementation. The project is subject to compliance with AB 52.

On October 29, 2018, the City of Murrieta (City) sent notification of the project to all California Native American tribal representatives that have requested project notifications from the City pursuant to AB 52 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area. These notification letters were sent to five tribes: the Agua Caliente Band of Cahuilla Indians, the Pechanga Band of Luiseño Indians, the Soboba Band of Luiseño Indians, the Rincon Band of Mission Indians and the Morongo Band of Mission Indians. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is assumed that consultation is declined. To date, government-to-government consultation initiated by the City has occurred with one tribe that requested consultation: Soboba Band of Luiseño Indians. Table 4.15-1 summarizes the results of the AB 52 consultation for the project.

Table 4.15-1. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification/Date	Response Received
Temet Aguilar, Chairperson Pauma Band of Luiseño Indians – Pauma & Yuima Reservation	Standard Mail; November 5, 2018	None to date
Scott Cozart, Chairperson Soboba Band of Luiseño Indians	Standard Mail; November 5, 2018	*Response received via email on January 8, 2019, from Joseph Ontiveros, Cultural Resource Department, and Jessica Valez, Cultural Resource Specialist
John Flores, Environmental Coordinator San Pasqual Band of Mission Indians	Standard Mail; November 5, 2018	None to date
Patricia Garcia-Plotkin, Director Agua Caliente Band of Cahuilla Indians	Standard Mail; November 5, 2018	*Response received via email on November 21, 2018, from tribal representative, Lacy Padilla, Archaeological Technician
Michael Garcia, Vice Chairperson Ewiiaapaayp Tribal Office	Standard Mail; November 5, 2018	None to date
Carrie Garcia, Cultural Resources Manager Soboba Band of Luiseño Indians	Standard Mail; November 5, 2018	*Response received via email on January 8, 2019, from Joseph Ontiveros, Cultural Resource Department, and Jessica Valez, Cultural Resource Specialist
Shasta Gaughen, Tribal Historic Preservation Officer Pala Band of Mission Indians	Standard Mail; November 5, 2018	None to date
Ralph Goff, Chairperson Campo Band of Mission Indians	Standard Mail; November 5, 2018	None to date
Jeff Grubbe, Chairperson Agua Caliente Band of Cahuilla Indians	Standard Mail; November 5, 2018	*Response received via email on November 21, 2018, from tribal representative, Lacy Padilla, Archaeological Technician
Julie Hagen Viejas Band of Kumeyaay Indians	Standard Mail; November 5, 2018	*Response received via standard mail on November 19, 2018, from tribal representative, Ray Teran, Resource Management
Lisa Haws, Cultural Resources Manager Sycuan Band of Kumeyaay Nation	Standard Mail; November 5, 2018	None to date
Allen E. Lawson, Chairperson San Pasqual Band of Mission Indians	Standard Mail; November 5, 2018	None to date
Mark Macarro, Chairperson Pechanga Band of Mission Indians	Standard Mail; November 5, 2018	None to date
Paul Macarro, Cultural Resources Coordinator Pechanga Band of Mission Indians	Standard Mail; November 5, 2018	None to date
Cody J. Martinez, Chairperson Sycuan Band of the Kumeyaay Nation	Standard Mail; November 5, 2018	None to date

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Native American Tribal Representatives	Method of Notification/Date	Response Received
Bo Mazzetti, Chairperson	Standard Mail;	*Response received via email on December 19, 2018, from
Rincon Band of Mission Indians	November 5, 2018	tribal representative, Destiny Colocho, Cultural Resource
		Manager, and Tribal Historic Preservation Officer.
Jim McPherson, Tribal Historic Preservation Officer	Standard Mail;	*Response received via email on December 19, 2018, from
Rincon Band of Mission Indians	November 5, 2018	tribal representative, Destiny Colocho, Cultural Resource
		Manager, and Tribal Historic Preservation Officer.
Javaughn Miller, Tribal Administrator	Standard Mail;	None to date
La Posta Band of Mission Indians	November 5, 2018	
Joseph Ontiveros, Cultural Resource Department	Standard Mail;	*Response received via email on January 8, 2019, from
Soboba Band of Luiseno Indians	November 5, 2018	Joseph Ontiveros, Cultural Resource Department, and Jessica
	A Tolophono: April 18, 2010	Valez, Cultural Resource Specialist.
	Telephone, April 18, 2019	Response indicated that the project site is within the tribe's
		traditional use area and requested formal consultation. The
		consultation was conducted via telephone, due to a missed in-
		person meeting, where the City's standard Tribal Cultural
		mitigation measures were discussed. As a result of the
		consultation, the City agreed to leave consultation open until
		circulation of the Draft Environmental Impact Report to ensure
	Other devel Mails	that mitigation measures to the tribe are acceptable.
Gwendolyn Parada, Chairperson	Standard Mall;	None to date
La Posta Band of Mission Indians	November 5, 2018	
Erica Pinto, Chairperson	Standard Mall;	None to date
Jamul Indian Village	November 5, 2018	
Robert Pinto, Chairperson	Standard Mall;	None to date
Ewiaapaayp Tribal Office	November 5, 2018	
Thomas Rodriguez, Chairperson	Standard Mail;	None to date
La Jolla Band of Luiseno Indians	November 5, 2018	
Angela Elliot Santos, Chairperson	Standard Mail;	None to date
Manzanita Band of Kumeyaay Nation	November 5, 2018	
Robert Welch, Chairperson	Standard Mail;	*Response received via standard mail on November 19,
Viejas Band of Kumeyaay Indians	November 5, 2018	2018, from tribal representative, Ray Teran, Resource
		I IVIANAGEMENT

Table 4.15-1. Assembly Bill 52 Native American Tribal Outreach Results

Note:

* Represents a response received from a tribal representative on behalf of a tribal organization and is listed for each Native American individual from that same tribe.

Vineyard III Retail Development Project

4.15.2 Relevant Plans, Policies, and Ordinances

State

California Public Resources Code

California Public Resources Code, Sections 5097–5097.6, provide that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. These sections prohibit the knowing destruction of objects of antiquity without a permit (express permission) on public lands, and provide for criminal sanctions. This section was amended in 1987 to require consultation with the NAHC whenever Native American graves are found. Violations that involve taking or possessing remains or artifacts are felonies.

California Public Resources Code, Section 5097.5, states that "no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historic feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands."

California Register of Historical Resources

The California Office of Historic Preservation maintains the California Register of Historical Resources (CRHR). The CRHR is the authoritative guide to the state's significant historic and archaeological resources. The program provides for the identification, evaluation, registration, and protection of California's historic resources. The CRHR encourages public recognition and protection of resources of architectural, historic, archaeological, and cultural significance; identifies historic resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protection to resources under the California Environmental Quality Act (CEQA).

The CRHR also has established context types to be used when evaluating the eligibility of a property or resource for listing. The four criteria are as follows:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- It is associated with the lives of persons important to local, California, or national history.
- It represents the work of a master, or possesses high artistic values.
- It has yielded, or is likely to yield, information important to prehistory or history of the local area, California, or the nation.

Similar to the National Register of Historic Places, eligibility for the CRHR requires an establishment of physical integrity. The CRHR's list of special considerations is less stringent than that of the National Register of Historic Places, providing allowances for relocated buildings, structures, or objectives as reduced requirements for physical integrity.

California Environmental Quality Act

The following CEQA statutes (California Public Resources Code, Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- California Public Resources Code, Section 21083.2(g) defines "unique archaeological resource."
- California Public Resources Code, Section 21084.1 and CEOA Guidelines Section 15064.5(a) • defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of a historical resource.
- California Public Resources Code, Section 21074(a) defines "tribal cultural resources."
- California Public Resources Code, Section 5097.98 and CEOA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- California Public Resources Code, Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code, Section 21084.1; CEQA Guidelines Section 15064.5[b]). If a site is listed or eligible for listing in the CRHR, or included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code, Section 5024.1[q]), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code, Section 21084.1; CEQA Guidelines Section 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code, Section 21084.1; CEQA Guidelines Section 15064.5[a]).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5[b][1]; California Public Resources Code, Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project does any of the following:

- (1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- (2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the California Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the California Public Resources Code, unless the public

agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (CEQA Guidelines Section 15064.5[b][2]).

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (California Public Resources Code, Sections 21083.2[a]–[c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (California Public Resources Code, Section 21083.2[g]).

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (California Public Resources Code, Section 21083.2[a]; CEQA Guidelines Section 15064.5[c][4]). However, if a non-unique archaeological resource qualifies as a tribal cultural resource (California Public Resources Code, Sections 21074[c] and 21083.2[h]), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Public Resources Code, Section 5097.98.

California State Assembly Bill 52

AB 52 of 2014 amended California Public Resources Code, Section 5097.94, and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California Public Resources Code. AB 52 established that tribal cultural resources must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American tribe and that is either:

- On or determined to be eligible for the California Register of Historical Resources or a local historic register; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

AB 52 formalizes the lead agency-tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the California Public Resources Code, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (California Public Resources Code, Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (California Public Resources Code, Section 21082.3[a]).

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains (Section 7050.5[b]). California Public Resources Code, Section 5097.98, also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact NAHC within 24 hours (Section 7050.5[c]). NAHC will notify the "most likely descendant." With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

County of Riverside General Plan

The County of Riverside General Plan Land Use Element specifies the following policies that pertain to the preservation of cultural resources (County of Riverside 2019):

- Policy LU 9.1 [Development should] Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.
- Policy LU 9.4 Allow development clustering and/or density transfers in order to preserve open space, natural resources, cultural resources, and biologically sensitive resources.

Murrieta General Plan 2035

The Conservation Element of the Murrieta General Plan 2035 specifies preservation of historical and cultural resources. The following policies that pertain to historical and cultural resources would apply to the project (City of Murrieta 2011):

- **Policy CSV-9.1** Identify and protect native trees, trees of historic or cultural significance, and mature trees, consistent with the Tree Preservation Ordinance.
- **Goal CSV-11** Murrieta protects, enhances, and celebrates archaeological, cultural, and historic resources as a way to foster community identity.
 - **Policy CSV-11.1** Promote the protection and preservation of archaeological, cultural, historical, and architecturally significant sites, structures, districts, Native American resources, and natural features throughout the community, consistent with the Cultural Resource Preservation Ordinance. Preferred methods of protection include avoidance of impacts, placing resources in designated open space and allocation of local resources and/or tax credits as feasible.
 - Policy CSV-11.2 Encourage appropriate adaptive reuse of historic structures and sites.
 - **Policy CSV-11.3** Promote the designation of eligible resources to the City Register of Cultural Resources, the County Landmarks Program, or other regional, state, or federal programs.
 - **Policy CSV-11.4** Encourage the development of programs to educate the community about Murrieta's historic resources and involve the community in historic preservation.
 - **Policy CSV-11.5** Comply with state and federal law regarding the identification and protection of archaeological and Native American resources, and consult early with the appropriate tribal governments.
 - **Policy CSV-11.6** Investigate the feasibility of establishing a museum or other repository to archive and display Murrieta's archaeological resources.
 - **Policy CSV-11.7** Maintain the position of archivist/historian at the Murrieta Public Library, and promote the Library's Heritage Room as a repository for historical information about the Murrieta area.
 - Policy CSV-11.8 Promote the use of historic elements in City parks and public places.
 - **Policy CSV-11.9** Exercise sensitivity and respect for all human remains, including cremations, and comply with all applicable state and federal laws regulating human remains.

4.15.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to tribal cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to tribal cultural resources would occur if the project would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.15.4 Impacts Analysis

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

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

Less-than-Significant Impact. A Cultural Resources Inventory Report (Appendix D) was prepared for the project, documenting the results of a CHRIS records search conducted for the project site and a 1-mile (1,608 meters) buffer, an NAHC SLF search, informal tribal consultation, and an intensive-level pedestrian survey. The CHRIS records search identified 46 previously recorded cultural resources within the 1-mile search radius; none of which intersect or overlap the project site. No historical resources listed or eligible for listing in the CRHR or in a local register of historic resources were identified during this search.

In a letter dated February 20, 2018, the NAHC stated that the SLF search was completed with positive results for the presence of Native American cultural resources within the project site and stated that the Pechanga Band of Luiseño Indians should be contacted for additional information on the resources identified within the project site. Informal outreach letters were sent to the 25 Native American individuals and/or tribal organizations suggested by the NAHC. Further, the City conducted formal AB 52 consultation (see response to 4.15.4 [b] below for further details on this process). No specific tribal cultural resources were identified by California Native American tribes as part of the City's AB 52 notification and consultation process.

No historical resources listed or eligible for listing in the CRHR or in a local register of historic resources were identified during informal or formal consultation with the tribes by the City, as a result of the CHRIS records search, the NAHC SLF search, or the intensive-level pedestrian survey. Therefore, the project would result in a less-than-significant impact to tribal cultural resources listed or eligible for listing as an historic resource as a result of the project.

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

Less-than-Significant Impact with Mitigation Incorporated. There are no resources in the project area that have been determined by the City to be significant pursuant to the criteria set forth in California Public Resources Code Section 5024.1. Further, no specific tribal cultural resources were identified in the project area by the NAHC through the SLF search or by the City as part of the AB 52 notification and consultation process. Informal outreach letters were sent to the Native American individuals and/or tribal organizations suggested by the NAHC, and in October 2018, the City sent notification of the project to all California Native American tribal representatives that requested project notifications pursuant to AB 52. These notification letters were sent to five tribes: the Agua Caliente Band of Cahuilla Indians, the Pechanga Band of Luiseño Indians, the Soboba Band of Luiseño Indians, the Rincon Band of Mission Indians, and the Morongo Band of Mission Indians. A tribal representative from one tribe, the Soboba Band of Luiseño Indians, requested to receive notifications from the City pursuant to AB 52 (see Section 4.15.1, Existing Conditions). It is possible that items of tribal significance could be uncovered during earthwork activities, thus, mitigation measures were developed in consultation with the consulting tribes. Adherence to mitigation measures **MM-TCR-1** through **MM-TCR-5** would reduce impacts to tribal cultural resources to less than significant.

4.15.5 Mitigation Measures

- **MM-TCR-1**: The project permittee/owner shall retain a Riverside County-certified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown cultural resources. Prior to grading, the project permittee/owner shall provide to the City verification that a certified archaeological monitor has been retained. Any newly discovered cultural resource deposits shall be subject to a cultural resources evaluation.
- **MM-TCR-2:** Archaeological Monitoring: At least 30-days prior to grading permit issuance and before any grading, excavation, and/or ground-disturbing activities on the site take place, the project permittee/owner shall retain a Riverside County-certified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.
 - 1. The Project Archaeologist, in consultation with consulting tribes, the permittee/owner, and the City, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include:
 - a. Project grading and development scheduling;
 - b. The development of a schedule in coordination with the permittee/owner and the Project Archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground-disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists; and,

- c. The protocols and stipulations that the permittee/owner, City, tribes, and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.
- 2. A final report documenting the monitoring activity and disposition of any recovered cultural resources shall be submitted to the City of Murrieta, Eastern Information Center and the consulting tribe within 60 days of completion of monitoring.
- **MM-TCR-3**: **Native American Monitoring:** Native American Tribal monitors shall also participate in monitoring of ground-disturbing activity. At least 30 days prior to issuance of grading permits, agreements between the permittee/owner and a Native American Monitor shall be developed regarding prehistoric cultural resources and shall identify any monitoring requirements and treatment of Tribal Cultural Resources so as to meet the requirements of CEQA. The monitoring agreement shall address the treatment of known Tribal Cultural Resources; the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation, and ground-disturbing activities; project grading and development scheduling.
- **MM-TCR-4**: **Disposition of Cultural Resources:** In the event that Native American cultural resources are inadvertently discovered during the course of grading for this project, one or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be submitted to the City of Murrieta Planning Department:
 - 1. Preservation-in-place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resource.
 - 2. On-site reburial of the discovered items as detailed in a Monitoring Plan. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments
 - 3. The permittee/owner shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources, and adhere to the following:
 - a. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 Code of Federal Regulations 800 Part 79 and therefore would be curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation; and,
 - b. At the completion of grading, excavation, and ground disturbing activities on-site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the Project Archaeologist and Native American Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during

the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Murrieta, Eastern Information Center and Consulting tribes.

MM-TCR-5: *Human remains:* If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendants(s)" for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations within 48 hours and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

4.15.6 Levels of Significance After Mitigation

MM-TCR-1 through **MM-TCR-5**, listed in Section 4.15.5, Mitigation Measures, would reduce potential impacts to tribal cultural resources to a less-than-significant level.

4.15.7 Cumulative Impacts

Cumulative impacts on tribal cultural resources evaluate whether impacts of the project and related projects, when taken as a whole, substantially diminish the number of tribal cultural resources within the same or similar context or property type. As discussed throughout this section, the project could have potentially significant impacts to unknown tribal cultural resources, and mitigation would be required to reduce adverse impacts to less than significant. It is anticipated that tribal cultural resources that are potentially affected by related projects would be subject to the same requirements of CEQA as the project, and that the project applicants would mitigate for their impacts, if applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the proposed project would not contribute to a cumulatively considerable impact associated with tribal cultural resources and cumulative impacts would be less than significant.

4.15.8 References Cited

City of Murrieta. 2011. "Chapter 8: Conservation Element." In Murrieta General Plan 2035. Adopted July 19, 2011.

County of Riverside. 2019. "Land Use Element." Chapter 3 in *County of Riverside General Plan*. Revised April 16, 2019. Riverside County Planning Department. Accessed March 2020. https://planning.rctlma.org/ Portals/14/genplan/2019/elements/Ch03_Land%20Use_041619.pdf.

4.16 Utilities and Service Systems

This section describes the existing utilities setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). This analysis was completed, in part, based on a Master Sewer Study (Appendix J-1) and a Master Water Study (Appendix J-2), which were prepared to assist Eastern Municipal Water District (EMWD) in its evaluation of impacts of the proposed project and the immediately adjacent projects (i.e., Vineyard I and Costco/Vineyard II [also referred to as the "related projects" for this analysis]) on water and sewer infrastructure in the vicinity of the project site. Additionally, this analysis is in part based on a Design Conditions Plan (formerly referred to as a Plan of Service) (EMWD 2019a) prepared by EMWD for the proposed project and related projects, which incorporates the Master Sewer Study (Appendix J-1) and Master Water Study (Appendix J-2). Lastly, this analysis references the project's Project-Specific Water Quality Management Plan (Appendix G-1) and the Hydrology/Hydraulics Study (Appendix G-2).

4.16.1 Existing Conditions

Wastewater

Sewer System

Eastern Municipal Water District

The proposed project would be in EMWD's service area for sewer services. EMWD wastewater collection systems include 1,534 miles of gravity sewer, 53 lift stations, and four regional water reclamation facilities (RWRFs) that treat municipal sewage and produce water for recycling, with interconnections between local collection systems serving each treatment plant. The four RWRFs—the San Jacinto Valley, the Moreno Valley, the Temecula Valley, and the Perris Valley—are spread throughout EMWD's service area. While the majority of the project's wastewater would be treated at the Perris Valley RWRF, interconnections between the local collections systems serving each treatment plant allow system operators to route wastewater to other RWRFs for operational flexibility and improved reliability. As presented in Table 4.16-1, in Fiscal Year (FY) 2018/2019, the Perris Valley RWRF treated 15,468 acre-feet of wastewater and has a current capacity of 24,600 acre-feet per year (AFY). In total, the four RWRFs treated 50,439 acre-feet of wastewater flows in FY 2018/2019 and have a combined capacity of 84,100 AFY.

Table 4.16-1. Eastern Municipal Water District Treatment Facilities - Capacity and Flow

Treatment Plant	Level of Treatment	Flow in Fiscal Year 2018/2019 (AFY)	Capacity (AFY)	Ultimate Capacity (AFY)
San Jacinto Valley RWRF	Secondary	6,725	15,700	30,300
Moreno Valley RWRF	Tertiary	12,554	17,900	46,000
Perris Valley RWRF	Tertiary	15,468	24,700	112,000
Temecula Valley RWRF	Tertiary	15,692	25,800	31,400
	Total	50,439	84,100	219,700

Source: EMWD 2020.

Notes: AFY = acre-feet per year; RWRF = regional water reclamation facility.

Project Vicinity

Within the immediate project vicinity, there is an existing 12-inch gravity sewer line located within Clinton Keith Road. As part of the Vineyard I project, an 8-inch gravity sewer line would be constructed within the future Warm Springs Parkway, located east of the project. Additionally, a sewer lateral would be extended from the future 8-inch sewer line within Warm Springs Parkway. Upon final buildout, wastewater from the project site would be conveyed by sewer lateral within the Vineyard I development, into the future 8-inch gravity sewer line within Warm Springs Parkway, and into the existing 12-inch gravity sewer line in Clinton Keith Road. The 12-inch gravity sewer line within Clinton Keith Road eventually flows to a 15-inch gravity sewer line in Whitewood Road, which in turn eventually flows to the Perris Valley RWRF.

Water

Eastern Municipal Water District

Water connection services within the City of Murrieta (City) are provided by four water districts: Rancho California Water District, Elsinore Valley Municipal Water District, Western Municipal Water District, and EMWD. The project site is within the service boundary of EMWD. EMWD serves a 555-square-mile service area in western Riverside County (County) and in most areas provides retail water and sewer service. EMWD also provides wholesale and retail water service to multiple subagencies including the Rancho California Water District.

As stated in EMWD's 2015 Urban Water Management Plan (EMWD UWMP) (revised 2016), EMWD has four sources of water supply: imported water from Metropolitan Water District of Southern California (MWD), local groundwater, desalinated groundwater, and recycled water (EMWD 2016). Delivery points for each source of water are located throughout the EMWD service area. Potable imported water is treated and delivered to EMWD directly from MWD's two large filtration plants. The Henry J. Mills (Mills) Water Treatment Plant treats water from Northern California and provides it to EMWD through two connection points located in the northeast portion of EMWD's service area. The Robert F. Skinner (Skinner) Water Treatment Plant treats a blend of Colorado River water and water from Northern California and provides it to EMWD through a connection point in the southwest portion of EMWD's service area. EMWD owns and operates two microfiltration plants that filter raw imported water delivered through MWD, removing particulate contaminants to achieve potable water standards. The two treatment plants-the Perris Water Filtration Plant and the Hemet Water Filtration Plant-are located in Perris and Hemet, respectively. Raw water from MWD is also used for groundwater replenishment in the eastern part of EMWD. EMWD and others can extract this water at a later date for beneficial uses. Untreated water from MWD used for agricultural purposes is delivered in the northeast for use by EMWD retail and wholesale accounts and in the south for Rancho California Water District agricultural accounts. EMWD produces potable and brackish groundwater from the San Jacinto Groundwater Basin that underlies the EMWD service area. Groundwater wells are mostly located within the San Jacinto Watershed and serve the northern portion of EMWD, with the largest amount of production taking place around the cities of Hemet and San Jacinto. EMWD owns and operates two desalination plants in Sun City-the Menifee Desalter and the Perris I Desalter-which treat brackish groundwater through reverse osmosis to achieve potable water standards. In addition to the potable system, EMWD maintains a regional recycled water system that provides tertiary-treated recycled water to customers for agricultural, landscape irrigation, environmental, and industrial use. EMWD's recycled water system consists of four regional RWRFs that treat municipal sewage and produce water for recycling. As stated in the EMWD UWMP, EMWD's recycled water distribution system includes 135 miles of large-diameter transmission pipelines, 6,000 acre-feet of surface storage reservoirs (10 separate sites), and four regional pumping plants.

As part of the EMWD UWMP, EMWD develops supply and demand forecasts to ensure that water needs will be met during average hydrology years, as well as during single year and multiple year drought periods. EMWD's supply and demand forecasts were developed using information about planned development and land use. To track new developments, EMWD updates a GIS database that tracks proposed development quarterly. While EMWD is constantly updating its water supply portfolio and developing local resources to meet future demand, it comprehensively updates its Urban Water Management Plan (UWMP) on a 5-year basis to include all new land use patterns and development.

According to the EMWD UWMP, EMWD has the supply needed to meet current and projected water demands through 2040 during normal, historic single-dry, and historic multiple-dry year periods. The conclusion is based on the assurances of MWD that it would be able to supply member agency demands, the reliability of local groundwater supplies achieved through groundwater management plans, and the development of recycled water resources. Therefore, according to the MWD UWMP and the EMWD UWMP, there is available water to meet all of the region's anticipated demand, even in historic single-dry, and historic multiple dry-years, as shown in Table 4.16-2.

Supply and D	emand	2020	2025	2030	2035	2040			
Average Year (Retail and Wholesale Combined)									
Supply totals		197,901	218,700	235,800	252,600	268,200			
Demand tota	ls	197,901	218,700	235,800	252,600	268,200			
Difference		0	0	0	0	0			
Historic Sing	le Dry-Year (Retail	and Wholesal	e Combined)						
Supply totals		224,800	248,600	268,100	287,200	305,000			
Demand totals		224,800	248,600	268,100	287,200	305,000			
Difference		0	0	0	0	0			
Historic Mult	Historic Multiple Dry-Years Scenario (Retail and Wholesale Combined)								
First Year	Supply totals	224,800	248,600	268,100	287,200	305,000			
	Demand totals	224,800	248,600	268,100	287,200	305,000			
	Difference	0	0	0	0	0			
Second	Supply totals	191,000	210,100	225,600		244000			
Year	Demand totals	191,000	210,100	225,600		244000			
	Difference	0	0	0	0	0			
Third Year	Supply totals	201,500	220,100	236,200	251,500	266600			
	Demand totals	201,500	220,100	236,200	251,500	266600			
	Difference	0	0	0	0	0			

Table 4.16-2. Supply and Demand	l Comparison (Acre-Feet per Year)
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Source: EMWD 2016.

This EIR relies upon the UWMP, which includes an analysis of the ability of EMWD to supply water to its retail service area customers, including for commercial uses, as well as its wholesale customers, during the 20-year period analyzed by the UWMP; the likelihood of the water's availability; and the reliability of that water supply.

Recycled water production and sales reduce the demand for imported water and provide a sustainable supply. EMWD's continued investment in improved facilities will continue to grow the market for recycled water, and innovative planning and recycled water management will allow EMWD's recycled water supply to bring an even

greater benefit to the service area. In addition to the development of local resources, EMWD promotes the efficient use of water. Through the implementation of local ordinances, conservation programs, and an innovative tiered pricing structure, EMWD is reducing demand by retail accounts. Reducing demand allows existing and proposed water supplies to stretch farther and reduces the potential for water supply shortage (EMWD 2016).

While Policy INF-2.3 of the Murrieta General Plan 2035 (General Plan) states that it is a policy of the City to require installation of recycled water systems for landscaping unless there is an exemption from the applicable water district, EMWD has determined that the project is not a candidate for recycled water due to the absence of recycled water infrastructure within the project area (EMWD 2019a).

Project Vicinity

Within the immediate project vicinity, there is an existing 24-inch water line within the vacated portion of Antelope Road, which connects to an 18-inch water line located within Clinton Keith Road. The project site would connect laterally to the existing 24-inch water line in the vacated portion of Antelope Road.

Stormwater

Surface runoff from the project site flows toward a network of improved and natural streams, storm channels, storm drains, and catch basins. These facilities are maintained by the Riverside County Flood Control and Water Conservation District and the City. Regional master-planned facilities are owned and maintained by the Riverside County Flood Control and Water Conservation District, and all non-master-planned facilities are maintained by the City. The drainage facility in the vicinity of the project site flows to Murrieta Creek through the Interstate 215/Clinton Keith Road interchange in approximately 4.7 miles of public storm drain and open vegetated channel. Murrieta Creek extends approximately 14 miles to the Santa Margarita River, which eventually drains to the Pacific Ocean. Murrieta Creek remains in a semi-natural state, with areas of substantial native vegetation occurring along portions of each.

To minimize detrimental effects of stormwater pollution, the City implements a Stormwater Management Plan that identifies methods to reduce potential stormwater runoff and the contribution of pollutants to the storm drain system from industrial, commercial, residential, and municipal sources (City of Murrieta 2011a).

Solid Waste

Solid Waste Collection and Disposal Systems

The collection, transport, and disposal of solid waste and recyclables from business uses in the City are provided by Waste Management Incorporated. The majority of solid waste generated within the City is disposed of at El Sobrante Landfill. The El Sobrante Landfill is located midway between Lake Elsinore and Corona along Interstate 15. Badlands Sanitary Landfill and Lamb Canyon also dispose of a significant portion of the City's solid waste. These three landfills have a combined remaining capacity of 161 million tons, as shown in Table 4.16-3.

Table 4.16-3. Existing Landfills

Landfill	Location	Estimated Close Date	Maximum Permitted Daily Load (tons/day)	Maximum Permitted Capacity (cubic yards)	Current Remaining Capacity (cubic yards)
Badlands Landfill	31125 Ironwood Avenue Moreno Valley, California	2022	4,800	34.4 million	15.7 million as of January 2015
El Sobrante Landfill	10910 Dawson Canyon Road Corona, California	2051	16,054	209.9 million	143.9 million as of April 2018
Lamb Canyon Landfill	16411 Lamb Canyon Road (State Route 79) San Jacinto, California	2029	5,000	38.9 million	19.2 million as of January 2015
		Total	25,854	283.2 million	178.8 million

Sources: CalRecycle 2019a, 2019b, 2019c.

Electric Power

Southern California Edison (SCE) provides electricity to the project. SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and Southern California. According to the California Public Utilities Commission (CPUC), approximately 84 billion kilowatt-hours of electricity were used in SCE's service area in 2017. Demand forecasts anticipate that approximately 75 billion kilowatt-hours of electricity will be used in SCE's service area in 2020 (CPUC 2018). In 2017, the non-residential electricity demand was 8,346,000 megawatt-hours for the County (CEC 2019a).

SCE receives electric power from a variety of sources. According to CPUC's 2018 California Renewables Portfolio Standard Annual Report, 32% of SCE's power came from eligible renewables, such as biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2018). The California Energy Commission estimates that about 29% of the state's electricity retail sales in 2017 came from renewable energy (CEC 2019a). The California Renewables Portfolio Standard (RPS) Program establishes a goal for California to increase the amount of electricity generated from renewable energy resources to 20% by 2010, and to 33% by 2020. Recent legislation revised the current RPS target for California to obtain 50% of total retail electricity sales from renewable sources by 2030, with interim targets of 40% by 2024, and 45% by 2027 (CPUC 2016).

The City is served by a total of three existing substations, with the substation serving the project site being the Auld Substation, located east of the project site at the southwest intersection of Clinton Keith Road and Auld Road (SCE 2020a). The Auld Substation transforms an incoming 115-kilovolt electrical current into a 12-kilovolt current, which is distributed to the substation's end users via a network of underground and aboveground electrical lines. The Auld Substation has a total generation capacity of 35.19 megawatts, and currently generates 31.77 megawatts.

In order to ensure to ensure projected supply meets demand, SCE tracks planned development and coordinates with the California Independent System Operator. The California Independent System Operator is an independent grid operator that manages the flow of electricity across 80% of California (including the project site). Every 5 minutes, the California Independent System Operator forecasts electrical demand and dispatches the lowest cost generator to meet demand while ensuring enough transmission capacity for delivery of power.

Project Vicinity

Within the immediate vicinity of the project site, existing 12-kilovolt electrical lines are located within the portion of Antelope Road south of Linnel Lane to the project's northern boundary at the cul-de-sac of Antelope Road.

SCE has determined that portions of its existing infrastructure serving the project area are near or at their operating limits, and SCE is in the planning process to construct improvements in the area to maintain sufficient capacity for system reliability (SCE 2020b). SCE has initiated the process to expand transmission in the general project area. Notably, the Valley South Subtransmission Line Project, which will serve the project area, has been approved and is under construction.

The Valley South Subtransmission Project will upgrade the existing electrical infrastructure in the project area and improve overall electrical reliability. Construction of this transmission project is anticipated to be completed in late 2020. Upon completion, the Valley South Subtransmission Project would add electric capacity to serve long-term forecasted electrical demand requirements in the "electrical needs area" of Menifee, Murrieta (including the project site), Temecula, Wildomar, and portions of unincorporated communities of southwestern Riverside County.

The Valley Ivyglen Subtransmission Line Project and the Fogarty Substation Project are other approved SCE projects under construction that will increase the capacity of SCE's system in the greater project area. SCE will continue to monitor development in the greater project area, and will plan for other expanded transmission projects as needed. Any potential impacts associated with construction of other additional future transmission facilities (if needed) will be analyzed in accordance with the California Environmental Quality Act (CEQA) by the CPUC, which is the lead agency tasked with approval of projects involving construction of investor-owned utilities infrastructure.

Natural Gas

Natural gas service is provided by the Southern California Gas Company (SoCalGas). The territory serviced by SoCalGas encompasses approximately 20,000 square miles and more than 500 communities. In the California Energy Demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas's service territory. As of 2017, approximately 7.2 billion therms were used in SoCalGas's service area per year, or 19.7 million therms per day. At project build-out (2021), natural gas demand is anticipated to be approximately 7.9 billion therms per year, or 21.6 million therms per day, in SoCalGas's service area (CEC 2019b). The total capacity of natural gas available to SoCalGas in 2016 is estimated to have been 3.9 billion cubic feet per day. In 2021, the total capacity available is also estimated to be 3.9 billion thousand British thermal units (kBTU) per day, 39.8 million therms per day. Over the course of a year, the available capacity would therefore be 14.5 billion therms per year, which is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas.

Project Vicinity

Within the immediate vicinity of the project site, there is an existing 6-inch gas line located within Clinton Keith Road (Excel Engineering 2019). The project would connect laterally to this existing gas line.

¹ One cubic foot of natural gas has approximately 1,020 British thermal units (BTUs) of natural gas or 1.02 kBTUs of natural gas.

Telecommunications

There are a number of service providers in the City that provide telecommunications services (i.e., landline phone service, internet service, and cable television service), including Frontier Communications and Time Warner Cable. These companies are private companies that provide connections to their communication systems on an as-needed basis, and maintain existing infrastructure in the vicinity of the project site. Telecommunication service) and Time Warner Cable site would be provided by Frontier Communications (landline phone service and internet service) and Time Warner Cable (cable television service).

Project Vicinity

Within the immediate vicinity of the project site, Frontier Communications maintains an existing telephone line within Clinton Keith Road. Time Warner Cable maintains existing underground fiber optic lines under the vacated portion of Antelope Road through the project site and along the frontage of the project along Clinton Keith Road. The Frontier telephone line would be connected to laterally from Clinton Keith Road. The Time Warner Cable television line would be connected to directly from its location within the vacated portion of Antelope Road and along the frontage of Clinton Keith Road.

4.16.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

In 1972, the federal Water Pollution Control Act (Clean Water Act [CWA]) was amended to prohibit the discharge of pollutants to navigable waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The CWA focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The CWA was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial stormwater discharges. In November 1990, the U.S. Environmental Protection Agency published final regulations that establish application requirements for specific categories of industries, including construction projects that encompass 5 acres or more of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those 1 acre or larger. The regulations require that stormwater and non-stormwater runoff associated with construction activity that discharges either directly to surface waters or indirectly through Municipal Separate Storm Sewer Systems must be regulated by an NPDES permit.

National Pollutant Discharge Elimination System

The City is under the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB) Region 9, which implements the NPDES permit for San Diego, Imperial, and Riverside Counties. The Municipal NPDES permit, a requirement under the CWA, addresses pollution from urban runoff that impacts water quality of receiving waters (such as streams and lakes). Under the NPDES permit, developers must implement measures to reduce urban runoff during all phases of development: planning, construction, and existing uses. Requirements include incorporating best management practices (BMPs) to reduce runoff from construction and current uses, reporting any violations to the San Diego RWQCB, and education regarding the negative water quality impacts of urban runoff.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (40 CFR 268, Subpart D) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

Porter-Cologne Water Quality Control Act

In the State of California, the State Water Resources Control Board (SWRCB) and nine RWQCBs are responsible for implementing the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act authorizes the SWRCB to implement programs to control polluted discharges into state waters. In compliance with the Porter-Cologne Act, the nine RWQCBs establish the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharge.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a sewer system management plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system. EMWD's most recent sewer system management plan was approved by EMWD's Board of Directors in 2019 (EMWD 2019b). The sewer system management plan provides EMWD staff with an operational plan to safely operate its wastewater treatment system, and includes protocols to satisfy state regulatory requirements.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

Senate Bill (SB) 610 and SB 221, amended into state law effective January 1, 2002, require the linkage between certain land use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record to serve as evidentiary basis for an approval action by the city or county on such projects. Under SB 610, a water supply assessment must be furnished to the local government for inclusion in any environmental documentation for certain types of projects, as defined in Water Code Section 10912 [a] and as subject to CEQA. A fundamental source document for compliance with SB 610 is the UWMP. The UWMP can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, requiring applicants, per a tentative map, to verify that the public water supplier has sufficient water available to serve the proposed development.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design

of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and nonresidential buildings. CALGreen standards are updated periodically. The latest version became effective on January 1, 2020.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Diversion of 65% of construction and demolition waste from landfills.

California Code of Regulations Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the California Energy Commission to demonstrate compliance with standards. New appliances regulated under Title 20 include, but are not limited to, refrigerators, freezers, air conditioners, dishwashers, clothes washers and dryers, cooking products, televisions, and consumer audio and video equipment. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal standards for federally regulated appliances, state standards for federally regulated appliances.

Executive Order B-29-15

In response to the ongoing drought in California, Executive Order (EO) B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000, and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting

system by local jurisdictions under California Integrated Waste Management Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered the statewide crisis it once was. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfill operations and solid waste facilities.

In 2011, AB 341 was passed, requiring CalRecycle to require that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Senate Bill 1374: Construction and Demolition Waste Reduction

SB 1374 requires that annual reports submitted by local jurisdictions to CIWMB include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 required the CIWMB to adopt a model ordinance suitable for adoption by any local agency that required 50% to 75% diversion of construction and demolition waste materials from landfills by March 1, 2004. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CIWMB's model by default. However, adoption of such an ordinance may be considered by CIWMB when determining whether to impose a fine on a jurisdiction that has failed to implement its Source Reduction and Recycling Element.

Assembly Bill 1826: Mandatory Commercial Organics Recycling

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. (Organic waste is defined as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.) This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings that consists of five or more units. This law phases in the mandatory recycling of commercial organics over time. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to recycle organic waste.

California Code of Regulations, Titles 14 and 27

Title 14 (Natural Resources, Division 7) and Title 27 (Environmental Protection, Division 2 [Solid Waste]) of the California Code of Regulations govern the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

Protection of Underground Infrastructure

California Government Code, Section 4216 et seq., requires an excavator to contact a regional notification center (e.g., Underground Service Alert or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert Southern California, the regional notification center for Southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of a project site. Representatives of the utilities, once notified, are required to mark the specific locations of their facilities within the work area prior to the start of project activities.

Local

Water Quality Control Plans

The Porter-Cologne Act, Section 13000, directs each RWQCB to develop a water quality control plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory program. The project site is located within the purview of the San Diego RWQCB, Region 9, and the proposed project must comply with applicable elements of the Basin Plan for Region 9. The Basin Plan gives direction on the beneficial uses of state waters, describes the water quality that must be maintained, and provides programs necessary to achieve the standards established in the Basin Plan.

Stormwater Pollution Prevention Plans

The SWRCB administers the NPDES permit program regulating stormwater from construction activities for projects with a disturbed area of 1 acre or more. The SWRCB has issued a statewide general NPDES permit for stormwater discharges from construction sites (Order No. 2009-0009-DWQ, as amended; NPDES No. CAS000002). Under this Statewide General Construction Activity permit, discharges of stormwater from construction sites with a disturbed area of 1 acre or more are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Statewide General Construction Activity permit. In order to obtain coverage under the Statewide General Construction Activity permit, a Notice of Intent must be filed with the SWRCB, and a stormwater pollution prevention plan must be developed and implemented. The stormwater pollution prevention plan must be developed and must be implemented during construction. The stormwater pollution prevention plan must also list BMPs to be implemented on the construction site to protect stormwater runoff and must contain a visual monitoring program, a chemical monitoring program, and a monitoring plan if the site discharges directly to a water body listed on the state's list of impaired waters.

EMWD Facilities Master Plan and Capital Improvement Plan Efforts

EMWD addresses its long-term planning efforts through the development of a long-term capital plan, which serves as a fundamental roadmap of required water, recycled water, and water reclamation facilities needed to support the build out of existing jurisdictional general plans throughout its service area. EMWD's Long-Term Capital Plan relies on EMWD's four facilities master plans, which include the Water Facilities Master Plan, Recycled Water Facilities Master Plan, Wastewater Facilities Master Plan, and Regional Water Reclamation Facilities Master Plan. These four facilities master plans are based on historical and projected demands in the EMWD's service area, and are used to assess EMWD's ability to meet future and current needs, assess the need for system upgrades, and identify future system improvements needed to satisfy current and future user demand. The four facilities master plans are used as the basis for developing a 5-Year, 10-Year, and Build-Out Capital Improvement Program (CIP). Within EMWD's CIPs, EMWD identifies the water, sewer, recycled water, and other infrastructure projects that will be necessary to accommodate future build-out of the jurisdictional general plans in its service area. Additionally, each year, EMWD updates its CIPs based on the then-current available growth information, which includes a comprehensive list of all development projects in its service area. This process ensures the list of CIP projects needed to accommodate

growth are developed just in time, while allowing EMWD to be flexible and responsive to development patterns. CIP projects are subject to approval by EMWD's Board of Directors, and EMWD, as the lead agency, is responsible for environmental review pursuant to CEQA as projects are implemented.

Urban Water Management Plans

Urban water purveyors are required to prepare and update a UWMP every 5 years. UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in an UWMP. UWMPs must be updated and submitted to the California Department of Water Resources every 5 years for review and approval. The proposed project site is within the area addressed by the EMWD UWMP. The site is also located within the area covered by the MWD UWMP, another relevant water planning document. The EMWD UWMP takes into account the projections and findings of the MWD UWMP. The UWMP Act (California Water Code Section 10631) specifies the data necessary to document the existing and projected future water demand over a 20-year planning horizon and requires that the projected demands be presented in 5-year increments.

Integrated Regional Water Management Plans

UWMPs serve as building blocks for integrated regional water management plans (IRWMPs). IRWMPs define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMPs generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. They address the challenges for delivering a stable and clean supply of water for the public, addressing stormwater and urban runoff water quality, providing flood protection, meeting water infrastructure needs, maximizing the use of reclaimed water, enhancing water conservation, and promoting environmental stewardship.

During the planning process, all stakeholders, including water distributors and purveyors, regional waterworks and sanitation districts, local public works departments, environmental organizations, nonprofits, and other vested interests work together to develop common goals, objectives, and strategies. Since water-related issues are addressed on a regional, watershed basis, these plans are instrumental in building consensus among the various stakeholders in the development and prioritization of an action plan that is complementary and leverages inter-jurisdictional cooperation, resources, and available funding. The project site is within the Upper Santa Margarita IRWMP area. The IRWMP for this area was last updated in 2014.

Riverside County Flood Control and Water Conservation District – Master Drainage Plans and Area Drainage Plans

Stormwater from the project site would ultimately flow into Murrieta Creek, which are regional master-planned facilities owned and maintained by the Riverside County Flood Control and Water Conservation District (RCFCWCD 2020). Master-planned facilities that are owned and operated by the Riverside County Flood Control and Water Conservation District are subject to the district's Master Drainage Plans and Area Drainage Plans. Master drainage plans addresses the current and future drainage needs of a given community and were created with the intention of providing for the orderly development of the County's drainages. Master Drainage Plans also establish Area Drainage Plan fees for a given community, which prevent existing taxpayers from having to shoulder the burden of land development costs. Accordingly, an Area Drainage Plan is a financing mechanism used to offset

taxpayer costs for proposed drainage facilities. The fees are imposed on new development within the Area Drainage Plan area. Because the project would contribute stormwater into Murrieta Creek (which is a facility within the Murrieta Valley sub-watersheds and part of the Murrieta Creek Area Drainage Plan), the project would be responsible for payment of fees pursuant to the Murrieta Creek Area Drainage Plan (RCFCWCD 1986).

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989, also known as AB 939, requires that each city or county prepare a new integrated waste management plan. The act further required each city to prepare a Source Reduction and Recycling Element by July 1, 1991. Each Source Reduction and Recycling Element includes a plan for achieving a solid waste reduction goal of 25% by January 1, 1995, and 50% by January 1, 2000. A number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act were adopted, including a revision to the statutory requirement for 50% diversion of solid waste. In 2011, AB 341 was passed, requiring CalRecycle to require local agencies to include strategies to enable the diversion of 75% of all solid waste by 2020. In 2017, the City's and County's reported waste diversion rate were in compliance with disposal rate requirements in the Integrated Waste Management Act (Ramaiya, pers. comm. 2019; CalRecycle 2019d).

Landscaping Standards and Water Efficient Landscaping

The City Municipal Code Section 16.28 – Landscaping Standards and Water Efficient Landscaping, is in place to promote water efficient landscaping and conservation through the use of appropriate technology and management. The following list identifies general provisions of this ordinance (City of Murrieta 1997a):

- A. All landscape plan approvals are subject to and dependent upon the applicant complying with all applicable city ordinances, codes, regulations, and adopted policies.
- B. If the water purveyor for a proposed project has adopted more restrictive water efficient landscaping requirements, all landscaping and irrigation plans submitted shall comply with the water purveyor's requirements. Said plans shall be accompanied by a written document from the water purveyor delineating the more restrictive requirements.
- C. Landscape design shall facilitate the implementation of landscape maintenance practices which foster long-term water conservation and plant viability. These practices may include, but not be limited to, scheduling irrigation based on established industry standards, conducting irrigation audits and establishing a water budget to limit the amount of water applied per landscape acre.
- D. Landscaping for fuel modification zones shall be subject to standards required by the City's Fire Department, and they shall include plant materials, plant spacing, and irrigation as directed by the Fire Department, in consultation with the Community Development Department, and/or Community Services Department.
- E. Landscaping adjacent to the Western Riverside County Multi-Species Habitat Conservation Plan ("MSHCP") conservation areas shall avoid invasive species as listed in the MSHCP.
- F. To the extent feasible, existing mature trees that represent the existing significant landscaping elements shall be preserved as identified in Chapter 16.42 (Tree Preservation).
- G. In the event covenants, conditions, and restrictions are required by the city for any permit subject to this chapter, a condition shall be incorporated into any project approval prohibiting the use of water-intensive landscaping and requiring the use of low water use landscaping pursuant to the provisions of this chapter in connection with common area/open space landscaping. Additionally, such a condition shall also require the covenants, conditions, and restrictions to incorporate provisions concerning landscape

irrigation system management and maintenance. Covenants, conditions, and restrictions shall not prohibit use of low-water use plants. Covenants, conditions, and restrictions shall not prohibit the replacement of natural turf with less water-intensive plant species.

The following EMWD water conservation policies, practices, and procedures were originally adopted in 1991, and have been periodically modified to provide long-term water reliability for existing and future customers (EMWD 2019c):

- 1. Hosing down driveways and other hard surfaces is prohibited except for health or sanitary reasons.
- 2. Repair water leaks within 48 hours of occurrence.
- 3. Irrigate landscape only between 9:00 p.m. and 6:00 a.m. except when:
 - a. manually watering;
 - b. establishing new landscape;
 - c. temperatures are predicted to fall below freezing;
 - d. it's for very short periods of time to adjust or repair an irrigation system.
- 4. Unattended irrigation systems using potable water are prohibited unless they are limited to no more than fifteen (15) minutes watering per day, per station. This limitation can be extended for:
 - a. Very low flow drip irrigation systems when no emitter produces more than two (2) gallons of water per hour.
 - b. Weather based controllers or stream rotor sprinklers that meet 70% efficiency.
 - c. Run-off or over watering is not permitted in any case.
- 5. Irrigation systems operate efficiently and avoid over watering or watering of hardscape and the resulting runoff.
- 6. Excessive water flow or runoff is prohibited.
- 7. Decorative fountains must be equipped with a recycling system.
- 8. Allowing water to run while washing vehicles is prohibited.
- 9. Install new landscaping with low-water demand trees and plants. New turf shall only be installed for functional purposes.
- 10. Watering during rain is prohibited.
- 11. The requirements listed above should be followed at all times.

Mandatory Water-Efficient Landscaping Requirements

EMWD's water conservation policies, practices, and procedures also include Mandatory Water-Efficient Landscaping Requirements, identified below (EMWD 2019c):

- EMWD requires a separate dedicated meter for all landscape areas greater than or equal to 3,000 square feet, except for single family residential accounts.
- The efficient use of water should be considered in the design of any new landscape area. The District [EMWD] will calculate an Annual Maximum Allowable Water Budget (AMAWB) for customers that request a new account.
- Prior to the issuance of a meter, the new customer shall calculate a water budget for each landscape area and submit it to the District [EMWD] for review.
- New accounts that have to comply with similar or more stringent water use efficiency measures imposed by County and/or City Ordinances, do not need to comply with the above requirements, but do need to provide information about the landscape areas to the District [EMWD].

Water Shortage Contingency Plan (Title 5, Article 10 EMWD Administrative Code)

In accordance with Water Code 10632 requirements, EMWD is responsible for conserving the available water supply, protecting the integrity of water supply facilities, and implementing a contingency plan in times of drought, supply reductions, failure of water distribution systems, or emergencies.

Therefore, EMWD adopted the Water Shortage Contingency Plan to regulate the delivery and consumption of water use during water shortages. EMWD's Board of Directors has the authority to initiate or terminate the water shortage contingency measures described in the Water Shortage Contingency Plan.

EMWD will implement an appropriate stage based on current water conditions, such as the following:

- EMWD water supply conditions and storage levels.
- Statewide water supply conditions.
- Local water supply and demand conditions.
- MWD Water Supply Allocation Plan implementation or other actions requiring a reduction in water demand.
- Actions by surrounding agencies.

Higher stages will be implemented as shortages continue and/or if customer response does not bring about desired water savings. Restrictions, penalties, and enforcement will build on each other as higher stages are implemented.

City of Murrieta – Sewer Connection Fees

In the City, each water district is responsible for collecting connection and user fees for the purpose of increasing the strength or quantity of wastewater discharged from connected facilities. The connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewer system to accommodate a development project. Payment of connection fees is required before sewer connection permits are issued.

City of Murrieta Solid Waste/Recyclable Materials Storage

The City Municipal Code Ordinance 16.18.150 provides standards for the provision of solid waste and recyclable material storage areas in compliance with state law (California Solid Waste Reuse and Recycling Access Act, Public Resources Code Sections 42900–42911). The ordinance requires the following minimum storage area for nonresidential structures: 12 square feet for solid waste and 12 square feet for recycling (total 24 square feet) per 5,000 square feet of a nonresidential structure. Every 25,000 square feet beyond 100,000 square feet requires an additional 48 square feet for solid waste and 48 square feet for recyclables (City of Murrieta 1997b).

Murrieta General Plan 2035 Goals and Policies

The City's General Plan contains goals and policies relevant to water, sewer, stormwater, and energy infrastructure. The Infrastructure Element establishes goals and policies for effective service and facilities planning and maintenance (City of Murrieta 2011a). The Conservation Element contains goals and policies related to the efficient use of resources provided by utilities in the City (City of Murrieta 2011b). The following goals and policies pertaining to municipal utilities and resources may be applicable to the proposed project (City of Murrieta 2011a, 2011b):

Infrastructure Element

- **Goal INF-1** New development and redevelopment is coordinated with the provision of adequate infrastructure for water, sewer, storm water, and energy.
 - **Policy INF-1.1** Encourage future development to occur in areas where infrastructure for water, sewer, and storm water can most efficiently be provided.
 - **Policy INF-1.2** Discourage development in areas without connections to existing infrastructure, unless infrastructure is being provided.
 - **Policy INF-1.4** Ensure that new development and redevelopment provides infrastructure for water, sewer, and storm water that adequately serves the proposed uses, and that has been coordinated with affected infrastructure providers.
 - **Policy INF-1.5** Continue to require new development and redevelopment to provide verification that energy utilities are able to accommodate the additional demand for service.
 - **Policy INF-1.7** Encourage the preparation and updates of master plans by the appropriate providers or agencies to conduct detailed long-range planning to ensure the efficient provision of public services, infrastructure, and/or utilities.
 - **Policy INF-1.8** Consult with water districts and Riverside County Flood Control and Water Conservation District (RCFCWCD) to ensure that fee structures are sufficient for new development and redevelopment to pay its fair share of the cost of infrastructure improvements for water, sewer, and storm water.
 - **Policy INF-1.11** Ensure sufficient levels of storm drainage service are provided to protect the community from flood hazards and minimize the discharge of materials into the storm drain system that are toxic or which would obstruct flows.
 - **Policy INF-1.13** Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.
- Policy INF-1.14 Continue to participate with other agencies on public education and outreach materials for countywide distribution to focus on public education and business activities with the potential to pollute. Distribute Best Management Practices (BMP) guidance for business activities, including but not limited to, mobile detailing, pool maintenance, restaurant cleaning operations, and automotive service centers.
- **Policy INF-1.17** Consider incorporating water quality features into new or redevelopment projects with sufficient land area. These features could address both project-specific and other local impacts.
- **Policy INF-1.18** Minimize the adverse effects of urbanization upon drainage and flood control facilities.
- **Policy INF-1.19** Encourage the City and the Riverside County Flood Control and Water Conservation District to improve the storm drain system in a way that respects the environment.
- **Policy INF-1.21** Encourage the use of specific plans, development agreements, or mechanisms that specify the nature, timing, cost, and financing mechanisms to be used to fund water, wastewater, and/or storm drainage improvements and services.
- **Goal INF-2** Infrastructure for recycled water is expanded throughout Murrieta for irrigation and other non-potable uses.
 - **Policy INF-2.3** Continue to require installation of recycled water systems for landscaping, unless there is an exemption from the applicable water district.

Conservation Element

- **Goal CSV-1** A community that conserves, protects, and manages water resources to meet long-term community needs, including surface waters, groundwater, imported water supplies, storm water, and waste water.
 - **Policy CSV-1.2** Promote the maximization of water supplies through conservation, water recycling, and groundwater recharge.
- **Goal CSV-2** Murrieta promotes compliance with requirements from the State and appropriate agencies regarding comprehensive water conservation measures in buildings and landscaping.
 - **Policy CSV-2.1** Ensure that all developments comply with water efficiency requirements, as mandated by the applicable Building Code.
 - **Policy CSV-2.4** Promote water efficient landscaping practices through outreach efforts, project review, and enforcement of City, regional or State code requirements.
- **Goal CSV-3** A community that participates in a multi-jurisdictional approach to protecting, maintaining, and improving water quality and the overall health of the watershed.

- **Policy CSV-3.2** Promote storm water management techniques that minimize surface water runoff in public and private developments.
- **Policy CSV-3.3** Utilize low-impact development (LID) techniques to manage storm water through conservation, on-site filtration, and water recycling, and continue to ensure compliance with the NPDES permit

4.16.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if the project would:

- 1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- 2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- 3. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- 4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- 5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.16.4 Impacts Analysis

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

Construction of New Utility Lines

Less-than-Significant Impact. As discussed in Section 4.16.1, Existing Conditions, existing utility service lines are located within the vicinity of the project site. As part of the project, utility service lines, including those for water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications services would be extended from their current locations nearby the project site to the proposed buildings. Given that the activity of connecting utilities from their current locations (i.e., within Clinton Keith Road and Antelope Road) to the project site would require ground disturbance and the use of heavy machinery associated with trenching, the installation of these utility service lines could potentially result in environmental effects. However, the extension of these utility service lines is part of the proposed project are already accounted for in this EIR as part of the impact assessment conducted for the entirety of the project. Additionally, the project would be required to comply with all regulatory requirements and mitigation measures outlined within this EIR for the purposes of mitigating impacts associated with trenching activities and the use of heavy machinery. No adverse physical effects beyond those already disclosed in this EIR would occur as a result of implementation of the project's proposed utility system connections.

Capacity of Water, Wastewater Treatment, Storm Water Drainage, Electric Power, Natural Gas, and Telecommunications Facilities

Less-than-Significant Impact. As discussed in further detail below, other than lateral connections to nearby utility mains, the project would not require the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities for the purposes of servicing the project. As such, impacts would be less than significant.

Water Service

A Master Water Study (Appendix J-2) was prepared to assist EMWD in its evaluation of the impacts of the proposed project and certain of the immediately adjacent related projects (i.e., Vineyard I and Costco/Vineyard II projects) on existing water service in the project area. The Master Water Study included an estimation of projected water usage by the three projects and a hydraulic analysis to evaluate the performance of the existing water distribution system with the additional water demand. Water demand calculations were completed in accordance with the EMWD Water System Planning & Design Principal Guidelines and Criteria (EMWD 2007).

Under the future demand conditions of the projects evaluated in the Master Water Study, the existing waster distribution system showed no deficiencies. Calculations indicated the greatest demand would occur when maximum daily demand and fire flows combined. Under this scenario, the Master Water Study found that the existing water distribution system would be able to provide a residual 50.5 pounds per square inch of pressure, well above required the minimum requirement of 20 pounds per square inch residual, as required by EMWD's Water System Planning & Design Principal Guidelines and Criteria. There is an existing 24-inch water line traversing through the project in the vacated portion of Antelope Road from which domestic and fire water will be accessed from. As a result, the project would not directly require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. As such, impacts are considered less than significant, and no mitigation is required.

Wastewater Collection Facilities

A Master Sewer Study (Appendix J-1) was prepared to assist EMWD in its evaluation of the impacts of the proposed project and certain of the immediately adjacent related projects (i.e., Vineyard I and Costco/Vineyard II projects) on existing sewer infrastructure in the project area. The Master Sewer Study included a calculation of sewage generation by existing developments in the project area and a hydraulic analysis to evaluate the performance of the existing sewage conveyance system with the additional input of the project. The Master Sewer Study follows a methodology provided in the EMWD 2006 Master Plan Update.

Under the future conditions of the project and other proposed projects, sewage would be conveyed via new onsite sewer laterals with connection to an existing 8-inch sewer pipe within Clinton Keith Road, and subsequently to a 15-inch pipe in Whitewood Road, south of the project site. Based on the hydraulic analysis performed in the Master Sewer Study, total future sewage generation at the downstream connection point in Whitewood Road is calculated to be 2.2.189 cubic feet per second. With the capacity of the existing 15-inch-diameter sewer line in Whitewood Road known to be 2.392 cubic feet per second, the Master Sewer Study concluded that the existing lines are adequate to serve the project and the adjoining related projects (Vineyard I and Costco/Vineyard II). Therefore, impacts would be less than significant. No mitigation is required.

Wastewater Treatment Facilities

The project would include the construction of a new commercial development, which would result in a net increase in wastewater flows. As discussed in Section 4.16.1, EMWD manages wastewater for the proposed project service area. While the majority of the project's wastewater would be treated at the Perris Valley RWRF, interconnections between the local collections systems serving each treatment plant allow system operators to route wastewater to other RWRFs for operational flexibility and improved reliability. In 2015, the Perris Valley RWRF treated 15,088 acre-feet of wastewater flows and has a permitted capacity of 28,000 AFY. All together, the four RWRFs treated 48,665 acre-feet of wastewater flows in 2015; they have a combined capacity of 81,800 AFY.

Project wastewater discharges would be typical of the wastewater already generated at nearby properties; it would not include large quantities of unusual industrial/hazardous discharges that can interfere with the ability of a treatment plant to meet the water quality requirements for its discharges. Furthermore, wastewater disposal is heavily regulated, and the San Diego RWQCB, in connection with the NPDES permit, have imposed requirements on the treatment of wastewater. Wastewater produced by the proposed project would meet these requirements through treatment at EMWD's RWRF. According to the Master Sewer Study (Appendix J-1) prepared for the project and adjacent related projects, the project is anticipated to generate approximately 11,307 gallons of wastewater per day, which is equivalent to approximately 12.6 AFY. In the context of the total volume of wastewater generated by the City, and the wastewater conveyed to the Perris Valley RWRF, the addition of 12.6 AFY to a wastewater system with 33,135 AFY of additional capacity would be nominal and could be accommodated in the existing facilities.

Because there is adequate wastewater treatment capacity within EMWD's wastewater treatment system, the project would not directly require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Therefore, impacts would be less than significant. No mitigation is required.

Stormwater Drainage

Upon project implementation, the impervious areas of the site would increase. Due to the proposed increase of impervious materials on the project site, there is potential for stormwater runoff volumes and/or stormwater runoff rates to increase upon project implementation. However, under existing conditions, stormwater infiltration opportunities are limited due to the dense, generally impermeable bedrock that underlies the project site. Upon project implementation, the same site conditions would continue to preclude on-site infiltration of stormwater.

The proposed project is required to be designed so that post-development stormwater runoff would be less than or equal to existing conditions. Four bio-retention basins and other low-impact development BMPs are proposed as part of the project. The basins were designed with low-flow thresholds in order to meet peak-flow frequency and flow-duration controls. Based on the hydrology report and water quality master plan prepared for the project, the resulting mitigated outflows associated with the design storm would be equal to or less than the pre-developed outflows, or within the 10% tolerance (Appendix G-1 and G-2). The design storm is the rainfall amount and distribution in space and time used to determine a design flood or design peak discharge. Once stormwater exits the biofiltration basins, it would pipe flow to the existing public storm drain.

For these reasons, upon implementation and compliance with the required water quality management plans for the project, stormwater volumes from the site would be equivalent to existing conditions or would be reduced upon project implementation relative to existing conditions. While stormwater drainage improvements would occur as previously described, these improvements are considered part of the proposed project and are analyzed in this EIR for potential environmental effects. As such, implementation of the proposed project would not increase the volume and/or rate of stormwater flows that enter the existing storm drain system and may even decrease the volume and/or rate of stormwater flows relative to existing conditions. The project would not result in expansion of any existing off-site facilities or in the construction or relocation of new off-site facilities. Upon implementation of the proposed water quality management plans, impacts associated with new stormwater drainage facilities would be less than significant, and no mitigation is required.

Electric Power, Natural Gas, and Telecommunication Facilities

As part of development of the project, new connections to the project site would be required for electric power, gas lines, and telecommunication facilities. However, such upgrades would be confined to the lateral connections to the project site from surrounding streets and not any centralized facilities.

Electrical power service would be provided to the project site via the existing 12-kilovolt electrical lines within Antelope Road that terminates at the cul-de-sac of Antelope Road serving the site, which the project would connect to via underground collector lines. As stated in Section 4.16.1, SCE has stated that the existing electrical infrastructure within the greater project area is operating near or at its capacity. As a result, SCE is in the process of constructing the Valley South Subtransmission Line Project, which will increase the operating capacity and reliability of electrical infrastructure within the "electrical needs area" of the Valley South Subtransmission Line Project, which includes the project site. Construction of the Valley South Subtransmission Line Project is anticipated to be completed in late 2020. Upon completion of the Valley South Subtransmission Project, which CPUC approved on December 16, 2016, existing infrastructure in the greater project area would be able to adequately serve the project.

As discussed in further detail in Section 4.5, Energy, the project is estimated to have a total electrical demand of 685 megawatt-hours per year. For comparison, non-residential electricity demand in 2017 was 8,346,000 megawatt-hours for the County (CEC 2019a). The proposed project would result in a minimal increase (0.000306%) in electricity consumption. In addition, SCE tracks planned development and coordinates with the California Independent System Operator to ensure projected supply meets demand. The project would be built in accordance with the current Title 24 standards at the time of construction and CALGreen standards. Therefore, due to the minimal increase in electricity usage generated by the project, incorporation of sustainability measures, installation of solar panels, increase in efficiency of building code regulations, planning efforts undertaken by SCE, and grid management efforts by the California Independent System Operator, SCE would have the ability to accommodate the proposed project and not require the construction or expansion of electrical facilities.

Natural gas service would be provided by the existing 6-inch line located with Clinton Keith Road. A new lateral gas main extension would be constructed from its location within Clinton Keith Road to the project site concurrent with construction of the project. Natural gas consumption during operation would be required for various purposes, including, but not limited to, building heating and cooling. SoCalGas confirmed availability of natural gas supply in the project vicinity to serve the project. As discussed in Section 4.5, default natural gas generation rates in CalEEMod for the proposed land use and climate zone were used to calculate the project's energy usage. According to these estimations, the project would consume approximately 1.9 billion BTUs per year. The non-residential natural gas consumption during operation would be 0.0019% of the County's non-residential natural gas consumption during operation would be 0.0019% of the County's non-residential natural gas consumption total; therefore, there would be available supply to meet the project's demand.

Telecommunication lines would be extended onto the project site from their existing locations within the vicinity of the project site. Given the nature of telecommunication lines, once telecommunication lines are extended to the project site, no additional telecommunication line construction is anticipated to be required.

For the reasons discussed above, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the project site would be less than significant, and no mitigation is required.

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

Less-than-Significant Impact. The proposed project would be served by EMWD, which serves an area of approximately 555 square miles in western Riverside County. EMWD has four sources of water supply: local groundwater, desalinated groundwater, recycled water, and imported water from MWD.

As an urban water supplier, EMWD is required to assess the reliability of its water supply service for a 20-year period under normal, single-dry and multiple-dry year conditions. Based on historical extraction and estimated population growth rates, the projected water supply and demand for the normal and single- and multiple-dry year scenarios were calculated for the EMWD UWMP, as provided in Section 4.16.1. As shown in Table 4.16-1, Eastern Municipal Water District Treatment Facilities – Capacity and Flow, EMWD has the ability to meet current and projected water demands through 2040 during historic multiple-dry year periods using imported water from MWD, groundwater, recycled water, and conservation methods. As indicated above and in the EMWD UWMP, the EMWD UWMP has determined these resources to be reliable, based upon the assurances of MWD that it would be able to supply member agency demands, the reliability of local groundwater supplies achieved through groundwater management plans, and the development of recycled water resources.

To ensure that planning efforts for future growth are comprehensive, EMWD incorporates regional projections into the EMWD UWMP using census data and proposed development projects and land uses within EMWD's borders, as well as current demographic information such as household size, as the basis of planning for future water supply and demonstrating compliance with state water conservation goals and policies. The EMWD UWMP identifies residential consumption as the dominant demand for EMWD according to the general plans for the County and local cities and identifies the likelihood of increase of commercial developments, especially along the major transportation corridors through EMWD's boundary (Interstate 15, Interstate 215, Highway 79, and Highway 74). As of 2015, commercial demands accounted for about 6% of EMWD's retail service area water demand; this is anticipated by the EMWD UWMP to increase over time.

The proposed project is consistent with the underlying City land use designations for the project site, which has a City General Plan designation of Commercial and a zoning designation of Regional Commercial. As such, the EMWD UWMP projections include commercial uses at the project site. According to the Master Water Study (Appendix J-2) prepared for the project, the projected water demand for the project is anticipated to be 14,630 gallons per day, which equates to 16 AFY of potable water. While the proposed project would involve an intensification of uses on the project site, the increased water use would be minor and incremental in the context of the total water portfolio managed by EMWD. By way of comparison, gross water demand from the proposed project would equate to approximately 0.01% of the service provider's total projected water supplies (including recycled water) in 2020, which is around the time of project build-out. In 2040, gross water demand from the proposed project would equate to 0.01% of projected potable water supplies, which is approximately 20 years into project operation.

As part of development process, EMWD has prepared a Design Conditions Plan (formerly referred to as a Plan of Service), which provides specifications as to how the project would be connected to EMWD's water and wastewater system, and is based on the Master Water Study (Appendix J-2) and Master Sewer Study (Appendix J-1) prepared for the project. As detailed in the Design Conditions Plan and substantiated in the Master Water Study, EMWD has indicated that it has planned for sufficient supplies of potable water to serve the project. Additionally, per the Design Conditions Plan and Master Water Study, no new water facilities or infrastructure would be required to accommodate the project, aside from the on-site infrastructure improvements and necessary utility connections and any associated improvements.

Furthermore, the proposed project would incorporate site-specific water efficiency measures to ensure that water is conserved to the extent feasible. Water use reduction would be a central focus of project design. The project applicants would incorporate project design features that involve the implementation of water efficiency practices, including outdoor water use reduction, indoor water use reduction, building-level water metering, and others. Landscaping would include low-water plants and turf of a low-water-use variety. Plumbing facilities would be designed to reduce water consumption. Low-flow fixtures would be installed that would meet or exceed CALGreen requirements, and sub-metering would be used to monitor water demands.

For the reasons described above, the project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple-dry years. Impacts would be less than significant, and no mitigation is required.

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

Less-than-Significant Impact. As previously described, the majority of wastewater generated by the project would be conveyed from the project site to EMWD's Perris Valley RWRF. In 2015, the Perris Valley RWRF treated 15,088 AFY of wastewater and has a treatment capacity of 28,000 AFY. As such, the recently expanded Perris Valley RWRF operates with approximately 8,000 AFY of excess capacity. According to the Master Sewer Study (Appendix J-1) prepared for the project, the project is anticipated to generate approximately 12.6 AFY of wastewater per year. In the context of the Perris Valley RWRF's excess capacity (approximately 8,000 AFY) and EMWD's overall existing capacity (approximately 33,135 AFY), wastewater generated by the project would be nominal. Additionally, per the Design Conditions Plan and as substantiated by the Master Sewer Study (Appendix J-1), EMWD has indicated that it has sufficient capacity within its wastewater collection and treatment system to treat wastewater generated by the project without the need for new wastewater facilities or infrastructure, aside from the on-site infrastructure improvements and necessary utility connections and any associated improvements (EMWD 2019a). For these reasons, the project would result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant, and no mitigation is required.

Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction

Less-than-Significant Impact. Construction of the project would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. According to the U.S.

Environmental Protection Agency's Estimating 2003 Building-Related Construction and Demolition Amounts paper on waste generation rates during construction and demolition (EPA 2009), the average overall waste generation rate of nonresidential construction was found to be 4.34 pounds of waste per square foot constructed. Table 4.16-4 provides an estimate of waste generated during on-site construction activities.

Table 4.16-4. Project-Generated Construction Waste Estimate

Pad	Size (Square Feet)	Unit (Pound/Square foot)	Total (Pounds/Tonnage)
Vineyard III Development	32,120	4.34	139,401/70

Source: EPA 2009.

As demonstrated in Table 4.16-4, it is anticipated that approximately 139,401 pounds (70 tons) of solid waste would be generated during construction of the project.

Per CALGreen, 75% of construction and demolition waste must be diverted from landfills starting in 2020. As such, at least 75% of all construction debris from the site would be diverted. The CALGreen Code requirements include preparing a construction waste management plan that identifies materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on site or mixed; and identifying diversion facilities where the materials collected will be taken. In addition, the CALGreen Code requires that 100% of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled. Pursuant to the construction waste recyclers. The County of San Bernardino Construction & Demolition Waste Recycling Guide & Directory (County of San Bernardino 2015) lists construction recyclers located throughout Southern California, including wood recyclers located in Romoland, Murrieta, and Lake Elsinore; and asphalt, concrete, and rock recyclers located in Romoland and Hemet.

The remaining 25% of construction material (approximately 129 tons) that is not required to be recycled would either be disposed of or voluntarily recycled at a solid waste facility with available capacity. As described in Section 4.16.1, the El Sobrante Landfill has a remaining capacity of 143.9 million cubic yards and is expected to remain open throughout project construction. Additionally, there are other facilities that process construction and demolition waste in the County that collectively have a maximum daily capacity of 283.2 million cubic yards per day. Construction of the proposed project is expected to conclude in September 2021. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills.

For the reasons stated above, project construction would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., CALGreen standards). Impacts would be less than significant.

Operations

Less-than-Significant Impact. Once operational, the proposed project would produce solid waste on a regular basis, in association with operation and maintenance activities. Anticipated solid waste generation attributable to the proposed project is shown in Table 4.16-5. The solid waste generation rates assume compliance with AB 341.

Project Components	Size (square feet)	Rate (tons per 1,000 square feet per year) ¹	Solid Waste Generation (tons per year)
Automobile Care Center	9,000	3.82	34.4
Bank (with Drive-Through)	3,470	.93	3.2
Fast Food Restaurant with Drive- Through	5,000	11.52	57.6
High-Turnover (Sit Down) Restaurant	3,000	11.9	35.7
Regional Shopping Center	11,870	1.05	12.5
		Total	143.4

Table 4.16-5. Anticipated Solid Waste Generation

¹ Source: CAPCOA 2017.

As described in Section 4.16.1, the City's commercial uses are currently served by Waste Management for solid waste collection and disposal. The majority of solid waste generated within the City for construction and operation is disposed of at El Sobrante Landfill (Ramaiya, pers. comm. 2019). This landfill has a remaining capacity of 143 million cubic yards, a maximum permitted capacity of 209 million cubic yards, and is expected to remain open through 2051 (CalRecycle 2019a). El Sobrante Landfill has a maximum daily permitted throughput of 16,054 tons per day, and in December 2019, received an average of 11,650 tons of waste per day (CalRecycle 2020), resulting in an average excess capacity of approximately 4,404 tons per day. Assuming that waste from the project site would be collected weekly, El Sobrante Landfill would receive approximately 3 tons of waste once per week. The net solid waste that is anticipated to be produced by the project would equate to less than 0.1% of the landfill's average excess capacity of its permitted daily load. As such, the proposed project's solid waste generation would be minimal to negligible relative to available landfill capacity. Solid waste from the City is also disposed at the Badlands Landfill, which has a remaining capacity of 15.7 million cubic yards and a maximum permitted capacity of 34.4 million cubic yards, and is expected to remain open through at least January 1, 2022 (CalRecycle 2019b). In addition, the Riverside County Department of Waste Resources is currently in the planning process to expand the disposal footprint from 150 acres to 396 acres (in multiple stages), thereby providing an additional 50 years of landfill capacity (RCDWR 2019). Between the existing and planned capacities of landfills that serve the City, it is anticipated that there would be adequate capacity to accommodate the waste disposal needs of the project.

The Countywide Integrated Waste Management Plan includes an assessment of the County's ability to accommodate solid waste disposal demands throughout a 15-year planning horizon. As shown in the County's latest annual report for the Countywide Integrated Waste Management Plan, there are numerous scenarios through which the County could meet the disposal needs of all jurisdictions. Future disposal needs are calculated through 2031 based on employment, population, and taxable sales projections based on long-term forecasts for the County. (All scenarios would meet the County's projected disposal needs except for a scenario in which out-of-county landfills are not used.) The Countywide Integrated Waste Management Plan is updated to include strategies for the County and local jurisdictions to continue meeting long-term needs and to maintain adequate disposal capacities. As such, the County is required to continue identifying ways to meet its disposal needs well into the future.

Once the Badlands and El Sobrante Landfills reach capacity, additional landfills and strategies are required to be identified so that disposal needs continue to be met. Further, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 100 years of remaining life. For example, the Prima Desecha Sanitary Landfill in Orange County is expected to remain open for

another 85 years; the Mesquite Regional Landfill in Imperial County is expected to remain open for another 100 years; and the Simi Valley Landfill in Ventura County is expected to remain open for another 67 years. As such, in the event of closure of the Badlands and El Sobrante landfills, other landfills in the region would be able to accommodate solid waste from the proposed project, and regional planning efforts would ensure continued landfill capacity into the foreseeable future.

For the reasons described above, project operations would not generate solid waste in excess of state or local standards or of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., Countywide Integrated Waste Management Plan). Impacts would be less than significant, and no mitigation is required.

Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-than-Significant Impact. During both construction and operation, the project would comply with all federal, state, and local laws. Additionally, the City is required to comply with the solid waste reduction and diversion requirements set forth in AB 939, AB 341, AB 1327, and AB 1826 (see Section 4.16.2, Relevant Plans, Policies, and Ordinances). Specifically, AB 1826 requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste.² Currently, businesses that generate 2 cubic yards or more of organic solid waste per week are required to arrange for organic waste recycling services. Waste Management, the project's waste collection and disposal provider, would provide the project with recycling, and if required, organic waste recycling services, to assist the project in compliance with the applicable solid waste regulations.

In addition, as described above, waste diversion and reduction during project construction and operations would be completed in accordance with CALGreen standards, County diversion standards, and the Countywide Integrated Waste Management Plan. As a result, the proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Impacts would be less than significant.

4.16.5 Mitigation Measures

Impacts to utilities and services would be less than significant. No mitigation measures are required.

4.16.6 Level of Significance After Mitigation

The project would not result in significant impacts, and no mitigation measures are necessary.

4.16.7 Cumulative Impacts

Water and Wastewater

Less-than-Significant Impact. Development of the project, in combination with the related projects (i.e., the Vineyard I and Costco/Vineyard II projects) and other cumulative projects, would cumulatively increase land-use intensities in the area, resulting in increased water usage. The project, related projects, and cumulative projects

² Organic waste is defined as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

would be served by the EMWD. As such, the development of the project, related projects, and cumulative projects would increase the amount of water used in the EMWD's service area.

The EMWD UWMP states that EMWD and other water agencies in Southern California have planned for the provision of regional water for the growing population, including drought scenarios for its service area over a 20-year period. The plan includes a new water demand forecast prepared for the major categories of demand and uses regional population, demographic projections, the dry climate, and historical water use to develop these forecasts. These projections consider land use, water development programs and projects, and water conservation. As discussed above, according to the EMWD UWMP, EMWD has the supply needed to meet the demand of its customers through 2040. The conclusion is considered reliable by EMWD based on the assurances of MWD that it would be able to supply member agency demands, the reliability of local groundwater supplies achieved through groundwater management plans, and the development of recycled water resources.

Furthermore, all cumulative projects would meet requirements to incorporate site-specific water efficiency measures. Compliance with CALGreen and other regulatory requirements would be required for new development, which would require new development to install high-efficiency appliances and incorporate water conservation measures throughout. This would ensure that the related projects and cumulative projects, as well as the proposed project, do not result in wasteful or inefficient use of limited water resources. As such, and because the related projects and cumulative projects are generally consistent with regional growth patterns and projections, there would be sufficient water supplies available to serve the project and related projects from existing entitlements and resources, without the requirement for new or expanded entitlements.

Cumulative projects that are not consistent with the applicable jurisdictional general plans would be required to undergo environmental review pursuant to CEQA, which would involve a water supply assessment of current and future water supplies, and if required, mitigation for impacts related to obtaining expanded entitlements. Additionally, EMWD updates a geographic information system database that tracks proposed development quarterly and is consistently updating its water supply portfolio and developing local resources to meet future demand. Because the project, related projects, and cumulative projects are either consistent with the jurisdictional general plans (and thereby included in regional water demand forecasts) or would be accounted for by EMWD as part of its development tracking efforts, there would be sufficient water supplies available to serve the project and related projects from existing entitlements and resources, without the requirement for new or expanded entitlements, and cumulative impacts would be less than significant.

The project, related projects, and cumulative projects would cumulatively incrementally increase the amount of wastewater that is generated in the area. However, as previously described, the project would generate approximately 12.6 AFY of wastewater, which would represent approximately 0.1% of the Perris Valley RWRF's capacity. Additionally, the newly upgraded Perris Valley RWRF has been designed such that it could be expanded to treat up to 100 million gallons per day of wastewater if demand grew to require such capacity. EMWD addresses its long-term planning efforts through the development of a long-term capital plan, which serves as a fundamental roadmap of required water, recycled water, and water reclamation facilities needed to support the build out of existing jurisdictional general plans throughout its service area. EMWD's Long-Term Capital Plan relies on EMWD's four facilities Master plans, which include the Water Facilities Master Plan, Recycled Water Facilities Master Plan, Wastewater Facilities Master Plan, and Regional Water Reclamation Facilities Master Plan. These four facilities master plans are based on historical and projected demands in the EMWD's service area, and are used to assess EMWD's ability to meet future and current needs, assess the need for system upgrades, and identify future system improvements needed to satisfy current and future user demand. The four facilities master plans are used as the basis for developing a 5-Year, 10-Year, and Build-Out CIP. Within EMWD's CIPs, EMWD

identifies the water, sewer, recycled water, and other infrastructure projects that will be necessary to accommodate future build-out of the jurisdictional general plans in its service area.

Additionally, each year, EMWD updates its CIP based on the then-current available growth information, which includes a comprehensive list of all development projects in its service area, including the project, related projects, and cumulative projects. This process ensures the list of CIP projects needed to accommodate growth are developed just in time, while allowing EMWD to be flexible and responsive to development patterns. CIP projects are subject to approval by EMWD's Board of Directors, and EMWD, as the lead agency, is responsible for environmental review pursuant to CEQA as projects are implemented. As cumulative increases in wastewater treatment demand within the service area require facility upgrades, EMWD would include service connection fees in their capital improvement plans. Such fees would ensure that capital improvements are completed sufficiently to accommodate increased wastewater inflows associated with the project area. As such, due to EMWD's long-term planning efforts, EMWD would have adequate capacity to serve the project's, related projects', and cumulative projects' projected demand in addition to the provider's existing commitments using existing entitlements and infrastructure, and cumulative impacts would be less than significant.

Completion of the related projects would involve construction of water distribution and wastewater conveyance infrastructure (i.e., pipes, valves, meters) on the related project sites. For the project and the related projects, connections would be made to nearby off-site lines in the adjacent rights-of-way. The construction of the laterals would be temporary and limited to trenching to the depth of the underground utility lines and project construction would occur in accordance with all applicable regulatory requirements. As discussed in Section 4.16.4, Impacts Analysis, other than the lateral connections from the related project sites to nearby existing utility mains, neither the project nor the related projects would require or result in construction or expansion of new off-site infrastructure like a need for new water treatment plants, and upgrades of lateral connections to related project sites would not create a cumulatively considerable impact. To account for cumulative effects on infrastructure facilities directly serving the project, the master water study and sewer study also accounted for the projected water and wastewater treatment demands of the project and related projects, and found that the project and the related projects in the immediate vicinity of the project site would not directly require or result in the relocation or construction of new or expanded water facilities. In addition, all other cumulative development would be required to comply with all applicable regulations, including CEOA, which would ensure that future development would not be allowed to proceed without adequate infrastructure and availability of water and sewer treatment capacity in place. Accordingly, there would not be a need for new entitlements, resources, and/or water or sewer treatment facilities that are not already being planned to accommodate regional growth forecasts and cumulative impacts related to adequacy of water and waste water infrastructure; sewer treatment would be less than significant.

Storm Drainage Facilities

Less-than-Significant Impact. The proposed project is located in an area of the City where many of the adjacent properties are developed. New development projects in the City, including the project, would be subject to the most recent City Stormwater Management Plan and the Regional Permit, which requires the identification of methods to reduce potential stormwater runoff and contribution of pollutants to the storm drain system. The proposed project in particular includes bio-retention basins and other low-impact development BMPs to manage and treat stormwater flows. Upon project implementation, stormwater runoff from the project site would be less than or equal to runoff that occurs under existing conditions. As such, the project would not contribute to a cumulative effect. For the related projects, stormwater runoff would be expected to be equal to or less than runoff under existing conditions, which can be achieved through the implementation of BMPs similar to those of the project. Therefore, it is unlikely that downstream flood control improvements would be required as a condition of

related project completion. As a result, cumulative impacts associated with upgrades of sewer lateral connections to related project sites would be less than significant, and no mitigation is required.

Solid Waste

Less-than-Significant Impact. Development of related projects would increase land use intensities in the area, resulting in increased solid waste generation in the service area for Riverside County landfills. AB 939 mandates that cities divert 75% of the total solid waste generated away from landfills. In order to maintain state requirements of diverting 75% of solid waste and to offset impacts associated with solid waste, the proposed project, related projects, and cumulative projects would each be required to implement waste reduction, diversion, and recycling during both construction and operation and to comply with the City's Integrated Waste Management Plan. Through compliance with City and state solid waste diversion requirements, and due to the recycling collection process that would, as a result of the foregoing laws and regulation, be part of each of the related and cumulative project's design, cumulative impacts would be less than significant.

Electric Power, Natural Gas, and Telecommunication

Less-than-Significant Impact. The development of the project and the related projects would add to demands for energy and would increase requirements for telecommunication technology infrastructure. As stated in Section 4.16.1, SCE has stated that the existing electrical infrastructure within the greater project area is operating near or at its capacity. As a result, SCE is in the process of constructing the Valley South Subtransmission Line Project, which will increase the operating capacity and reliability of electrical infrastructure within the "electrical needs area" of the Valley South Subtransmission Line Project, which includes the project site and related project sites. Construction of the Valley South Subtransmission Line Project area. Upon completion, SCE would be able to adequately serve the project and the related projects in the project area. Additionally, SCE would continue its long-term planning efforts and plan for the provision of upgrades to its regional electrical distribution network as needs develop. Typically, upgrades to utility networks fall under the jurisdiction of CPUC and would be subject to environmental review as electrical projects are proposed.

As part of the project and as part of the other related projects, natural gas and telecommunication lines would be extended onto the project site and related projects from their existing locations within the vicinity of the project site, resulting in localized less-than-significant impacts. Similarly, the other related projects would result in localized impacts that are reduced to less-than-significant impacts through compliance with local regulations, such as the Regional System permit and NPDES General Construction Permit. Additionally, the related projects would be subject to review on a case-by-case basis. Should the applicable service provider determine that upgrades or extensions of infrastructure be required, any such upgrades would be included within each project's environmental review. As a result, cumulative impacts associated with upgrades of electric, natural gas, and telecommunication facilities would be less than significant.

Conclusion

Overall, given the water availability and conservation and recycling measures disclosed by the EMWD UWMP, capacity at Perris Valley RWRF, capacity of public and private landfills serving the County, and availability of water and energy supplies, adequate wastewater, solid waste, water and energy supplies exist for the related projects and cumulative projects without the need for construction of new infrastructure other than laterals proximate to the various project sites. Combined with cumulative development, the project would result in an increase to

energy, solid waste, and water and wastewater service demands, but these increases are accommodated within the existing utility and service system (as described above). Additionally, compliance with regulations governing water, solid waste, wastewater, and energy supplies would reduce demands for utilities and service systems. Lastly, with regard to water quality, related projects and cumulative projects would be required to implement practices that would ensure stormwater flows and stormwater quality are appropriately managed and treated. As such, cumulative impacts related to utilities and service systems would be less than significant.

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4.17 Wildfire

This section describes the existing wildfire conditions within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts associated with wildfire and contribution to regional wildfire conditions, and identifies mitigation measures related to implementation of the proposed Vineyard III Retail Development Project (project). Potential wildfire impacts resulting from construction and operation of the proposed project were evaluated based on a review of existing resources and applicable laws, regulations, guidelines, and standards. This section focuses on the effect of the proposed project on wildfire risk. Fire protection services for the proposed project are addressed in Section 4.12, Public Services.

4.17.1 Existing Conditions

Wildfire is a continuous threat in Southern California, and is particularly concerning in the wildland – urban interface, the geographic area where urban development either abuts or intermingles with wildland or vegetative fuels. The threat of wildland fire in or near the City of Murrieta (City) is high due to the wildland – urban interface areas in and around the City (City of Murrieta 2011a). During the summer season, dry vegetation, prolonged periods of drought, and Santa Ana wind conditions can combine to increase the risk of wildfires.

Wildland fire hazards exist throughout approximately 90% of Riverside County (County) and the City in open space, parklands, and agricultural areas (City of Murrieta 2011a). Undeveloped hillside areas in and adjacent to the City present a potentially serious hazard, including the mountainous areas along the western boundary of Murrieta, wildland areas in the Greer Ranch area in northern Murrieta, and the Hogbacks and Los Alamos area (City of Murrieta 2011a). The project site is located in the northeastern portion of the City, less than 1 mile north of some of these fire-prone wilderness areas within the City.

The project site consists of a 6.65-acre site located in the northern portion of the City. It is bound by Clinton Keith Road to the south, a northbound on-ramp to Interstate (I) 215 to the west, and the vacated section of Antelope Road to the east. The L-shaped project site is located at the southwest corner of an approximately 70-acre undeveloped area surrounded by suburban development. Under existing conditions, surrounding properties consist of vacant land to the east, residential development across Clinton Keith Road to the south, and the I-215 to the west. The site consists of a strip of land along the northbound on-ramp to the I-215 freeway that is vacant apart from a cluster of trees around a cell tower. A narrow strip of vacant land that is sparsely landscaped with trees and gravel lies between the northbound on-ramp and I-215 northbound through-lanes. Vacant land to the east, beyond the vacated Antelope Road, consists of varying slopes due to a previous rock, sand, and gravel operation. The property to the northeast is relatively flat and composed of approximately 20 acres of disturbed sage scrub and grasses.

The project site is mostly vacant with the exception of the cell tower and utilities. The vacated portion of Antelope Road traverses the project site from north to south, with concrete traffic control barriers that block roadway access at both the northern and southern ends of the project site. A cell tower is located within the northern tip of the project site, and access to this tower is provided via a private easement connected to Antelope Road. Additionally, the southeasternmost portion of the project site contains an easement for a traffic signal that serves the intersection of Creighton Avenue and Clinton Keith Road. A small concrete drainage ditch is adjacent to the northern portion of the project site along the freeway on-ramp. Vacated Old Antelope Road drains to two catch basins and four storm drain inlets located just beyond the project site at the southern terminus of the vacated Antelope Road.

Fire History

The project area, like all of the County, is subject to seasonal weather conditions that can heighten the likelihood of fire ignition and spread, and considering the site's terrain and vegetation, may result in fast-moving and moderate-intensity wildfire. Fire history is an important component of wildfire analysis. Wildfire history information can provide an understanding of fire frequency, fire type, most vulnerable project areas, and significant ignition sources, amongst others. The California Department of Forestry and Fire (CAL FIRE) maintains the Fire and Resource Assessment Program database, which was used to evaluate the project site's fire history to determine whether large fires (greater than 10 acres) have occurred in the project area, and thus the likelihood of future fires. Per the recorded fire history database, the site has not been subject to wildfire. Recorded wildfires within 5 miles range from 31 acres (2007 Wright Fire) to 24,434 acres (1993 California Fire) (CAL FIRE 2019).

Fire Hazard Mapping

CAL FIRE's database also includes map data documenting areas of significant fire hazard throughout the state. These maps designate geographic areas as fire hazard severity zones (FHSZs). CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state. FHSZs are ranked as Moderate, High, or Very High, and are also differentiated by State Responsibility Areas, Local Responsibility Areas, and Federal Responsibility Areas, which delineate areas where state, local, or federal government agencies are financially responsible for fire protection and prevention. Fire hazard severity classifications take into account vegetation, topography, weather, crown fire production, and ember production and movement. As shown in Figure 4.17-1, Fire Hazard Severity Zones, the project site and surrounding area is designated as a Very High FHSZ within the Local Responsibility Area (CAL FIRE 2009).

Vegetation Communities and Land Covers

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (leaf size, branching patterns), and overall fuel loading.

It is important to consider the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes affects plant community succession. Succession of plant communities, most notably the gradual conversion of shrublands to grasslands with high-frequency fires and grasslands to shrublands with fire exclusion, is highly dependent on the fire regime. Further, biomass and associated fuel loading will increase over time if disturbance or fuel reduction efforts are not diligently implemented.

As detailed in Section 4.3, Biological Resources, the project study area consists of five vegetation communities and two non-natural land cover types, including chamise–black sage, chamise–California buckwheat, disturbed California buckwheat, non-native grassland, disturbed land, and developed land. Figure 4.3-1, Biological Resources Map, illustrates the distribution of vegetation communities and land cover types in the study area (the project site plus a 500-foot buffer) (see Section 4.3), and Table 4.17-1, provide a summary of each land cover's extent.

Table 4.17-1. Vegetation Communities and Land Covers within the Project Site and Natural Habitat within Associated 500-foot Buffer (Study Area)

Vegetation Community/Land Cover	Acreage
Chamise-Black Sage	0.32
Chamise-California Buckwheat Association	0.94
Vineyard III Retail Development Project	10773
October 2020	4.17-2

 Table 4.17-1. Vegetation Communities and Land Covers within the Project Site and Natural Habitat within Associated 500-foot Buffer (Study Area)

Vegetation Community/Land Cover	Acreage
Disturbed California Buckwheat	0.87
California Buckwheat	3.74
Non-Native Grassland	3.45
Disturbed Land	17.13
Developed Land	16.36
Total	42.81*

Source: Appendix C.

Note:

42.81 acres represents the project parcel and natural habitat within a 500-foot buffer (i.e., the associated study area). The proposed project includes the 6.65-acre project site.

Topography/Terrain

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up slope and slower spread down slope. Terrain that forms a funneling effect—such as chimneys, chutes, or saddles—on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind.

The project area is characterized as lowlands between the Hogbacks to the southeast and Greer Ranch Hills to the northwest. As discussed in Section 4.6, Geology and Soils, of this Environmental Impact Report (EIR), the site's ground surface is generally sloped from an elevation of approximately 1,546 feet above mean sea level in the north to 1,526 feet above mean sea level in the south, surrounded by relatively flat land. Overall, the project site is relatively flat, with the exception of approximately 2.5:1 slopes in some areas of the site along the west side of vacated Antelope Road.

Climate, Weather, and Wind

In the City, the summers are hot, arid, and mostly clear and the winters are long, cold, and partly cloudy. During the summer months (late June through September), the average daily temperature is above 83°F, and during the cooler, winter months (late November through March), the average daily temperature is below 69°F. The temperature varies throughout the year, but is rarely below 34°F or above 95°F. Like much of Southern California, the City experiences seasonal variation in monthly rainfall throughout the year, with the wetter months lasting from October through April.

The project site, like much of Southern California, is influenced by prevailing wind patterns. Prevailing winds are winds that blow from a single direction over a specific area of the Earth. The predominant average hourly wind speed and direction in the City varies throughout the year. From February through mid-November, the wind blows primarily from the west, and for approximately 2.5 months, from mid-November to early February, the wind blows primarily from the east. The windier part of the year lasts for approximately 7 months (mid-November through mid-June), with average wind speeds of more than 5.6 mph (Weather Spark 2020), and average wind gusts reaching speeds over 9 mph (World Weather Online 2020).

4.17.2 Relevant Plans, Policies, and Ordinances

Federal

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection, but are not laws or codes unless adopted as such or referenced as such by the California Fire Code (CFC) or the local fire agency.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995, updated in 2001, and again in 2009, by the National Wildfire Coordinating Group, a federal multiagency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. An important component of the Federal Wildland Fire Management Policy is the acknowledgement of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles, found in the Guidance for Implementation of Federal Wildland Fire Management Policy (National Wildfire Coordinating Group 2009):

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan, officially titled Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000, was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses the following five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (DOI and USDA 2000).

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property, including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted (ICC 2017).

International Wildland-Urban Interface Code

The International Wildland–Urban Interface Code is published by the International Code Council and is a model code addressing wildfire issues (ICC 2014).

State

California Government Code

Sections 51175–51189 of the California Government Code provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria, and makes the information available for public review. Further, local agencies must designate, by ordinance, Very High FHSZs within their jurisdiction based on the recommendations of CAL FIRE.

Section 51182 of the California Government Code sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuels management, and building materials and standards. Defensible space around structures in fire hazard areas must consist of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe, vegetation near buildings must be maintained, and roofs of structures must be cleared of vegetative materials. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

California Code of Regulations

Title 14 Natural Resources

Title 14, Division 1.5, Chapter 7, Subchapter 3, Fire Hazard, also sets forth requirements for defensible space if the distances specified in Section 51182 of the California Government Code (outlined above) cannot be met. For example, options that have similar practical effects include noncombustible block walls or fences, 5 feet of noncombustible material horizontally around the structure, installing hardscape landscaping or reducing exposed windows on the side of the structure with a less-than-30-foot setback, or additional structure hardening such as those required in the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A.

Title 24 California Building Standards Code

California Building Code

Part 2 of Title 24 of the California Building Standards Code contains the California Building Code. Chapter 7A of the California Building Code regulates building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a fire hazard area. Fire hazard areas as defined by the California Building Code include areas identified as a FHSZ within a State Responsibility Area or a wildland–urban interface fire area. The purpose of Chapter 7A is to establish minimum standards for the protection of life and property by increasing the ability of structures located in a fire hazard area to resist the intrusion of flames or burning embers projected by a wildfire, and to contribute to a systematic reduction in structural losses from a wildfire. New buildings located in such areas must comply with the ignition-resistant construction standards outlined in Chapter 7A.

California Fire Code

Part 9 of Title 24 of the California Building Standards Code contains the CFC, which incorporates by adoption the International Fire Code with necessary California amendments. The purpose of the CFC is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the wildland–urban interface and fire hazard areas.

The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission. The 2016 CFC took effect on January 1, 2017, and the 2019 CFC took effect on January 1, 2020. The City adopted the 2016 CFC with local amendments in August 2018.

California Public Resources Code

California Public Resource Code, Section 4290, requires minimum fire safety standards related to defensible space that are applicable to residential, commercial, and industrial building construction in State Responsibility Area lands and lands classified and designated as Very High FHSZs. These regulations include road standards for fire apparatus access, standards for signs identifying roads and buildings, fuel breaks and green belts, and minimum water supply requirements. It should be noted that these regulations do not supersede local regulations, which are equal to or exceed minimum regulations required by the state.

California Public Resource Code, Section 4291, requires a reduction of fire hazards around buildings located adjacent to a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered in flammable material. It is required to maintain 100 feet of defensible space around all sides of a structure, but not beyond the property line unless required by state law, local ordinance, rule, or regulations. Further, California Public Resource Code, Section 4291 requires the removal of dead or dying vegetative materials from the roof of a structure, and trees and shrubs must be trimmed from within 10 feet of the outlet of a chimney or stovepipe. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

Fire Hazard Severity Zones

CAL FIRE maps FHSZs based on fuel loading, slope, fire history, weather, and other relevant factors as directed by California Public Resources Code, Sections 4201–4204, and California Government Code, Sections 51175–51189. FHSZs are ranked from Moderate to Very High, and are categorized for fire protection within a Federal

Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively. As shown in Figure 4.17-1, the project site and surrounding area is designated as a Very High FHSZ within the Local Responsibility Area (CAL FIRE 2009).

California Strategic Fire Plan

The 2018 Strategic Fire Plan for California reflects CAL FIRE's focus on fire prevention and suppression activities to protect lives, property, and ecosystem services, as well as natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire resilient, buildings and infrastructure that are more fire resistant, and a society that is more aware of and responsive to the benefits and threats of wildland fire, all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2018). Plan goals include the following:

- Identify and evaluate wildland fire hazards and recognize life, property, and natural resource assets at risk, including watershed, habitat, social, and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
- Promote and support local land use planning processes as they relate to (a) protection of life, property, and natural resources from risks associated with wildland fire; and (b) individual landowner objectives and responsibilities.
- Support and participate in the collaborative development and implementation of local, county, and regional plans that address fire protection and landowner objectives.
- Increase fire prevention awareness, knowledge, and actions implemented by individuals and communities to reduce human loss, property damage, and impacts to natural resources from wildland fires.
- Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
- Determine the level of resources necessary to effectively identify, plan, and implement fire prevention using adaptive management strategies.
- Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
- Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities, but can give and receive help whenever needed.

Local

In addition to the relevant plans, policies, and ordinances identified below, Section 4.12 of this EIR provides information on the City's fire protection services.

Murrieta General Plan 2035

The following goals and policies from the Murrieta General Plan 2035 (General Plan) are relevant to the proposed project (City of Murrieta 2011b):

- **Goal SAF-5** Damage from fire hazards is minimized through preventive measures, education, and fire protection services.
 - **Policy SAF-5.1** Continue efforts to reduce fire hazards associated with older buildings, multifamily housing, and fire-prone industrial facilities throughout the City.
 - **Policy SAF-5.2** Provide public safety education programs through the Fire Department to reduce accidents, injuries and fires, as well as to train members of the public to respond to emergencies.
 - Policy SAF-5.3 Continue to coordinate fire protection services with Riverside County, CAL FIRE, and all other agencies and districts with fire protection powers.
 - **Policy SAF-5.4** Ensure that outlying areas in the City can be served by fire communication systems as new development occurs.
 - **Policy SAF-5.5** Require that all dedicated open space or undeveloped areas meet specifications for fire safety.
- **Goal SAF-7** Reduced incidence of damage to life and property from wildland fires.
 - **Policy SAF-7.1** Continue to require development in high fire hazard areas to use fire-resistant building materials and landscaping, and to meet fire chief specifications for fuel modification, access, and water facilities.
 - **Policy SAF-7.2** Evaluate all new development to be located in or adjacent to wildland areas to assess its vulnerability to fire and its potential as a source of fire.
 - **Policy SAF-7.3** Encourage the use of development features such as roads and irrigated/landscaped open space to buffer homes from wildland fire.
 - **Policy SAF-7.4** Promote community education about preventing wildfire ignition, using fire resistant building features, and creating defensible space around homes.
 - **Policy SAF-7.5** Continue to implement a weed abatement program to reduce fire hazards on private properties.

City of Murrieta Municipal Code

Title 15, Chapter 24 of the City's Municipal Code (City of Murrieta 2018) contains the CFC with local amendments. A city, county, or city and county may establish more restrictive building standards reasonably necessary because of local climatic, geological, or topographical conditions. The code contains provisions for fire prevention and safety, reflecting regulations set forth by the CFC, such as requirements for emergency apparatus access (Section 15.24.130);water supply, fire flow, and fire hydrants (Sections 15.24.160–15.24.190); and general fire protection

systems (Section 15.24.220). Sections 15.24.250–15.24.290 (Sections 4903–4907 of the CFC, revised) of the City's Municipal Code contain regulations specific to development in fire hazard areas, such as construction methods (Section 15.24.280), fuel modification (Section 15.24.250), setbacks and defensible space (Section 15.24.290), and the preparation of a fire protection plan (Section 15.24.270).

Section 15.24.290 of the City's Municipal Code (Section 4907 of the CFC, revised) sets forth requirements for the provisioning of defensible space, including structure setbacks and fuel modification. A fuel modification zone (FMZ) is required around every building within a hazardous fire area that is designed primarily for human habitation or use. Where setbacks are 100 feet or more from the property line, an FMZ shall be maintained within 100 feet of the building or structure. The area within 50 feet of a building or structure shall be cleared of vegetation that is not fire resistant and replanted with fire-resistant plants (Zone A). In the area between 50 to 100 feet from a building, all dead and dying vegetation shall be removed (Zone B). Native vegetation may remain in this area provided that the vegetation is modified so that combustible vegetation does not occupy more than 50% of the square footage of this area. Weeds and annual grasses shall be maintained at a height not to exceed 6 inches. The chips from chipping of vegetation that is done on site may remain if the chips are dispersed so they do not exceed 6 inches in depth. Trees may remain in both areas provided that the horizontal distance between crowns of adjacent trees and crowns of trees and structures is not less than 10 feet (City of Murrieta 2018).

Where a setback is less than 100 feet from the property line, the fuel modification requirements detailed above should be implemented to the extent possible in the area between the building or structure and the property line. Further, the building official and the fire code official may provide lists of prohibited and recommended plants.

The FMZ shall be located entirely on the subject property unless approved by the Murrieta Planning Department and Murrieta Fire and Rescue (MFR). This required FMZ may be reduced or increased as required by a fire protection plan.

City of Murrieta Emergency Operations Plan

The City's Emergency Operations Plan (EOP), adopted in June 2017, addresses the planned response to extraordinary emergency situations associated with natural disasters, national security emergencies, and technological incidents affecting the City. The EOP was prepared to ensure the most effective allocation of resources for the protection of people and property in the event of an emergency. The City's EOP describes the operations of the City's Emergency Operations Center, which is the central management entity responsible for directing and coordinating the various City departments and other agencies in their emergency response activities. The City's Emergency Operations Center centralizes the collection and dissemination of information during an emergency, and makes policy-level decisions about response priorities and the allocation of resources. As part of the City's Emergency Management Program, the City's Emergency Operations Center Manager (the Emergency Operations Center Manager in the City is, by order of rank, the City Manager, Assistant City Manager, Fire Chief, and Police Chief) is responsible for ensuring the readiness of the Emergency Operations Center (City of Murrieta 2017).

City of Murrieta Development Impact Fee

New development in the City is subject to the City's Development Impact Fee, a portion of which covers costs associated with fire protection, including fire department staffing and the construction of fire department facilities. The Development Impact Fee amount is determined through evaluation of the need for new public service facilities based on the level of service demanded by new development (City of Murrieta 2019). As discussed in Section 4.12 of this EIR, the current fee schedule for the City indicates the fee for commercial development is \$11.49 per square foot, with allocations distributed to law enforcement, fire protection, road infrastructure, storm drainage, and general facilities.

4.17.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to wildfire are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to wildfire would occur if the project would:

- 1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
- 2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- 3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- 4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

4.17.4 Impacts Analysis

Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. The City currently has no defined emergency routes; however, I-15 and I-215 may be considered emergency routes, as they traverse the City and connect to multiple major roads (City of Murrieta 2011b). The I-215 freeway travels north to south through the City and is located immediately west of the project site. As analyzed in Section 4.14, Transportation, of this EIR, the project is not anticipated to significantly impact freeway ramps, and feasible mitigation has been proposed to offset any potential project impacts related to traffic and circulation. Thus, the project would not impact any potential emergency evacuation routes in the City.

The City's EOP is designed to ensure the most effective response and allocation of resources in the event of an emergency, and is intended to facilitate multiagency and multijurisdictional coordination (City of Murrieta 2017). MFR also provides emergency preparedness information and safety tips specific to wildland fires. In the event of a major emergency such as fire, hazardous materials spill, police activity, or other situation that may directly impact the City or its residents, the City's Emergency Incident Information website page will contain updated information on the nature of the incident, potential impacts to traffic circulation, possible evacuations, and/or other pertinent information (City of Murrieta 2011b). The proposed project would not hinder implementation of the City's EOP in the event of an emergency, and emergency response procedures specific to the site would be coordinated through the City.

In addition, the proposed project would be designed to provide adequate vehicular and emergency apparatus access. As discussed in Section 4.14 of this EIR, the project would not result in inadequate emergency access. The project would be required to design, construct, and maintain structures, roadways, and facilities in compliance with applicable local, regional, state, and federal requirements (see Section 4.17.2, Relevant Plan, Policies, and Ordinances) related to emergency access and evacuation, as well as fire safety, building materials, setbacks, and defensible space requirements for development in fire hazard areas. Drive aisles, turning radii, and both access points to the proposed project would be designed with adequate emergency access. The proposed site plan is subject to approval by the City and the MFR. Further, the City and MFR would review any modifications to existing roadways to ensure that adequate emergency access or emergency response would be maintained.

Primary access to the project site would be provided from the intersection of Creighton Avenue and Clinton Keith Road. The project would involve improvements to the intersection of Clinton Keith Road and Creighton Avenue, such as sidewalk and crosswalk improvements, landscaping, stoplight installation, and construction of a private access drive from Creighton Avenue into the site. The project would also involve the construction of an extension of a private, shared mutual access road to the north, and overlay of the vacated Antelope Road as a private drive to the south. Additional site access would be provided from the redeveloped Antelope Road and drive aisles that would connect to the property to the east of the project site, which is separately proposed for commercial development. The proposed site plan, including the access driveways, would be reviewed for approval by MFR during construction drawing plan check review.

A 30-foot drive isle that connects to a 28-foot drive isle would surround the proposed retail development center and provide fire access and circulation for the delivery trucks. An Americans with Disabilities Act-compliant pedestrian pathway is required from the new retail pads to the public right-of-way to ensure connectivity throughout the site and easy access from adjacent streets and neighboring properties.

Further, travel distance from the nearest fire station (Fire Station No. 4) and potential impacts to existing emergency services have been addressed in Section 4.12, and the project was determined to have a less-than-significant impact. Therefore, the project would not conflict with emergency ingress or egress, and adherence to regulatory requirements would ensure that the project would not substantially impair an emergency response plan or emergency evacuation plan; thus, impacts would be less than significant, and no mitigation is required.

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

Less-than-Significant Impact with Mitigation Incorporated. The project could result in an impact related to exacerbating wildfire risk that exposes project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of a wildfire if it would increase the risk of a wildfire occurring and the climatic, topographic, vegetation, weather conditions, and other factors that aid in increasing the severity of such an occurrence. As shown in Figure 4.17-1, the project site is located within a Very High FHSZ, which is also shown in Exhibit 5.17-1 of the City's General Plan EIR (City of Murrieta 2011a).

Construction

Construction of the project would introduce potential ignition sources to the project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the project would be required to comply with City and state requirements for activities in hazardous fire areas, including fire safety practices, to reduce the possibility of fires during construction activities. Per Section 15.24.250 of the City's Municipal Code, adequate defensible space must be created before bringing any combustible materials on to the project site, and vegetation management must take place throughout the duration of project construction. Implementation of the regulatory standards set forth in the City's Municipal Code would reduce the risk of wildfire ignition and spread on the project site during construction activities. Therefore, with adherence to City Municipal Code, project construction would not exacerbate wildfire risk, and impacts related to project construction would be less than significant.

Operation

Due to the project's location in a Very High FHSZ, the project would be required to design, construct, and maintain structures, roadways, and facilities in compliance with applicable local, regional, state, and federal requirements (see Section 4.17.2) related to fire safety, emergency access, and evacuation, as well as building materials, setbacks, and defensible space requirements for development in fire hazard areas. The local, state, and federal rules, regulations, and policies included in Section 4.17.2 set forth minimum standards for development strategies, building materials, and systems and fire prevention strategies for development in the wildland–urban interface and fire hazard areas to reduce the risk of wildfire damage and losses. As local agencies may amend state policies to establish more restrictive building standards reasonably necessary because of local climatic, geological, or topographical conditions (CFC 2016), compliance with the City Municipal Code would ensure compliance with applicable state policies, rules, or regulations related to development in fire hazard areas, including Chapter 49 of the CFC, California Public Resources Code Sections 4290–4291, and California Government Code Sections 51175–51189. A discussion of the project's compliance with these development standards is further discussed below.

Slope

The project site's ground surface is generally sloped from an elevation of approximately 1,546 feet above mean sea level in the north to 1,526 feet above mean sea level in the south. Overall, the project site is relatively flat, with the exception of approximately 2.5:1 slopes in some areas of the site along the vacated Antelope Road that will be eliminated when the site is developed. The project site is surrounded by relatively flat land, with the exception of existing slopes on the adjacent property to the east, which are highly variable due to the previous use as a sand and gravel operation. However, the project site would be graded to a flat, level surface, as would the adjacent property to the east, which has been separately proposed for development. The project would include substantial cut and fill operations and compaction to create a level site. Since the surrounding lands are relatively flat, they do not contain slopes typical of exacerbating wildfire risks. Further, the project site is surrounded by development or proposed development on all sides, with the exception of a narrow strip of vacant land between Antelope Road and I-215, located north and west of the project site. Once the surrounding land to the east is developed, the likelihood of a wildfire approaching from the east would be minimal.

Prevailing Winds

Prevailing winds are winds that blow from a single direction over a specific area. The predominant average hourly wind speed and direction in the City varies throughout the year. From February through mid-November, the wind blows primarily from the west, and for approximately 2.5 months, from mid-November to early February, the wind blows primarily from the east. The windier part of the year lasts for approximately 7 months (mid-November through mid-June), with average wind speeds of more than 5.6 mph (Weather Spark 2020) and average wind gusts reaching speeds over 9 mph (World Weather Online 2020). Given that the prevailing wind direction during summer months is from the west, and there is no readily ignitable vegetation west of the project site (between the project site and I-215 freeway), it is not anticipated that prevailing winds would exacerbate wildfire risks on site.

Vegetation Management and Set Backs

As discussed above in Section 4.17.1, Existing Conditions, the vegetation on site and in the surrounding study area consists of five vegetation communities (chamise-black sage, chamise-California buckwheat, disturbed California buckwheat, non-native grassland), but is dominated by disturbed land and developed land. The vegetation on the project site would be removed with project development, as would the existing vegetation within the adjacent

property to the east once developed. However, vacant land to the northeast is relatively flat and composed of approximately 20 acres of untreated sage scrub habitat. A worst-case scenario fire in extreme wind conditions (peak wind gusts of up to 50 mph offshore winds) from this type of fuel would be expected to produce up to 45-foot flame lengths and moderately high fire intensity. A vegetation fire on this vacant property would have a relatively short burn time, since, under extreme fire weather, the fire spread rate would be approximately 6.8 mph (Dudek 2020). This short combustion and heat output period would result in a short duration when heat would be produced that could impact the proposed project structures. Further, potential exposure to pollutant concentrations from a wildfire would be brief.

As indicated in Section 15.24.290 of the City's Municipal Code, a 100-foot FMZ is required around structures in high fire hazard areas. As indicated by the City's Municipal Code, a typical FMZ would consist of 50 feet for Zone A (the area within 50 feet of a building or structure must be cleared of vegetation that is not fire resistant and replanted with fire-resistant plants) and 50 feet for Zone B (in the area 50 to 100 feet from a building, all dead and dying vegetation must be removed; native vegetation may remain in this area, provided that the vegetation is modified so that combustible vegetation does not occupy more than 50% of the square footage of this area; weeds and annual grasses must be maintained at a height not to exceed 6 inches) (City of Murrieta 2018). The northernmost project building (Building T, proposed for auto-related use) would be set back approximately 185 feet from the northern project boundary. The area between Building T and the northern project boundary would consist of a paved 30-foot-wide drive aisle, parking spaces, and a groundwater retention basin. The achievable FMZ at the northern end of the project site would consist of complete fuel conversion to noncombustible surfaces, including paved parking and roadway areas. This would equate to an FMZ that exceeds the vegetation management requirements of the typical Zone A and Zone B FMZ. Therefore, the project would exceed the 100-foot FMZ requirement and project building setbacks of approximately 185 feet from off-site fuel beds would allow for heat dissipation to occur in the event of a fire on the vacant property northeast of the project site.

As detailed in Section 15.24.290 of the City's Municipal Code, when a building or structure is set back less than 100 feet from the property line, fuel modification should take place to the extent feasible. The project site would be surrounded on all sides by development or proposed development, with the exception of the strip of vacant land adjacent to I-215 to the west. Further, as required by Section 15.24.290 of the City's Municipal Code, project buildings and structures would be setback a minimum of 25 feet from the project boundary.

Further, project landscaping (as shown in Figure 3-4, Planting Plan, in Chapter 3, Project Description) would be implemented according to **MM-WF-1**, which requires a fully irrigated landscape planted with drought-tolerant and fire-resistive plants. Further, mature trees would be required to be maintained per Section 15.24.290 of the City's Municipal Code, which requires horizontal and vertical clearance between trees/tree limbs and limits groupings of trees. Additionally, decomposed granite is proposed adjacent to buildings.

Building Materials and Other Factors

The distance between a wildfire that is consuming wildland fuel and a building is the primary factor for structure ignition (not including burning embers) (Cohen 2000). However, studies indicate that given certain assumptions (e.g., 10 meters of low-fuel landscape, no open windows), wildfire is unlikely to spread to buildings unless the fuel and heat requirements of the building are sufficient for ignition and continued combustion (Alexander et al. 1998; Cohen 1995). Construction materials and methods can prevent or minimize ignitions. Case studies indicate that with nonflammable roofs and vegetation modification from 10 to 18 meters (roughly 32 to 60 feet) in Southern California fires, 85% to 95% of the homes survived (Foote and Gilless 1996; Howard et al. 1973). Similarly,

according to previous research, post-fire assessments conducted in San Diego County indicate that updated building codes have shown success in preventing structural loss (IBHS 2008).

If structures have a sufficiently low ignitability, such as the proposed project's structures, the buildings can survive exposure to wildfire without major fire destruction. Low-ignitability buildings provide the option of reducing the wildland fire threat to structures without extensive wildland fuel reduction. Larger flame lengths and widths require wider FMZs to reduce structure ignition (Cohen 1995). For example, structure ignition assessment model results indicate that a 20-foot-high flame has minimal radiant heat to ignite a structure beyond 33 feet (horizontal distance), and a 70-foot-high flame may require about 130 feet of clearance to prevent structure ignitions from radiant heat (Cohen and Butler 1996). The Cohen and Butler study used bare wood, which is more combustible than the ignition-resistant exterior walls of the proposed structures. The project would be required to be constructed using ignition-resistant building materials and systems as outlined in Chapter 7A of the California Building Code. Chapter 7A specifies requirements for materials and construction methods for wildfire exposure.

The proposed building materials for project structures include exterior plaster, seam metal roofing, metal siding, suspended metal aluminum canopies, stone, steel, and other fire-resistant materials, with the use of wood materials limited to decorative features that would not penetrate the building envelope. If structures have a sufficiently low ignitability, such as the proposed project's structures, buildings can survive exposure to wildfire without major fire destruction.

Summary

With adherence to the City's Municipal Code, the low ignitability of the proposed structures, implementation of FMZs, and fire-resistant landscaping consistent with **MM-WF-1**, the proposed project would not facilitate wildfire spread or exacerbate wildfire risk. Further, given the approximately 185-foot distance between project structures and off-site vegetative fuels, project occupants would not be exposed to the uncontrolled spread of a wildfire or prolonged pollutant concentrations in the event of a wildfire. Therefore, it is not anticipated that the proposed project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant with mitigation incorporated.

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

Less-than-Significant Impact. The proposed project would involve construction of a new retail development and circulation improvements on a 6.65-acre site. The project would include installation and maintenance of associated infrastructure including driveways and roadways, connections to service utilities (e.g., water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications services), water drainage and water quality improvements (e.g., stormwater retention basin), and fuel breaks (e.g., fuel modification).

Vegetation Management

As previously discussed, the project site is located in a Very High FHSZ, and implementation of FMZs and defensible space is required. However, FMZs are designed to provide vegetation buffers that gradually reduce fire intensity and flame lengths from advancing fire, and would reduce, rather than exacerbate, wildfire risk. Per Section 15.24.250 of the City's Municipal Code, adequate defensible space must be created before bringing any combustible materials on to the project site, and vegetation management activities would occur prior to the start of construction and throughout the life of the project. Consequently, the associated vegetation management

activities would not exacerbate fire risk, provided that fuel modification and other vegetation management activities are implemented and enforced according to City and state requirements. The proposed vegetation management activities would reduce the fire risk by thinning or removing combustible vegetation and implementing a landscape plan with more adequately spaced, drought-tolerant, low-fuel-volume plants (in accordance with **MM-WF-1**) in order to provide a reasonable level of protection to structures from wildland fire.

Roads

The project would involve construction of a private access drive from Creighton Avenue into the site, as well as internal drive aisles and parking and access from the north from Antelope Road. The project would also involve improvements to the intersection of Clinton Keith Road and Creighton Avenue, such as sidewalk and crosswalk improvements, landscaping, and stoplight installation. The on-site roadway network and roadway improvements would be integrated into the broader roadway network in the project area, as well as the proposed development east of the project site. The presence of increased human activity and vehicles along newly installed roads would introduce new potential ignition sources to the project area. However, vegetation management would be required along roadways within the Very High FHSZ for roads internal and external to the project site. Construction of project roadways and connections to existing roadways would provide increased accessibility for MFR to the project area. Further, fire engine apparatus road access would be maintained as required by City Municipal Code, Section 15.24.130. Adherence to these regulatory requirements would reduce the risk of fire ignition along roadways and ensure ease of accessibility for ingress and egress of fire apparatus, and would not be anticipated to exacerbate wildfire risk.

Utilities

As discussed in Section 4.16, existing utility service lines are located within the vicinity of the project site, and connection to utility service lines would be implemented as part of the project. Connections to utility service lines, including those for water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications services, would be extended underground from their current locations nearby the project site to the proposed buildings. Given that the activity of connecting utilities from their current locations (i.e., within Clinton Keith Road and Antelope Road) to the project site would require ground disturbance and the use of heavy machinery associated with trenching, the installation of these utility service lines would introduce new potential sources of ignition to the site, such as the use of heavy machinery, welding, or other hot work. However, as previously discussed, vegetation management activities would occur prior to the start of construction, which would reduce the likelihood of fire ignition during installation and connection of utilities.

Further, other than lateral connections to nearby utility mains, the project would not require or result in the relocation or construction of new or expanded service utilities facilities, the construction or relocation of which could exacerbate wildfire risk or cause significant environmental effects.

As discussed in Section 4.16, water service utilities, the most notable utility service in terms of fire prevention and protection, were assessed in a Master Water Study (Appendix J-1), which was prepared to assist Eastern Municipal Water District in its evaluation of the impacts of the proposed project. The Master Water Study included calculations for the greatest demand (when maximum daily demand and fire flows combined) and determined that the existing water distribution system would be able to provide a residual 50.5 pounds per square inch of pressure, well above the minimum requirement of 20 pounds per square inch residual, as required by Eastern Municipal Water District's Water System Planning & Design Principal Guidelines and Criteria. As a result, the project would not directly require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. As such, impacts are considered less than significant, and no mitigation is required.

Summary

Installation and maintenance of project roads, service utilities, fuel modification, drainage and water quality improvements, and other associated infrastructure would not exacerbate wildfire risks provided that the appropriate fire prevention, access, and vegetation management activities are implemented as required by the City's Municipal Code.

Given that the activities involved with installation or maintenance of associated infrastructure would require ground disturbance and the use of heavy machinery associated with trenching, grading, site work, and other construction and maintenance activities, the installation of related infrastructure could potentially result in temporary or ongoing impacts to the environment. However, the installation and maintenance of roads, service utilities, drainage and water quality improvements, and vegetation management activities are part of the project analyzed herein. As such, any potential temporary or ongoing environmental impacts related to these components of the proposed project have been accounted for and analyzed in this EIR as part of the impact assessment conducted for the entirety of the project. Additionally, the project would be required to comply with all regulatory requirements and mitigation measures outlined within this EIR for the purposes of mitigating impacts associated with trenching, grading, site work, and the use of heavy machinery. No adverse physical effects beyond those already disclosed in this EIR would occur as a result of implementation of the project's associated infrastructure.

Therefore, the installation and maintenance of associated infrastructure would not exacerbate wildfire risk or result in impacts to the environment beyond those already disclosed in this EIR, and impacts would be less than significant.

Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less-than-Significant Impact. The project site is not within areas mapped as susceptible to subsidence, landslides, or liquefaction as depicted in Exhibit 5.8-2, Subsidence Susceptibility Map and Exhibit 5.8-5, Liquefaction Susceptibility Map, of the Murrieta General Plan 2035 Final EIR (City of Murrieta 2011a). The project site is surrounded by relatively flat land, and is also surrounded by land that is developed or proposed for development. Development of the site would result in grading to a level surface, altering the existing drainage pattern of the site. However, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. Due to the proposed grading of the site, the relatively flat surrounding lands, and the fact that the site would be paved for development and parking, the likelihood for downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes would be minimal, and impacts would be less than significant.

4.17.5 Mitigation Measures

MM-WF-1 *Fire-Resistant Landscaping*: A fully irrigated landscape, planted with drought-tolerant, fire-resistive plants, as listed in the Project Plant Palette below, shall be planted within all fuel modification zones. No undesirable, highly flammable plant species shall be planted, as listed in the Prohibited Plant List below. The landscaping shall be routinely maintained and shall be watered by an automatic irrigation system that will maintain healthy vegetation with high moisture contents that would prevent ignition by embers from a wildfire.

Project Plant Palette

Botanical Name	Common Name	
Site Trees		
Arbutus u. 'Marina	Marina Strawberry Tree	
Cercis Occidentalis	Western Redbud	
Chitalpa Tashkentensis 'Pink Dawn'	Pink Chitalpa	
Olea Europa 'Wilson'	Fruitless Olive	
Site Shrubs		
Baccharis Pilularis 'Pigeon Point'	Prostrate Coyote Bush	
Hesperaloe Parviflora	Red Yucca	
Salvia Greggii	Autumn Sage	
Anigozanthos Flavidus 'Velvet'	Kangaroo Paws	
Myoporum Parvifolium	Prostrate Myoporum	
Lavandula Stoechas 'Otto Quast'	Spanish Lavender	
Rosa 'Green Carpet Red'	Red Ground Cover Rose	
Callistemon Viminalis 'Little John'	Dwarf Bottle Brush	
Heteromeles Arbutifolia	Toyon	
Leucophyllum Frutescens 'Gr. Cloud'	Green Cloud Texas Ranger	
Rhus Ovata	Sugar Bush	
Site Vines		
Clytostoma Callistegioides	Purple Trumpet Vine	
Vitis Vinifera 'Thompson Seedless'	Thompson Seedless Grape	
Basins		
Juncus Patens	California Gray Rush	
Mulch and Groundcover		
Decomposed Granite	Compacted Decomposed Granite near project	
	structures	

Prohibited Plant List

Botanical Name	Common Name	Comment
Trees		
Abies species	Fir	F
Acacia species (numerous)	Acacia	F, I
Agonis juniperina	Juniper Myrtle	F
Araucaria species (A. heterophylla, A. araucana, A. bidwillii)	Araucaria (Norfolk Island Pine, Monkey Puzzle Tree, Bunya Bunya)	F
Callistemon species (C. citrinus, C. rosea, C. viminalis)	Bottlebrush (Lemon, Rose, Weeping)	F
Calocedrus decurrens	Incense Cedar	F
Casuarina cunninghamiana	River She-Oak	F
Cedrus species (C. atlantica, C. deodara)	Cedar (Atlas, Deodar)	F

Prohibited Plant List

Botanical Name	Common Name	Comment
Chamaecyparis species (numerous)	False Cypress	F
Cinnamomum camphora	Camphor	F
Cryptomeria japonica	Japanese Cryptomeria	F
Cupressocyparis leylandii	Leyland Cypress	F
Cupressus species (C. forbesii, C. glabra, C. sempervirens,)	Cypress (Tecate, Arizona, Italian, others)	F
Eucalyptus species (numerous)	Eucalyptus	F, I
Juniperus species (numerous)	Juniper	F
Larix species (L. decidua, L. occidentalis, L. kaempferi)	Larch (European, Japanese, Western)	F
Leptospermum species (L. laevigatum, L. petersonii)	Tea Tree (Australian, Tea)	F
Lithocarpus densiflorus	Tan Oak	F
Melaleuca species (M. linariifolia, M. nesophila, M. quinquenervia)	Melaleuca (Flaxleaf, Pink, Cajeput Tree)	F, I
Olea europaea	Olive	I
Picea (numerous)	Spruce	F
Palm species (numerous)	Palm	F, I
Pinus species (P. brutia, P. canariensis, P. b. eldarica, P. halepensis, P. pinea, P. radiata, numerous others)	Pine (Calabrian, Canary Island, Mondell, Aleppo, Italian Stone, Monterey)	F
Platycladus orientalis	Oriental arborvitae	F
Podocarpus species (P. gracilior, P. macrophyllus, P. latifolius)	Fern Pine (Fern, Yew, Podocarpus)	F
Pseudotsuga menziesii	Douglas Fir	F
Schinus species (S. molle, S. terebinthifolius)	Pepper (California and Brazilian)	F, I
Tamarix species (T. africana, T. aphylla, T. chinensis, T. parviflora)	Tamarix (Tamarisk, Athel Tree, Salt Cedar, Tamarisk)	F, I
Taxodium species (T. ascendens, T. distichum, T. mucronatum)	Cypress (Pond, Bald, Monarch, Montezuma)	F
Taxus species (T. baccata, T. brevifolia, T. cuspidata)	Yew (English, Western, Japanese)	F
Thuja species (T. occidentalis, T. plicata)	Arborvitae/Red Cedar	F
Tsuga species (T. heterophylla, T. mertensiana)	Hemlock (Western, Mountain)	F
Groundcovers, Shrubs, and Vines		
Acacia species	Acacia	F, I
Adenostoma fasciculatum	Chamise	F
Adenostoma sparsifolium	Red Shanks	F
Agropyron repens	Quackgrass	F, I
Anthemis cotula	Mayweed	F, I
Arbutus menziesii	Madrone	F
Arctostaphylos species	Manzanita	F
Arundo donax	Giant Reed	F, I
Artemisia species (A. abrotanium, A. absinthium, A. californica, A. caucasica, A. dracunculus, A. tridentata, A. pycnocephala)	Sagebrush (Southernwood, Wormwood, California, Silver, True tarragon, Big, Sandhill)	F
Vineyard III Retail Development Project		10773

Prohibited Plant List

Botanical Name	Common Name	Comment
Atriplex species (numerous)	Saltbush	F, I
Avena fatua	Wild Oat	F
Baccharis pilularis	Coyote Bush	F
Bambusa species	Bamboo	F, I
Bougainvillea species	Bougainvillea	F, I
Brassica species (B. campestris, B. nigra, B. rapa)	Mustard (Field, Black, Yellow)	F, I
Bromus rubens	Foxtail, Red brome	F, I
Castanopsis chrysophylla	Giant Chinquapin	F
Cardaria draba	Hoary Cress	I
Carpobrotus species	Ice Plant, Hottentot Fig	I
Cirsium vulgare	Wild Artichoke	F,I
Conyza bonariensis	Horseweed	F
Coprosma pumila	Prostrate Coprosma	F
Cortaderia selloana	Pampas Grass	F, I
Cytisus scoparius	Scotch Broom	F, I
Dodonaea viscosa	Hopseed Bush	F
Eriodictyon californicum	Yerba Santa	F
Eriogonum species (E. fasciculatum)	Buckwheat (California)	F
Fremontodendron species	Flannel Bush	F
Hedera species (H. canariensis, H. helix)	Ivy (Algerian, English)	I
Heterotheca grandiflora	Telegraph Plant	F
Hordeum leporinum	Wild barley	F, I
Juniperus species	Juniper	F
Lactuca serriola	Prickly Lettuce	I
Larix species (numerous)	Larch	F
Larrea tridentata	Creosote bush	F
Lolium multiflorum	Ryegrass	F, I
Lonicera japonica	Japanese Honeysuckle	F
Mahonia species	Mahonia	F
Mimulus aurantiacus	Sticky Monkeyflower	F
Miscanthus species	Eulalie Grass	F
Muhlenbergia species	Deer Grass	F
Nicotiana species (N. bigelovii, N. glauca)	Tobacco (Indian, Tree)	F, I
Pennisetum setaceum	Fountain Grass	F, I
Perovskia atriplicifolia	Russian Sage	F
Phoradendron species	Mistletoe	F
Pickeringia montana	Chaparral Pea	F
Rhus (R. diversiloba, R. laurina, R. lentii)	Sumac (Poison oak, Laurel, Pink Flowering)	F
Ricinus communis	Castor Bean	F, I
Rhus Lentii	Pink Flowering Sumac	F
Rosmarinus species	Rosemary	F

Prohibited Plant List

Botanical Name	Common Name	Comment
Salvia species (numerous)	Sage	F, I
Salsola australis	Russian Thistle	F, I
Solanum Xantii	Purple Nightshade (toxic)	I
Silybum marianum	Milk Thistle	F, I
Thuja species	Arborvitae	F
Urtica urens	Burning Nettle	F
Vinca major	Periwinkle	I

Source: Dudek and Hunt Research Corporation 2007.

Notes: F = flammable; I = invasive.

Plants on this list that are considered invasive are a partial list of commonly found plants. There are many other plants considered invasive that should not be planted in a fuel modification zone and they can be found on The California Invasive Plant Council's Website www.calipc.org/ip/inventory/index.php. Other plants not considered invasive at this time may be determined to be invasive after further study. For the purpose of using this list as a guide in selecting plant material, it is stipulated that all plant material will burn under various conditions. The absence of a particular plant, shrub, groundcover, or tree, from this list does not necessarily mean it is fire resistive. All vegetation used in fuel modification zones and elsewhere in this development shall be subject to approval of the Fire Marshal. Landscape architects may submit proposals for use of certain vegetation on a project-specific basis. They shall also submit justifications as to the fire resistivity of the proposed vegetation.

4.17.6 Level of Significance After Mitigation

With implementation of fuel modification zones and a landscape plan consistent with **MM-WF-1**, impacts related to wildfire would be reduced to below a level of significance.

4.17.7 Cumulative Impacts

As previously discussed, the project site is located within a Very High FHSZ. The nearby related projects that should be considered in terms of cumulative wildfire impacts include the related projects adjacent to the project site that are also located within the Very High FHSZ. These projects include Vineyard I, directly south of the project site, and Costco/Vineyard II, directly east of the project site. The proposed project, in combination with these nearby related projects that are immediately east of the project site, would convert vacant land within a Very High FHSZ to a developed condition, thereby reducing the available fuels should a wildfire occur. Related projects would also be subject to the regulations listed in Section 4.17.2 that govern construction practices, the use of construction equipment in fire-prone areas, building materials, and more. It is assumed that the related project design, such as ignition-resistant building materials, fire sprinklers, emergency access, fire alarms, defensible space, and FMZs. Compliance with these regulations would mitigate potential wildland fire risks on a project-by-project basis, thereby preempting cumulative effects.

The project area is relatively flat, and it is not anticipated that related projects would combine to result in significant wildfire impacts related to slope, prevailing winds, downstream flooding or landslide, slope instability, or drainage changes. Further, all related projects would be required to avoid conflict with the City's EOP and any emergency evacuation routes in the area.

The combination of related projects in the project area could result in increased calls to the MFR. As discussed in Section 4.12, MFR has identified a need for a sixth fire station in the eastern portion of the City as a result of increasing development in the area. As shown in Exhibit 12-9 of the City's General Plan (City of Murrieta 2011b),
the project site would not be within the proposed service area of the sixth fire station, and would not be directly served by the new station unless other resources are not available to respond first. However, the addition of a sixth station could alleviate some calls to the fire station that would serve the proposed project—Fire Station No. 4—and result in improved response times for Fire Station No. 4.

New development would be required to pay its fair-share of the City's Development Impact Fee, a portion of which covers costs associated with the provision of firefighting resources and related staffing, including the construction of fire department facilities. Further, MFR participates in the California Master Mutual Aid Agreement. In the event of a major fire, outside resources can be brought into the City as needed (City of Murrieta 2011a). As such, the project would not result in cumulatively considerable impacts related to wildfire, and cumulative impacts would be less than significant.

4.17.8 References Cited

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SOURCE: CAL Fire 2019

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FIGURE 4.17-1 Fire Hazard Severity Zones Vineyard III Retail Development Project

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5 Other CEQA Considerations

Consistent with California Environmental Quality Act (CEQA) Guidelines Section 15126.2, this chapter summarizes the findings with respect to the growth-inducing effects, significant irreversible environmental changes, cumulative impacts (when considered with other projects), significant unavoidable environmental impacts, and effects found to be less than significant of the proposed Vineyard III Retail Development Project (project).

5.1 Growth Inducement and Indirect Impacts

The CEQA Guidelines require that an Environmental Impact Report (EIR) evaluate the growth-inducing impacts of a proposed action (Section 15126.2[d]). A growth-inducing impact is defined by the CEQA Guidelines as follows:

[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involved construction of new housing. A project can have indirect growth inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises), or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could strain existing community service facilities, requiring construction of new facilities that could cause significant environmental impacts.

The project would involve construction and operation of a new retail development, including an auto-related services/retail store, tire store, retail pad, three-tenant food and retail pad with one drive-through lane on the west and south of the building, drive-through fast food restaurant, and a two-lane drive-through ATM station and bank. Commercial development may induce growth indirectly if it would attract significant numbers of new employees to the area, thereby creating a demand for additional housing. The project is expected to employ approximately 20 full-time employees; analysis in this EIR has conservatively assumed that these would be new residents to the City of Murrieta (City) (although in reality they may already reside in the City or may travel from other locations to work at the project). The project is not likely to induce substantial indirect population growth within the Murrieta area (see Section 4.11, Population and Housing, for further details).

As of 2017, the majority of residents commute outside of the City for employment, with only 15.3% of residents working within City limits (SCAG 2019). Therefore, additional jobs created during construction and operation of the project would likely be filled primarily by area residents, and would provide a benefit to the local economy.

The project would also involve improvements to the intersection of Clinton Keith Road and Creighton Avenue, such as sidewalk and crosswalk improvements, landscaping, and stoplight installation. Additionally, the project would involve the construction of an extension of a private access road to the north, and overlay of the vacated Antelope Road as a private drive to the south. The project would also include four bio-retention basins that would be located in the

northwest and southwest corners of the site, and adjacent to the proposed bank building. However, this infrastructure would specifically serve the project and would not remove obstacles to population growth. The project would be served by existing infrastructure and utilities.

5.2 Significant and Unavoidable Environmental Impacts

This section was prepared in accordance with Section 15126.2(c) of the CEQA Guidelines, which requires the discussion of any significant environmental impacts that cannot be avoided if a project is implemented. These include impacts that can be mitigated but cannot be reduced to a less-than-significant level. An analysis of environmental impacts caused by the project has been conducted and is contained in this EIR. In Chapter 4, Environmental Analysis, 17 issue areas were analyzed in detail. Table 1-1, Summary of Project Impacts, in Chapter 1, Executive Summary, summarizes the project's impacts, mitigation measures, and levels of significance before and after mitigation. According to the analysis presented in Chapter 4, the project would not result in significant unavoidable adverse impacts.

5.3 Significant Irreversible Environmental Impacts

Section 15126.2(d) of the CEQA Guidelines requires that an EIR analyze the extent to which a project's primary and secondary effects would impact the environment and commit nonrenewable resources to uses that future generations will not be able to reverse. Nonrenewable resources that would be used on site during construction and operation include natural gas, other fossil fuels, water, concrete, steel, and lumber. The project would result in the commitment of such resources. (The project's energy consumption is discussed in greater detail in Section 4.5, Energy.)

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as a highway that provides increased access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project.

Implementation of the project would occur on vacant land in the City. Proposed development would include the irreversible commitment of natural resources, energy, and human resources. Implementation of the project would increase the intensity of the site compared to existing conditions. Ongoing maintenance and operation of the project would entail a further irreversible commitment of energy resources in the form of natural gas and electricity. The project has incorporated voluntary sustainable design factors under **SC-AQ/GHG-1**, such as operational landscaping maintenance equipment that is powered by electricity (e.g., rechargeable batteries) instead of gas, recycle bins, solar-powered installation, roofs built to be compatible for optional solar use to be added in the future, electric vehicle charging stations, and drought-tolerant vegetation and water-efficient irrigation systems (see Section 4.2, Air Quality). As such, the project is not anticipated to consume substantial amounts of energy in a wasteful manner (see Section 4.5 and Section 4.16, Utilities and Service Systems, for details), and it would not result in significant impacts from consumption of utilities. Furthermore, the projected increase in vehicular traffic and mobile source emissions generated from vehicle trips such as visitors, employees, and delivery trips would not exceed the South Coast Air Quality Management District operational thresholds for maximum daily operational criteria air pollutant emissions (see Section 4.2 for details).

5.4 Effects Found Not to Be Significant

Section 15128 of the CEQA Guidelines requires a statement that briefly indicates the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. As stated in the CEQA Guidelines, such a statement may be contained in an attached copy of an Initial Study. The Initial Study for the proposed project is included in Appendix A of this EIR. As described and substantiated in Appendix A, the following issue areas were not found to be significant and were not further analyzed in the EIR: Agriculture and Forestry Resources, Land Use and Planning, and Mineral Resources. CEQA checklist items that were screened out for other environmental resource areas and described in the Initial Study are identified in each resource section.

5.5 References Cited

SCAG (Southern California Association of Governments). 2019. *Profile of the City of Murrieta: Local Profiles Report 2019.* May 2019. Accessed May 2019. https://www.scag.ca.gov/Documents/Murrieta.pdf. INTENTIONALLY LEFT BLANK

6 Alternatives

The California Environmental Quality Act (CEQA) requires that environmental impact reports (EIRs) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6[a]). As defined by the CEQA Guidelines, "[t]he range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the Lead Agency determines could feasibly attain most of the basic objectives of the project" (14 CCR 15126.6[f]).

As presented in prior sections of this EIR, the proposed Vineyard III Retail Development Project (project) would not result in significant and unavoidable impacts. However, mitigation would be required to reduce impacts related to air quality, biological resources, cultural resources, transportation, and tribal cultural resources to a less-than-significant level.

6.1 Project Objectives

The project has been designed to meet the following series of objectives:

- Enhance the City of Murrieta (City) with an economically viable development that is architecturally designed to be sensitive to the Murrieta community
- Contribute to the City's tax base by further developing retail in the City
- Provide a development in a location that is convenient for its customers and employees to travel to shop and work
- Increase the number of employees in the City and contribute to the local job/housing balance in the City
- Design a project that is consistent with the City's General Plan and Development Code
- Create a new opportunity for integrated retail sales of goods and services in the growing Murrieta community
- Design a site plan that minimizes circulation conflicts between automobiles and pedestrians

6.2 Alternatives Considered and Eliminated During the Scoping/Project Planning Process

The CEQA Guidelines provide that this EIR should "identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the Lead Agency's determination" (14 CCR 15126.6[c]). The following is a discussion of the proposed project alternatives during the scoping and planning process and the reasons they were not selected for detailed analysis in this EIR.

With respect to the feasibility of potential alternatives to the project, CEQA Guidelines Section 15126.6(t)(l) states, "[a]mong the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries ... and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site."

In determining an appropriate range of project alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and then rejected. The freeway frontage and visibility for the uses for this project was of utmost importance, and the possibility of a high-draw anchor was also a critical consideration. Project alternatives were rejected because they could not accomplish the basic objectives of the proposed project; they would not have resulted in a reduction of significant adverse environmental impacts; or they were considered infeasible to construct or operate.

6.3 Alternatives Selected for Further Analysis

This section discusses a reasonable range of alternatives to the proposed project, including a no project alternative, in compliance with CEQA Guidelines Section 15126.6(e). These alternatives include the following:

- Alternative 1: No Project/No Development Alternative
- Alternative 2: Reduced Project Alternative

Each alternative's environmental impacts are compared to the proposed project and determined to have fewer impacts than the proposed project, the same or similar impacts, or more impacts than the proposed project.

6.3.1 Alternative 1: No Project/No Development Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the impacts of a no project alternative. The "purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project" (14 CCR 15126.6[e][1]). When defining the no project alternative, the analysis shall be informed by "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (14 CCR 15126.6[e][2]).

The CEQA Guidelines state that "in certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained. Where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment" (14 CCR 15126.6[e][3][B]). In the case of the No Project/No Development Alternative, the existing site would be vacant with existing vegetation left undisturbed in a high fire hazard zone. No significant improvements would be implemented.

Analysis

Aesthetics

Under the No Project/No Development Alternative, the project site would be vacant. The project site has a disturbed visual character. Under the existing conditions, the western portion of the site remains relatively undisturbed and features low-growing scattered shrubs, although bare expanses of soil are located where previous grading activities have occurred. The No Project/No Development Alternative would maintain the current visual quality of the site and would not add new lighting sources. The No Project/No Development Alternative would not enhance the appearance of the area by developing the site with a new retail development and the site would remain visually incompatible with the surrounding area, which has a suburban character. Therefore,

although neither the proposed project nor the No Project/No Development Alternative would have significant impacts, the proposed project is considered to have fewer visual impacts compared to the No Project/No Development Alternative, which would leave the site vacant and unimproved with exposed dirt, dirt piles, and scrubby brush. Therefore, the No Project/No Development Alternative would have more visual impacts than the proposed project.

Air Quality

Construction Emissions

Under the No Project/No Development Alternative, there would be no development of the project site. No construction activities would occur; therefore, there would be no construction air pollutant emissions. Under the proposed project, daily construction emissions would not exceed the South Coast Air Quality Management District (SCAQMD) significance thresholds for volatile organic compounds (VOCs), carbon monoxide (CO), sulfur oxide (SO_x), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), or particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) during construction in all construction years. However, the daily construction emissions would exceed the SCAQMD significance thresholds for oxides of nitrogen (NO_x). **MM-AQ-1** would be applied to the proposed project to reduce impacts associated with construction emissions of NO_x to a less-than-significant level. The No Project/No Development Alternative would not result in construction emissions. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to construction emissions.

Operational Emissions

Under the No Project/No Development Alternative, the project site would be vacant. No new buildings or improvements would occur on the project site. Under the No Project/No Development Alternative there would be no operational pollutant emissions that would occur on the project site. As shown in Table 4.2-7, Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated, in Section 4.2, Air Quality, of this EIR, the proposed project would result in combined daily area, energy, and mobile source emissions that would not exceed the SCAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Thus, impacts associated with project-generated operational criteria air pollutant emissions would be less than significant. However, the No Project/No Development Alternative would have no operational emissions; therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to operational emissions.

Biological Resources

Under the No Project/No Development Alternative, the project site would be vacant. As described in Section 4.3, Biological Resources, construction of the project could result in impacts to special-status plants, special-status wildlife species, nesting birds, and burrowing owl (*Athene cunicularia*). The construction period mitigation measures proposed (**MM-BIO-1** and **MM-BIO-2**) would minimize impacts to burrowing owl and nesting birds to a less-than-significant level. As the No Project/No Development Alternative would not result in any grading on the project site, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to biological resources.

Cultural Resources

Under the No Project/No Development Alternative, there would be no development of the project site; thus, there would be no impact to cultural resources. Under the proposed project, construction could result in impacts to archaeological resources. Thus, with incorporation of **MM-TCR-2**, which is included to mitigate impacts associated with an unanticipated find during construction activities, impacts would be reduced to a less-than-significant level. However, the No Project/No Development Alternative would not result in impacts to cultural resources; therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to cultural resources.

Energy

Construction Energy

Under the No Project/No Development Alternative, no grading, off-road construction equipment, haul trucks, vendor trucks, and worker vehicle trips would occur on the project site, and no energy use would be associated with construction. Under the proposed project, construction would occur, and thus would result in the consumption of energy associated with haul trucks, vendor trucks, worker trips, and construction equipment. As the No Project/No Development Alternative would not result in any construction or grading on the project site and would not require use of utilities systems or petroleum consumption for construction under the No Project/No Development Alternative. Thus, in terms of construction energy use, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to energy consumption from construction.

Operational Energy

Under the No Project/No Development Alternative, the site would remain vacant and would not require use of utilities systems, including consumption of electricity and natural gas for building heating and cooling, lighting, and appliances, including refrigeration, electronics, equipment, and machinery; as well as energy consumption related to water usage, solid waste disposal, and electric vehicle trips. Furthermore, the No Project/No Development Alternative would not generate mobile trips fueled with gasoline, diesel, or alternative fuels. As such, there would be no increase in energy demand under the No Project/No Development Alternative. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to energy consumption from operational activities.

Geology and Soils

Under the No Project/No Development Alternative, the site would be vacant and no grading would occur. Under current conditions, soil erosion and loss of topsoil is likely, due to the disturbed, undeveloped ground surface. Excavations and grading for the proposed project would result in disturbance of existing sediments, such that erosion could be exacerbated during precipitation or high-wind events. However, proposed project grading and construction would be completed in accordance with a Stormwater Pollution Prevention Plan (SWPPP), as mandated by the National Pollutant Discharge Elimination System (NPDES), which would include standard best management practices (BMPs) to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. Under the No Project/No Development Alternative, the site would be vacant and no grading would occur and the existing 2.5:1 slopes would remain with highly erodible slopes. Upon implementation of the proposed project, the site would be graded and paved, greatly

reducing the possibility for soil erosion or loss of topsoil compared to current conditions. Under the No Project/No Development Alternative, the project site would be vacant with no BMPs to prevent erosion. Therefore, the No Project/No Development Alternative would have more environmental impacts than the proposed project with regard to geology and soils.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, no grading would occur on the project site. Therefore, there would be no greenhouse gas (GHG) emissions associated with construction, including grading, off-road construction equipment, rock crushing, haul trucks, vendor trucks, worker vehicle trips, or future operations. The proposed project would generate vehicular trips from customers, employees, and deliveries, and would require building energy, compressed natural gas forklifts, landscape and maintenance, solid waste, and water supply and wastewater treatment, which would result in additional GHG emissions when compared to a vacant and unutilized site. Therefore, although neither the proposed project nor the No Project/No Development Alternative would have significant energy impacts, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to GHG emissions with respect to construction and operational activities.

Hazards and Hazardous Materials

Under the No Project/No Development Alternative, the site would be vacant and no grading would occur. Construction of the proposed project would involve the transport, use, or disposal of hazardous materials on or off site. These materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment. Under the proposed project, all hazardous materials generated and/or used on the property would be managed in accordance with all relevant federal, state, and local laws. The proposed project includes the operation of a bank, tire store, retail pad, auto-related services/retail store, three-tenant food and retail pad, and fast-food restaurant. These facilities would involve the routine handling, transport, use, and disposal of hazardous materials, including cleaning solvents and disinfectants, various types of oils for oil change services associated with the tire store, automobile batteries, and oil- and synthetic-based lubricants sold within the auto-related service/retail store. The No Project/No Development Alternative would not involve the handling of these materials. Therefore, although neither the proposed project nor the No Project/No Development Alternative would have significant environmental impacts, the No Project/No Development Alternative and hazardous materials.

Hydrology and Water Quality

Under the No Project/No Development Alternative, the site would be vacant and no grading would occur. No changes would be made to the current drainage patterns on the project site, and no changes with regard to hydrology and water quality would occur.

The project site is underlain by topsoil and weathered bedrock, which is underlain by relatively impervious granitic bedrock. The proposed project and the No Project/No Development Alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.

Under current conditions, substantial soil erosion and loss of topsoil is highly likely due to the disturbed, undeveloped ground surface. Excavations and grading for the proposed project would result in disturbance of existing sediments, such that erosion could be exacerbated during precipitation or high-wind events. Proposed

project grading and construction would be completed in accordance with an NPDES-mandated SWPPP, which would include standard BMPs to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. Upon proposed project implementation, the site would be graded and paved, greatly reducing the possibility for soil erosion or loss of topsoil compared to current conditions. Under the Project/No Development Alternative substantial soil erosion and loss of topsoil would remain highly likely. Therefore, the No Project/No Development Alternative would have more environmental impacts than the proposed project with regard to hydrology and water quality.

Noise

Construction Noise

Under the No Project/No Development Alternative, no grading would occur. With construction of the proposed project, noise from the use of construction equipment, such as heavy equipment, haul trucks, and additional worker trips, would occur, although with implementation of a standard condition (**SC-NOI-1**) impacts would be less than significant. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to construction noise.

Operational Noise

Under the No Project/No Development Alternative, there would be no development of the project site and no grading would occur. The proposed project would introduce new on-site mechanical noise, parking lot noise, and traffic noise. Although the proposed project would not result in significant noise impacts and no operational noise mitigation measures would apply, the proposed project would result in new noise sources that would not occur as part of a vacant site. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to operational noise impacts.

Population and Housing

Under the No Project/No Development Alternative, the site would remain vacant and no grading would occur. It is anticipated that the proposed project would employ approximately 20 full-time employees, all of whom are conservatively assumed to move to the City in the analysis presented in this EIR. As the No Project/No Development Alternative would not increase jobs or increase the need for housing, it would not result in additional construction or demand for additional services. Therefore, although the proposed project would not have significant environmental impacts, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to population and housing.

Public Services

Under the No Project/No Development Alternative, the site would be vacant and no grading would occur. It is anticipated that the proposed project would employ approximately 20 full-time employees, all of whom are conservatively assumed to move to the City in the analysis presented in this EIR. However, even conservatively assuming that all 20 employees are new residents to the City, the analysis in Section 4.11, Population and Housing, of this EIR found that the project would not induce substantial unplanned population growth that could increase the need for additional public services. The No Project/No Development Alternative would not increase jobs or increase the need for housing, and therefore would not result in increased demand for public services. Therefore, although the proposed project would not have significant environmental impacts, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to public services.

Recreation

Under the No Project/No Development Alternative, the site would be vacant. It is anticipated that the proposed project would employ approximately 20 full-time employees, all of whom are conservatively assumed to move to the City in the analysis presented in this EIR. However, even conservatively assuming that all 20 employees are new residents to the City, the analysis in Section 4.11 of this EIR found that the project would not induce substantial unplanned population growth, and that growth as a result of the project is consistent with Southern California Association of Governments' overall growth projections for the City, as well as with the Murrieta General Plan 2035 (General Plan), which identifies the site for commercial development. The No Project/No Development Alternative would not increase jobs or increase the need for housing, and therefore would not result in increased demand for recreational facilities. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to recreation.

Transportation

Construction Traffic

Under the No Project/No Development Alternative, there would be no development of the project site. With construction of the proposed project, haul trucks and worker trips would contribute to traffic in the area on a daily basis during project construction. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to construction traffic.

Operational Traffic

Under the No Project/No Development Alternative, the project site would be vacant and thus would not contribute to traffic in the area. Operation of the proposed project would result in daily trips from employees and visitors generated by the proposed project, which would contribute to traffic in the area. No vehicle miles traveled would be created under a No Project/No Development Alternative. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to operational traffic.

Tribal Cultural Resources

Under the No Project/No Development Alternative, there would be no development of the project site; thus, impacts to tribal cultural resources would not occur. Under the proposed project, construction of the project could result in impacts to tribal cultural resources. Thus, **MM-TCR-1 and MM-TCR-2** are proposed, which would minimize impacts to a less-than-significant level. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to tribal cultural resources.

Utilities and Service Systems

Under the No Project/No Development Alternative, the site would be vacant and no grading would occur. No improvements to the existing utilities would occur, including the construction of new sewer lines, water lines, storm drainage facilities, electric power lines, natural gas lines, or telecommunication lines. As the No Project/No Development Alternative would not result in any grading on the project site and would not require the development or use of utilities systems, there would be no impacts on utilities and service systems under the No Project/No Development Alternative. Therefore, the No Project/No Development Alternative would have fewer environmental impacts than the proposed project with regard to utilities and service systems.

Wildfire

Under the No Project/No Development Alternative, the site would remain vacant and no grading would occur. The project site is surrounded by development or proposed development on all sides, with the exception of a narrow strip of vacant land between Antelope Road and Interstate 215, located north and west of the project site. The project site is identified by the City's General Plan Safety Element as occurring within a Very High Fire Hazard Severity Zone, and thus is subject to the regulations regarding wildfire hazards in the City Municipal Code (Section 15.24) (Exhibit 12-8 in City of Murrieta 2011). The proposed project would introduce new structures and new sources of ignition to the project site, but would reduce fire risk by replacing readily ignitable vegetation with fire-resistant structures and landscaping (particularly with implementation of **MM-WF-1**), which would reduce ignitability risk when compared to the existing vacant site. Therefore, the No Project/No Development Alternative would have more impacts than the proposed project with regard to wildfire.

6.3.2 Alternative 2: Reduced Project Alternative

The Reduced Project Alternative would include a 5,000-square-foot tire store, a 3,000-square-foot sit down restaurant, and a 5,000-square-foot drive-through ATM bank. This would reduce the project footprint from 32,120 square feet to 13,000 square feet, a 60% reduction in size. At this size, the project would not trigger the traffic mitigation (**MM-TRA-1**) that requires a second eastbound left-turn lane on Creighton Avenue.

Analysis

Aesthetics

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. The Reduced Project Alternative would enhance the appearance of the area by developing a portion of the site with a new retail development center, which would be compatible with the surrounding area; however, the balance of the site would be left with existing vegetation. Additionally, both the proposed project and Reduced Project Alternative would introduce new sources of lighting to the area. However, the nearest sensitive receptor to the project site is a residential neighborhood located approximately 0.3 miles to the east. If upon construction, the vacant land to the east of the project site remains undeveloped, both the proposed project and the Reduced Project Alternative would contribute to nighttime light that could result in significant impacts. As such, the Reduced Project Alternative would have the same or similar environmental impacts as the proposed project with regard to aesthetics.

Air Quality

Construction Emissions

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under the proposed project, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, CO, SO_x, PM₁₀, or PM_{2.5} during construction in all construction years. However, the daily construction emissions would exceed the SCAQMD significance thresholds for NO_x. **MM-AQ-1** would be applied to the proposed project and would reduce impacts associated with construction emissions of NO_x to a less-than-significant level. The Reduced Project Alternative would result in the development of fewer buildings, which would result in fewer mobile trips to

the project site. Similar to the proposed project, construction emissions resulting from the Reduced Project Alternative would not exceed the SCAQMD significance thresholds for VOC, CO, SOx, PM10, or PM2.5 during construction. Further, due to the reduction in construction needs and fewer mobile trips that would be generated by the project during construction, the Reduced Project Alternative would likely not exceed the SCAQMD significance thresholds for NOx. However, under a conservative analysis, if the Reduced Project Alternative did exceed the thresholds for NOx, the impact would be less than the impact resulting from the proposed project. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to construction emissions.

Operational Emissions

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under both the Reduced Project Alternative and the proposed project, operational criteria air pollutant emissions would occur on the project site. As shown in Table 4.2-7 in Section 4.2 of this EIR, the combined daily area, energy, and mobile source emissions under the proposed project would not exceed the SCAQMD operational thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Thus, impacts associated with project-generated operational criteria air pollutant emissions would be less than significant. The Reduced Project Alternative would result in the development of fewer buildings, which would result in fewer mobile trips to the project site. As shown in Table 4.14-7, Project Trip Generation, in Section 4.14, Transportation, the proposed project would result in 4,433 daily trips during the weekday and 692 daily trips during the weekend. The Reduced Project Alternative would generate 1,008 daily trips during the weekday and 363 daily trips during the weekend combined and would contribute to less mobile emissions than the proposed project. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to operational emissions.

Biological Resources

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. As described in Section 4.3 of this EIR, construction of the project could result in impacts to special-status plants, special-status wildlife species, nesting birds, and burrowing owl. The construction period mitigation measures proposed (**MM-BIO-1** and **MM-BIO-2**) would minimize impacts to burrowing owl and nesting birds to a less-than-significant level. However, the Reduced Project Alternative would also require grading a portion of the project site, which could potentially result in indirect impacts to special-status plants, special-status wildlife species, nesting birds, and burrowing owl. Thus, **MM-BIO-1** and **MM-BIO-2** would be required to reduce potential impacts to burrowing owl and nesting birds to a less-than-significant level. Therefore, the Reduced Project Alternative would have similar or the same environmental impacts as the proposed project with regard to biological resources.

Cultural Resources

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under the proposed project, the likelihood of the unanticipated discovery of prehistoric or archaeological deposits within the project site is considered to be low. No additional, archaeological efforts are recommended beyond the standard considerations for the management of unanticipated resources, which is included as **MM-TCR-1 and MM-TCR-2**. The Reduced Project Alternative would develop three buildings, rather than the proposed six buildings under the proposed project. As such,

the Reduced Project Alternative would result in less ground-disturbing activities that would have the potential to uncover cultural resources, though **MM-TCR-1 and MM-TCR-2** would still be required. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to cultural resources.

Energy

Construction Energy

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Construction energy use would be comparable under both the proposed project and the Reduced Project Alternative, including petroleum consumption from off-road equipment, haul trucks, vendor trucks, and worker vehicle trips. However, a reduced building development would result in reduced off-road equipment use, and fewer vendor truck and worker vehicle trips. Therefore, although both the proposed project and the Reduced Project Alternative would have less-than-significant impacts with respect to construction energy use, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to construction energy consumption.

Operational Energy

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Both the proposed project and the Reduced Project Alternative would generate vehicular trips and would require electricity and natural gas for building heating and cooling, lighting, and appliances, including refrigeration, electronics, equipment, and machinery; as well as energy consumption related to water usage, solid waste disposal, and electric vehicle trips. However, the Reduced Project Alternative would be reduced and consumption from electricity and natural gas would be less than the proposed project. Therefore, although both the proposed project and the Reduced Project Alternative would have less-than-significant impacts with respect to operational energy use, the Reduced Project Alternative would have fewer impacts than the proposed project with regard to energy consumption during operational activities.

Geology and Soils

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Excavations and grading for the proposed project would result in disturbance of existing sediments, such that erosion could be exacerbated during precipitation or high-wind events. As with the proposed project, grading and construction would be completed in accordance with an NPDES-mandated SWPPP, which would include standard BMPs to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. With operation, the site would be graded and paved, greatly reducing the possibility for soil erosion or loss of topsoil compared to current conditions. Both the proposed project and the Reduced Project Alternative would have less-than-significant impacts with respect to geology and soils. Therefore, the Reduced Project Alternative would have the same or similar environmental impacts as the proposed project with regard to geology and soils.

Greenhouse Gas Emissions

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. With the reduction in the scope of construction, GHG emissions would be less for the Reduced Project Alternative than the proposed project. Under both the Reduced Project Alternative and the proposed project, GHG emissions would be generated during operations. The Reduced Project Alternative would result in less building development, which would result in less area source emissions, energy use, solid waste disposal, and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment, as well as fewer mobile trips to the project site. Furthermore, the Reduced Project Alternative and the proposed project would be consistent with the Scoping Plan, 2016 Regional Transportation Plan/Sustainable Communities Strategy, the City's General Plan, the City's Climate Action Plan, Senate Bill 32, and Executive Order S-3-05. As with the proposed project, the Reduced Project Alternative would have less-than-significant impacts with respect to GHGs. Because the Reduced Project Alternative has a smaller construction footprint and less development, this alternative would have fewer environmental impacts than the proposed project with regard to GHG emissions.

Hazards and Hazardous Materials

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Construction of the proposed project would involve the transport, use, or disposal of hazardous materials on or off site. These materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment. The same materials would be required for the Reduced Project Alternative. Under the Reduced Project Alternative and the proposed project, all hazardous materials generated and/or used on site would be managed in accordance with all relevant federal, state, and local laws. The proposed project includes the operation of a bank, tire store, retail pad, auto-related services/retail store, three-tenant food and retail pad, and fast-food restaurant. These facilities would involve the routine handling, transport, use, and disposal of hazardous materials, including cleaning solvents and disinfectants, various types of oils for oil change services associated with the tire store, automobile batteries, and oil- and synthetic-based lubricants sold within the auto-related service/retail store. However, the Reduced Project Alternative would only include operation of a tire store, a restaurant, and a drive-through ATM bank. As such, the Reduced Project Alternative would reduce the amount of hazardous materials encountered during routine handling, transport, use, and disposal, and would only require cleaning solvents and disinfectants, and various types of oils for the oil change services. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to hazards and hazardous materials.

Hydrology and Water Quality

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. The project site is underlain by topsoil and weathered bedrock, which is underlain by relatively impervious granitic bedrock. As such, the proposed project and the Reduced Project Alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.

Under current conditions, soil erosion and loss of topsoil is highly likely due to the disturbed, undeveloped ground surface. Excavations and grading for both the proposed project and the Reduced Project Alternative would result in disturbance of existing sediments, such that erosion could be exacerbated during precipitation or high-wind events.

Proposed project and the Reduced Project Alternative grading and construction would be completed in accordance with an NPDES-mandated SWPPP, which would include standard BMPs to reduce potential off-site water quality impacts related to erosion and incidental spills of petroleum products and hazardous substances from equipment. Upon implementation of the proposed project and the Reduced Project Alternative, the site would be graded and paved, greatly reducing the possibility for soil erosion or loss of topsoil compared to current conditions.

Although the proposed project and the Reduced Project Alternative would alter the existing drainage pattern of the site, the proposed project and the Reduced Project Alternative are designed to match pre-development drainage conditions as much as possible and would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. Therefore, the Reduced Project Alternative would have the same or similar environmental impacts as the proposed project with regard to hydrology and water quality.

Noise

Construction Noise

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under both the proposed project and the Reduced Project Alternative, construction noise from the use of construction equipment, such as heavy equipment, haul trucks, and additional worker trips, would occur. For both the proposed project and the Reduced Project Alternative, a standard condition would be required. As with the proposed project, with implementation of the standard condition (**SC-NOI-1**), the Reduced Project Alternative would have a less-than-significant impact with respect to construction noise. However, as the total amount of construction would be reduced under the Reduced Project Alternative, this alternative would have fewer environmental impacts than the proposed project with regard to construction noise.

Operational Noise

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. The proposed project and the Reduced Project Alternative would both introduce new on-site mechanical noise, parking lot noise, and traffic noise. As with the proposed project, the Reduced Project Alternative would have a less-than-significant impact with respect to operational noise. However, the Reduced Project Alternative would produce less on-site mechanical noise, parking lot noise, and traffic noise as a result of having fewer buildings and therefore generating fewer employees and visitors to the project site. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to operational noise.

Population and Housing

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. It is anticipated that the proposed project would employ approximately 20 full-time employees, all of whom are conservatively assumed to move to the City in the analysis presented in this EIR. The Reduced Project Alternative would require slightly fewer employees as compared to the proposed project, and therefore conservatively would be projected to induce a smaller demand for housing. Therefore, although the proposed project would not have significant environmental impacts, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to population and housing.

Public Services

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. The proposed project would result in an increase in employees in the area, all of whom are conservatively assumed to move to the City in the analysis presented in this EIR. However, even conservatively assuming that all 20 employees are new residents to the City, the analysis in Section 4.11 of this EIR found that the project would not induce substantial unplanned population growth that could increase the need for additional public services. The Reduced Project Alternative would require slightly fewer employees as compared to the proposed project; thus, both the proposed project and the Reduced Project Alternative would result in a slight increase in employees working in the City. Therefore, although the proposed project would not have significant environmental impacts, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to public services.

Recreation

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. It is anticipated that the proposed project would employ approximately 20 full-time employees, all of whom are conservatively assumed to move to the City in the analysis presented in this EIR. However, even conservatively assuming that all 20 employees are new residents to the City, the analysis in Section 4.11 of this EIR found that the project would not induce substantial unplanned population growth, and that growth as a result of the project would be consistent with Southern California Association of Governments' overall growth projections for the City, as well as with the City's General Plan, which identifies the site for commercial development. As indicated in this EIR, the City's current and ongoing plans for additional parkland, as funded by the City's Development Impact Fee, would offset any increased use of parkland and recreational facilities as a result of the proposed project, and there would be less-than-significant impacts. The Reduced Project Alternative would require fewer employees and therefore would have less of an impact to recreational facilities than the proposed project. Therefore, although the proposed project would not have significant environmental impacts, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to recreation.

Transportation

Construction Traffic

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under both the proposed project and the Reduced Project Alternative, haul trucks and worker trips associated with project construction would contribute to traffic in the area; however, there would be fewer construction trips associated with the Reduced Project Alternative. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to construction traffic impacts.

Operational Traffic

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under the proposed project, employee and customer trips associated with project operations would contribute 4,433 daily trips to traffic in the area and would require mitigation (**MM-TRA-1 through MM-TRA-4**). With mitigation, the traffic impacts

of the proposed project would be reduced to less than significant. Implementation of the Reduced Project Alternative would reduce trips and would remove the need for **MM-TRA-1**, which requires the project applicant to be responsible for designing, funding, and installing a second eastbound left-turn lane at the intersection of Creighton Avenue and Clinton Keith Road. However, under the Reduced Project Alternative, **MM-TRA-2 through MM-TRA-4** would still be required. As described in Section 4.14 of this EIR, the proposed project is consistent with the applicable Regional Transportation Plan/Sustainable Communities Strategy and would not be considered to have a significant impact with respect to vehicle miles traveled. The proposed project and the Reduced Project Alternative both include local-serving retail uses. As indicated in Section 4.14, local-serving retail is generally presumed to have less-than-significant vehicle miles traveled impact.

Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project in regard to operational traffic.

Tribal Cultural Resources

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be significantly reduced as compared to the proposed project. Under the proposed project, there would be potential to uncover tribal cultural resources as part of the proposed project construction. As such, mitigation (**MM-TCR-1 and MM-TCR-2**) is required to reduce impacts to a less-than-significant level. The Reduced Project Alternative would develop three buildings, rather than the proposed six buildings. As such, the Reduced Project Alternative would result in less ground-disturbing activities that would have the potential to uncover sensitive tribal cultural resources, though **MM-TCR-1 and MM-TCR-2** would still be required. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to tribal cultural resources.

Utilities and Service Systems

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be reduced as compared to the proposed project. Improvements to the existing utilities would occur under the Reduced Project Alternative, including the extension of sewer lines, water lines, storm drainage facilities, electric power lines, natural gas lines, and telecommunication lines—as would be required for the proposed project. With a reduced development, there would be slightly less wastewater generated, slightly less water demand, less electricity usage, and less natural gas usage. Therefore, the Reduced Project Alternative would have fewer environmental impacts than the proposed project with regard to construction and operation of utilities and service systems.

Wildfire

Under the Reduced Project Alternative, a 13,000-square-foot retail development would be constructed; however, this retail development would be reduced as compared to the proposed project and a portion of the site would remain with existing vegetation. The project site is surrounded by development or proposed development on all sides, with the exception of a narrow strip of vacant land between Antelope Road and Interstate 215, located north and west of the project site. The project site is identified by the City's General Plan Safety Element as occurring within a Very High Fire Hazard Severity Zone, and thus is subject to the regulations regarding wildfire hazards in the City Municipal Code (Section 15.24) (Exhibit 12-8 in City of Murrieta 2011). However, the project site is located in a predominantly urbanized area. Although the proposed project would not result in wildfire impacts, particularly with implementation of **MM-WF-1**, the proposed project would introduce new structures to the project site, which reduces fire risk by replacing readily ignitable vegetation with fire-resistant structures and

landscaping when compared to the existing conditions. The very high fire hazard danger from the existing vegetation would remain under the Reduced Project Alternative, which would create an increased wildfire risk as compared to the proposed project. Therefore, the Reduced Project Alternative would have more wildfire impacts compared to the proposed project.

6.4 Environmentally Superior Alternative

An EIR must identify an "environmentally superior" alternative; and, where the no project alternative is environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior (14 CCR 15126.6[e][2]).

The environmentally superior alternative is the Reduced Project Alternative, because it reduces the proposed project's impacts except those related to wildfire severity. Further, implementation of the Reduced Project Alternative would remove the need for MM-TRA-1, which requires the project applicant to design, fund, and install a second eastbound left-turn lane at the intersection of Creighton Avenue and Clinton Keith Road. However, despite having less of an impact than the proposed project, the Reduced Project Alternative would still require the same remaining mitigation to reduce potentially significant impacts to air quality, biological resources, cultural resources, transportation, and tribal cultural resources, to a less-than-significant level, while wildfire would have an increased impact.

Table 6-1 shows the comparison of alternatives by resource area and determines the total impacts that are environmentally superior to the proposed project.

Impact	Alternative 1: No Project/ No Development	Alternative 2: Reduced Project/ Reduced Vineyard III Development
Aesthetics	-1	0
Air Quality – Construction	+1	+1
Air Quality – Operation	+1	+1
Biological Resources	+1	0
Cultural Resources	+1	+1
Energy – Construction	+1	+1
Energy – Operation	+1	+1
Geology and Soils	-1	0
Greenhouse Gas Emissions	+1	+1
Hazards and Hazardous Materials	+1	+1
Hydrology and Water Quality	-1	0
Noise – Construction	+1	+1
Noise - Operation	+1	+1
Population and Housing	+1	+1
Public Services	+1	+1
Recreation	+1	+1
Transportation – Construction	+1	+1
Transportation – Operation	+1	+1

Table 6-1. Comparison of Alternatives to Proposed Project

Table 6-1. Comparison of Alternatives to Proposed Project

Impact	Alternative 1: No Project/ No Development	Alternative 2: Reduced Project/ Reduced Vineyard III Development
Tribal Cultural Resources	+1	+1
Utilities and Service System	+1	+1
Wildfire	-1	-1
Total (environmentally superior only)	17	16
Avoids an impact or eliminates need for mitigation?	Yes	Only partially

Notes: 0 = same or similar environmental impacts; -1 = more environmental impacts; +1 = fewer environmental impacts.

6.5 References Cited

City of Murrieta. 2011. "Chapter 12: Safety Element." In Murrieta General Plan 2035. Adopted July 19, 2011.

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