Hallmark-Barham Specific Plan
Draft Environmental Impact Report

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Acronyms

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	Average Daily Trips
AF	Acre Feet
AFY	Acre Feet Per Year
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AMSL	Above Mean Sea Level
ANFO	Ammonium Nitrate/Fuel Oil
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
AQIA	Air Quality Impact Assessment
AQMD	Air Quality Management District
ASTM	American Society for Testing and Materials
AWSC	All Way Stop Control
BAU	Business-As-Usual
BMP	Best Management Practices
BEV	Battery Electric Vehicles
BSD	Buena Sanitation District
BTA	Bicycle Transportation Account
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Program
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Cal/OSHA	State of California Occupational Safety and Health Administration
CalRecycle	Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CC&R	Covenants, Conditions, and Restrictions
CCA	Community Choice Aggregation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCSYA	Critical Coarse Sediment Yield Areas
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission

CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFD	Community Facilities District
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second
CGS	California Geological Survey
CH_4	Methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
CIWBM	California Integrated Waste Management Board
CMP	Congestion Management Plan
CMWD	Carlsbad Municipal Water District
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	CO_2 Equivalent
COPPS	Community Oriented Police and Problem Solving
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CRHR	California Register of Historic Resources
CSS	Coastal Sage Scrub
CSUSM	California State University San Marcos
CUP	Conditional Use Permit
CUWCC	California Urban Water Conservation Council
CWA	Clean Water Act
CWC	California Water Code
CWPP	Community Wildfire Protection Plan
CY	Cubic Yard
dB	Decibel
dBA	A-weighted Decibel
DDE	Dichlorodiphenyldichloroethylene
DEH	Department of Environmental Health
DEIR	Draft Environmental Impact Report
DMV	Department of Motor Vehicle
DOF	Department of Finance
DOT	Department of Transportation
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DU	Dwelling Unit
DU/Acre	Dwelling Unit/Acre
DWR	Department of Water Resources
E	East
EDCO	EDCO Waste and Recycling

EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EO	Executive Order
ESA	Endangered Species Act
ESA	Environmental Site Assessment
EV	Electric Vehicle
EWA	Encina Wastewater Authority
EWPCF	Encina Water Pollution Control Facilities
FAA	Federal Aviation Administration
FAC	Facultative
FAR	Federal Aviation Regulations
FAR	Floor Area Ratio
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FPA	Focused Planning Area
FPP	Fire Protection Plan
FRA	Federal Rail Administration
FT	Feet
FTA	Federal Transit Administration
FCEV	Fuel Cell Electric Vehicles
GHG	Greenhouse gas
GPA	General Plan Amendment
GPD	Gallons Per Day
GPM	Gallons Per Minute
GV	Grading Variance
GWP	Global Warming Potential
HA	Hydrologic Area
HAPs	Hazardous Air Pollutants
HARRF	Hale Avenue Resource Recovery Facility
HCFC	Hydrochloroflurocarbons
HCM	Highway Capacity Manual
HFC	Hydrofluorocarbons
HFRA	Health Forests Restoration Act
HMBP	Hazardous Material Business Plan
HMP	Hydromodification Plan
HOV	High-Occupancy Vehicle
HRA	Hazards Risk Assessment
HREC	Historical Recognized Environmental Condition
H&SC	Health and Safety Code
I-5	Interstate
IBC	International Building Code
ICC	International Code Council
ID	Improvement District

IDA	International Dark Sky Association
IEPR	Integrated Energy Policy Report
IFC	International Fire Code
in/sec	inch per second
IPCC	Intergovernmental Panel on Climate Change
ISO	Insurance Service Office
IWMA	Integrated Waste Management Act
IWMP	Integrated Waste Management Plan
JRMP	Jurisdictional Runoff Management Program
Kg	Kilogram
kV	Kilovolt
kWh	Kilowatt-hour
LBP	Lead-based Paint
Lbs/Day	Pounds per Day
LCFS	Low Carbon Fuel Standards
LED	Light Emitting Diode
Leq	Equivalent Sound Level
LI	Light Industrial
LID	Low Impact Development
LNG	Liquefied Natural Gas
LOS	Level of Service
LCFS	Low Carbon Fuel Standard
LTF	Local Task Force
LTS	Less than Significant
LTSM	Less than Significant with Mitigation
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MEP	Maximum Extent Possible
MFSDP	Multi-Family Site Development Plan
MG	Million Gallon
MG/M^3	Milligrams per Cubic Meter
MGD	Million Gallons Per Day
MGY	Million Gallons Per Year
MHCP	Multiple Habitat Conservation Plan
MLLW	Mean Lower Low Water
MM	Mitigation Measure
MMCFD	Million Cubic Feet Per Day
MMT	Million Metric Tons
MMTCO_2e	Million Metric Tons of CO_2 Equivalent
MOU	Memorandum of Understanding
MPH	Miles Per Hour
MRF	Meadowlark Reclamation Facility
MRZ	Mineral Resource Zone
MSCP	Multiple Species Conservation Program
MS4s	Separate Storm Sewer Systems

MSSC	Minor Street Stop Controlled Intersection
MT	Metric Ton
MU3	Mixed Use 3
MWD	Metropolitan Water District
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NBL	Northbound Lane
NCCP	Natural Community Conservation Planning
NCTD	North County Transit District
NEVs	Neighborhood Electric Vehicles
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO_2	Nitrogen Dioxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSLU	Noise Sensitive Land Use
NTA	Northern Tributary Area
O_2	Oxygen
O_3	Ozone
OCPs	Organochlorine pesticides
OEHHA	Office of Environmental Health Hazards Assessment
OS	Open Space
OPR	Office of Planning and Research
Pb	Lead
PC	Per Capita
PDP	Priority Development Project
PFCs	Perfluorocarbons
PFF	Public Facility Fee
PG&E	Pacific Gas & Electric
PHEV	Plug-In Hybrid Electric Vehicles
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	Respirable Particulate Matter
PPB	Parts Per Billion
PPHM	Parts Per Hundred Million
PPIC	Public Policy Institute of California
PPM	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRD	Planned Residential Development
PVC	Polyvinyl Chloride
RAQS	Regional Air Quality Strategies
RBC	Rocks Biological Consulting

RCP	Regional Comprehensive Plan
RCP	Reinforced Concrete Pipeline
RCRA	Resource Conservation and Recovery Act
RDDMWD	Rincon del Diablo Municipal Water District
REC	Recognized Environmental Conditions
RES	Residential
Renewable Fuel Standard	RFS
RHNA	Regional Housing Needs Assessment
RMP	Risk Management Plan
RMS	Root Mean Square
ROZ	Ridgeline Overlay Zone
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
RZ	Rezone
SAFE	Safer Affordable Fuel-Efficient
S.F.	Square Feet
SF_6	Sulfur Hexafluoride
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas & Electric
SDNR	San Diego Northern Railroad
SDP	Site Development Permit
SF_6	Sulfur Hexafluoride
SFNA	School Facilities Needs Assessment
SHMA	Seismic Hazards Mapping Act
SIP	State Implementation Plans
SLF	Sacred Lands File
SMFD	San Marcos Fire Department
SMFPD	San Marcos Fire Protection District
SMUSD	San Marcos Unified School District
SO_2	Sulfur Dioxide
SOV	Single Occupancy Vehicle
SP	Service Population
SPA	Specific Plan Area
SRA	State Responsibility Areas
SR-76	State Route 76
SR-78	State Route 78
SU	Significant and Unavoidable

SUSMP	Standard Urban Stormwater Mitigation Plan
SWDA	Solid Waste Disposal Act
SWRCB	State Water Resources Control Board
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWQMP	Stormwater Quality Management Plan
TACs	Toxic Air Contaminants
TAZ	Traffic Analysis Zone
T-BACT	Toxics Best Available Control Technology
TCA	Traditionally and Culturally Affiliated
TDM	Transportation Demand Management
TIAG	Transportation Impact Analysis Guidelines
TOVWTP	Twin Oaks Valley Water Treatment Plan
TMDL	Total Maximum Daily Load
TSM	Tentative Subdivision Map
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
V/C	Volume-To-Capacity
VCMWD	Valley Center Municipal Water District
Vdb	Vibration Velocity
VHFHSZ	Very High Fire Hazard Severity Zone
VID	Vista Irrigation District
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
VWD	Vallecitos Water District
WB	Westbound
WELO	Water Efficiency Landscape Ordinance
WMA	Watershed Management Area
WQIP	Water Quality Improvement Plan
WUI	Wildland Urban Interface
ZEV	Zero Emission Vehicle
µg/m3	Micrograms Per Cubic Meter

1.0 Summary

1.1 Project Summary

The applicant is proposing to develop 151 multi-family residential units and associated common and private open space as contemplated in the Hallmark-Barham Specific Plan (proposed project) on a 10.56-acre site located at 943 E. Barham Drive, west of La Moree Road in the City of San Marcos.

The project applicant is requesting the following discretionary approvals from the City to allow for development of the proposed project:

- **General Plan Amendment (GP20-0002)** – A General Plan Amendment would be required to change the existing Mixed Use 3 (MU3) designation to Specific Plan Area (SPA).
- **Specific Plan (SP20-0002)** - The Specific Plan establishes the development rules and regulations of all land uses within the project site. Upon adoption of the Specific Plan by the City, all development within the project site must conform to the regulations of the Specific Plan.
- **Rezone (R20-0001)** - A rezone would be required to change the existing Mixed-Use-3 (MU-3) zoning to Specific Plan Area (SPA).
- **Multi-Family Site Development Plan (MFSDP20-0001)** - The Site Development Plan approval would be required to construct 151 multi-family residential units and address the details of the architectural style, building elevation, fencing, landscaping, among other criteria, within the development.
- **Tentative Subdivision Map (TSM20-0001)** – A Tentative Subdivision Map would be required for formation of residential condominium units, private driveways, and open space areas.
- **Conditional Use Permit (CUP20-0007)** - A Conditional Use Permit would be required for potential use of a temporary rock crusher.
- **Grading Variance (GV20-0002)** - A Grading Variance would be required to allow manufactured slopes and/or retaining walls in excess of 20 feet in height without benching within the project area.

1.2 Summary of Significant Effects/Mitigation

Table 1-1, Summary of Significant Environmental Impacts, provides a summary of significant environmental impacts resulting from the project, mitigation measures identified to reduce and/or avoid the environmental effects, and a determination of the level of significance of each impact following implementation of the identified mitigation measures. The analysis shows that, with implementation of mitigation measures, all project impacts with the exception of land use and transportation impacts will be mitigated to below a level of significance. Detailed analyses of significant environmental effects and mitigation are provided in Chapter 3 of this Environmental Impact Report (EIR).

In addition to mitigation measures, regulatory standards for grading, construction, and environmental protection have been incorporated into the project design to reduce adverse environmental effects.

These include, but are not limited to, grading design and earthwork specifications, erosion control measures, Best Management Practices (BMPs) for pollutant control during construction, and a biofiltration basins to handle and treat runoff.

The mitigation measures listed in **Table 1-1** will reduce impacts related to biological resources, cultural resources, geology and soils, land use, noise and transportation. As shown in Table 1-1, the remaining impacts to land use and transportation would remain significant and unavoidable.

Table 1-1. Summary of Significant Environmental Impacts

Impact	Mitigation Measures	Level of Significance After Mitigation
Biological Resources		
BIO-1: Direct and indirect impacts to nesting birds	Implementation of MM-BIO-1, refer to Section 3.3.6	Less than significant
BIO-2: Direct impacts to sensitive habitats	Implementation of MM-BIO-2, refer to Section 3.3.6	Less than significant
BIO-3 and BIO-4: Indirect impacts to sensitive habitats during project construction and operation	Implementation of MM-BIO-3 and MM-BIO-4, refer to Section 3.3.6	Less than significant
Cultural Resources and Tribal Cultural Resources		
CR-1a and CR-1b: Potential for impacts to archaeological and historical resources	Implementation of MM-CR-1a, MM-CR-1b and MM-CR-1c, refer to Section 3.4.6	Less than significant
CR:2 Potential for impacts to human remains	Implementation of MM-CR-2, refer to Section 3.4.6	Less than significant
Geology and Soils		
GEO-1: Potential for impact to paleontological resources	Implementation of MM-GEO-1, refer to Section 3.6.6	Less than significant
Land Use		
LU-1: Year 2025 impact at Rancheros Drive/SR-78 WB resulting in an inconsistency with Mobility Element policies	Implementation of MM-LU-1, refer to Section 3.10.6	Significant and unavoidable
LU-2a and LU-2b: Year 2025 and Year 2050 impact at E. Barham Drive/western project driveway in the PM Peak hour	Implementation of MM-LU-2, refer to Section 3.10.6	Less than significant
LU-3a and LU-3b: Year 2025 and Year 2050 impact at E. Barham Drive/eastern project driveway in the PM Peak hour	Implementation of MM-LU-3, refer to Section 3.10.6	Less than significant

Impact	Mitigation Measures	Level of Significance After Mitigation
Noise		
N-1: Noise impact related to rock drilling	Implementation of MM-N-1, refer to Section 3.11.6	Less than significant
N-2: Noise impact related to rock crusher	Implementation of MM-N-2, refer to Section 3.11.6	Less than significant
N-3 and N-4: Noise impact related to future onsite roadway noise	Implementation of MM-N-3, MM-N-4 and MM-N-5, refer to Section 3.11.6	Less than significant
Transportation		
TR-1: Conflict with Mobility Element policies addressing roadways	Implementation of MM-LU-1, MM-LU-2 and MM-LU-3, refer to section 3.10.6	Significant and unavoidable
TR-2: Project and cumulative impact related to vehicle miles traveled	None	Significant and unavoidable

1.3 Areas of Controversy

A Notice of Preparation (NOP) was distributed on March 31, 2021, for a 30-day public review and comment period. Additionally, an online public scoping meeting was held on April 15, 2021.

Public comments were received on the NOP for this EIR and reflect concern over a number of environmental issues (refer to Appendices B.2 and B.3). A total of five letters were received and included:

- California Department of Fish and Wildlife
- Caltrans
- Native American Heritage Commission
- San Diego County Archaeological Society
- Sylvia J. Williams

Issues and concerns raised in the NOP comment letters include:

- Biological Resources: sensitive species, scope of biological analysis, analysis of direct and indirect impact to biological resources, and recommended mitigation measures.
- Transportation: scope of the study area, existing roadway congestion, appropriate and adequate mitigation, safety.
- Cultural and Tribal Cultural Resources: compliance with Assembly Bill 52 and Senate Bill 18.

These concerns are addressed in Chapters 3 and 4 of this EIR.

1.4 Issues to be Resolved

An EIR is an informational document intended to inform the public agency decision makers and the public of the significant effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

The lead agency must respond to each significant effect identified in the EIR by making "Findings" for each significant effect. The issues to be resolved by the decision makers for the project include whether or how to mitigate the associated significant effects, including whether to implement a project alternative.

Issues to be resolved that are directly related to the proposed project include the choice among the alternatives and whether or how to mitigate the significant effects. In particular, the decision makers must decide if the significant impacts associated with biological resources, cultural resources/tribal cultural resources, geology and soils, and noise have been mitigated to less than significant and whether or not the proposed project's significant and unavoidable impacts related to land use and transportation would be offset by the benefits of the project. Lastly, the decision makers must determine whether any of the project alternatives would substantially reduce significant effects while still meeting key objectives of the project.

1.5 Project Alternatives

Four alternatives are proposed to provide an understanding of how environmental effects could be reduced by varying the design and scope of the project. Table 1-2 provides a comparison of the impacts of project alternatives to the impacts of the proposed project.

1.5.1 No Project/No Development Alternative

Under the No Project/No Development Alternative, the proposed project would not be implemented, and the project site would remain undeveloped and in its current condition. No grading or construction would occur on the project site under this alternative. The project site is currently undeveloped and supports the following vegetation communities/land covers: non-native grassland with smaller areas of Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated, developed, disturbed, ornamental and ruderal vegetation. Habitat on the project site would not be impacted under this alternative.

Since the No Project/No Development Alternative would not develop any homes on the project site, overall impacts would be less than with the proposed project or eliminated entirely. There are some benefits of the project that would not be realized under this alternative, including providing additional housing units as identified in the General Plan and a reduction of wildfire risk through vegetation removal and fire fuels management. Under this alternative there would not be any payment of Public Facilities Fees (PFF), which goes toward supporting variety of services and improvements in the City, including but not limited to Circulation Streets, SR-78 Interchanges, NPDES, Tech Improvements, Parks, and Habitat Conservation. Similarly, this alternative would not contribute any school fees. This alternative would not realize the benefit of the looped water line that would be constructed by Rincon del Diablo Municipal Water District (RDDMWD) as part of the project. This water line extension and connection to VWD infrastructure would provide a backup water source for the Mira Lago community,

located immediately east of the project site. Finally, this alternative would not meet any of the project objectives.

1.5.2 No Project/Existing Land Use Alternative

Under the No Project/Existing Land Use Alternative, the project site would be developed consistent with the site's existing land use. Per the City's General Plan, the project site has an existing General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. According to Table 2-3 of the Land Use Element of the City's General Plan, this designation "Provides for a variety of commercial and office uses integrated as a cohesive development. These uses may be mixed 'vertically' (on separate floors of a building) or 'horizontally' (on a single site or adjacent parcels). Structured parking, while not required to achieve the maximum FAR, may be allowed. Shared parking arrangements may also be allowed consistent with the nature of mixed uses. Typical uses include retail, commercial services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants, and health care facilities. To maintain a pedestrian scale and orientation, retail and other active services are encouraged at street level. This designation does not allow residential uses. A Specific Plan is required for development" (City of San Marcos 2012).

A development scenario that would be consistent with the MU3 zoning could include three 3-story buildings on the project site for a total of 275,067 square feet (s.f.) of office use and 18,344 s.f. of retail use and 879 parking spaces. The southern portion of the project site would be reserved for a minimum 150-foot fire fuel modification buffer. Overall, the development footprint and area of disturbance would be similar to that of the proposed project, but with different uses. Vehicular trips under the No Project/Existing Land Use Alternative would be approximately four times higher than the proposed project. This alternative would generate approximately 5,410 ADT compared to the 1,208 ADT anticipated for the project.

The No Project/Existing Land Use Alternative would result in a more intensive use on the project site, including four times the trip generation compared to the proposed project (5,410 ADT compared to 1,208 ADT). This results in a corresponding increase in air and greenhouse gas emissions and noise from offsite vehicles compared to the proposed project. Footprint specific impacts, such as those related to biological resources, cultural and tribal cultural resources, and geology and soils would be similar as the proposed project as the same amount of area would be disturbed. This alternative would not generate any students for SMUSD. Depending on the mix of Vehicle Miles Traveled (VMT) reduction strategies an employer implements and the number of employees who participate, it could be possible to reduce the VMT impacts to below a level of significance. This alternative could meet some of the project objectives.

1.5.3 Reduced Density Alternative

Under the Reduced Density Alternative, the project would be developed with 74 residential units for a density of 7 du/acre. Such a density could support a mix of single-family and multi-family residential units. The southern portion of the project site would be reserved for a minimum 150-foot fire fuel modification buffer. Overall, the development footprint and area of disturbance would be similar to that of the proposed project, but with fewer residential units.

Vehicular trips under this alternative would be reduced compared to the proposed project. Depending on the type and number of units development under this alternative (single family and multi-family),

this alternative would generate between 592 and 740 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by at least 38% and up to 50%.

The Reduced Density Alternative would reduce the number of residential units constructed on the project site. This results in a corresponding decrease in vehicular trips by approximately 38% -50% and a corresponding decrease in air and greenhouse gas emissions and noise from offsite traffic compared to the proposed project. Public services and utilities, service systems and energy demands would also proportionally decrease. Footprint specific impacts, such as those related to biological resources, cultural and tribal cultural resources, and geology and soils would be similar as the proposed project since a similar area of disturbance would occur under this alternative. This alternative would contribute less Public Facilities Fees (PFF) and school fees since fewer residential units would be constructed. This alternative would meet the majority of the project objectives.

1.5.4 Reduced Footprint Alternative

A Reduced Footprint Alternative was analyzed as it would result in less grading and site disturbance compared to the project. For the Reduced Footprint Alternative, the southernmost row of residential buildings proposed by the project would be eliminated. This includes eight 7-plex buildings and one 3-plex building. Under the Reduced Foot Alternative, the site would be developed with 92 multifamily residential units. The southern portion of the project site would still be subject to a minimum 150-foot fire fuel modification buffer.

Vehicular trips under this alternative would be reduced compared to the proposed project. This alternative would generate 736 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by 39%.

The Reduced Footprint Alternative would reduce the number of residential units constructed on the project site. This results in a corresponding decrease in vehicular trips by approximately 39% and a corresponding decrease in air and greenhouse gas emissions and noise from offsite traffic compared to the proposed project. Public services, utilities and service systems, and energy demands would also proportionally decrease. Footprint specific impacts, such as those related to biological resources, cultural and tribal cultural resources, and geology and soils would be less than the proposed project since less ground disturbing activities would be required. The amount of Public Facilities Fees (PFF) paid would be less than compared to the project since fewer residential uses would be constructed. Similarly, the amount of school fees paid to SMUSD would be less under this alternative. This alternative would meet the majority of the project objectives.

1.5.5 Environmentally Superior Alternative

Table 1-2 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. As shown in Table 1-2, the No Project/No Development Alternative would eliminate all of the significant impacts identified for the project. However, the No Project/No Development Alternative would not meet any of the project objectives. Additionally, there is no certainty that the project site would remain undeveloped in perpetuity. CEQA Guidelines Section 15126.6(e)(2) states that if the No Project alternative is identified as the environmentally superior alternative, then an environmentally superior alternative should be identified among the other alternatives.

Among the other alternatives, not including the proposed project, the Reduced Footprint Alternative is the environmentally superior alternative because it would provide a reduced level of impact in some environmental analysis areas including air quality, greenhouse gas, noise, public services, recreation,

and utilities/service systems. Additionally, footprint specific impacts, such as those related to cultural and tribal resources, biological resources, and geology and soils would be reduced compared to the proposed project, since less ground disturbing activities would be required. Mitigation measures would still be required to mitigate impacts to biological resources, cultural resources, geology and soils, noise, tribal cultural resource, and land use (partially mitigated).

Due to project site being in a suburban setting and the limited options there are to mitigate Vehicle Miles Traveled (VMT) impacts for residential projects, the Reduced Footprint Alternative would still result in significant and unavoidable transportation impacts due to Vehicle Miles Traveled (VMT). Similarly, due to existing degraded LOS at the intersection Rancheros Drive/ SR-78 WB, this alternative would still result in significant and unavoidable impacts in the AM and PM peak hours under Near Term 2025 With Project condition. Even though payment of funds to the City's Congestion Management Community Facilities District (CFD) and Public Facilities Fees (PFF) that addresses congestion would occur, the needed improvements at this intersection to improve LOS are within Caltrans jurisdiction, not the City's. Therefore, the City cannot control the timing of the installation of the improvements and it cannot be conclusively stated that the intersection improvements would be in place in time. Thus, the inconsistency with policies in the Mobility Element related to LOS will remain and the significant and unavoidable land use and transportation impacts would still occur under the Reduced Footprint Alternative.

Table 1-2. Comparison of Impacts of Proposed Project and Alternatives

Environmental Topic	Proposed Project	No Project/No Development Alternative	No Project/Existing Land Use Designation Alternative	Reduced Density Alternative	Reduced Footprint Alternative
Aesthetics	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Air Quality	LTS	No Impact (Reduced)	LTS (Increased)	LTS (Reduced)	LTS (Reduced)
Biological Resources	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Cultural Resources	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Energy	LTS	No Impact (Reduced)	LTSM (Increased	LTSM (Reduced)	LTSM (Reduced)
Geology and Soils	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Greenhouse Gas Emissions	LTS	No Impact (Reduced)	LTS (Increased)	LTS (Reduced)	LTS (Reduced)
Hazards and Hazardous Materials	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Hydrology and Water Quality	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Land Use and Planning	SU	No Impact (Reduced)	SU (Same)	SU (Same)	SU (Same)
Noise	LTSM	No Impact (Reduced)	LTSM (Increased)	LTSM (Reduced)	LTSM (Reduced)
Population and Housing	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)

Environmental Topic	Proposed Project	No Project/No Development Alternative	No Project/Existing Land Use Designation Alternative	Reduced Density Alternative	Reduced Footprint Alternative
Public Services	LTS	No Impact (Reduced)	LTS (Same)	LTS (Reduced)	LTS (Reduced)
Recreation	LTS	No Impact (Reduced)	No Impact (Reduced)	LTS (Reduced)	LTS (Reduced)
Transportation	SU	No Impact (Reduced)	SU (Reduced for VMT, Increased for ADT generation)	SU (Same)	SU (Same)
Tribal Cultural Resources	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Utilities and Service Systems	LTS	No Impact (Reduced)	LTS (Reduced)	LTS (Reduced)	LTS (Reduced)

Notes: Impact Status: LTS = Less than significant impact; LTSM = Less than significant with mitigation; SU = Significant and unavoidable

2.0 Project Description, Location and Environmental Setting

This Draft Environmental Impact Report (EIR) has been prepared by the City of San Marcos to evaluate the potential effects associated with the construction and implementation of the proposed Hallmark-Barham Specific Plan Project (proposed project) as described in Section 2.2 of this EIR. The EIR is intended to provide information to the San Marcos City Council, public agencies, stakeholders and organizations, and the general public regarding the potential environmental impacts, mitigation measures, and alternatives to the proposed project.

2.1 Project Objectives

The following objectives of the Hallmark-Barham Specific Plan describe the underlying purpose of the proposed project and provide a basis for identification of a range of reasonable alternatives evaluated in this EIR. The complete Specific Plan is included as **Appendix A.1**.

- Provide a multi-family housing opportunity through a range of unit types, sizes, and number of different bedroom counts, including one, two, three, and four-bedroom units, as well as a range of affordability to accommodate a full spectrum of family demographics to contribute to the growing housing needs of the region;
- To the extent possible given the site constraints, maximize the opportunity to provide medium-density housing for the City of San Marcos in the 12.1-15.0 dwelling unit density range which comparable to other medium-density housing developments near the Specific Plan Area.
- Create a development which accommodates appropriate recreational open space for the anticipated residents expected to reside within the Specific Plan Area;
- Provide development standards to regulate the nature and appearance of all construction within the Hallmark-Barham Specific Plan Area through integration of landform use, architectural design, unified landscape theme, and recreation areas;
- Design a safe and efficient circulation system that adequately supports the appropriate level of traffic within the Specific Plan Area as well as connections to public roadways and improvements to public streets and rights-of-way inclusive of vehicular, bicycle, pedestrian modes of travel;
- Develop a financing plan that provides for the efficient and timely provision of infrastructure and public services prior to and as development occurs;
- Implement a maintenance program which will ensure all common areas are maintained to standards set forth in the City's General Plan; and
- Finance and/or contribute to all appropriate community and citywide infrastructure as warranted.

2.2 Project Description

The approximate 10.56-acre site is located at 943 E. Barham Drive, west of La Moree Road in the Barham/Discovery Community. The assessor parcel number (APN) is 228-310-01-00 **(Figure 2-1)**.

The project applicant is requesting approval of a General Plan Amendment, Specific Plan, Rezone, Multi-Family Site Development Plan, Tentative Subdivision Map, Conditional Use Permit, and Grading Variance. If approved, these entitlements would allow for the development of a multi-family residential project on the project site.

The Specific Plan is a comprehensive planning document that establishes development guidelines for the project site. The Specific Plan will serve as the primary land use, policy, and regulatory document for the project by providing a development planning review process, as authorized by California Government Code Section 65450, in conjunction with the City of San Marcos Zoning Ordinance, Chapter 20.535. Under the Specific Plan, the only permitted land use would be residential.

The proposed project would allow for the development of 151 multi-family residential units and associated common and private open spaces. The proposed project includes infrastructure improvements as described in greater detail below. The conceptual site plan is included in **Figure 2-2**.

2.2.1 Discretionary Actions

As mentioned above, the requested project entitlements/discretionary actions, and permits by the City include a General Plan Amendment, Specific Plan, Rezone, Multi-Family Site Development Plan, Tentative Subdivision Map, a Conditional Use Permit and a Grading Variance. Each of these actions is described in more detail below. The Specific Plan is included as Appendix A.1 and the project plans are included as Appendix A.2.

- **General Plan Amendment (GP20-0002)** – A General Plan Amendment would be required to change the existing Mixed Use 3 (MU3) designation to Specific Plan Area (SPA).
- **Specific Plan (SP20-0002)** - The Specific Plan establishes the development rules and regulations of all land uses within the project site. Upon adoption of the Specific Plan by the City, all development within the project site must conform to the regulations of the Specific Plan. The Specific Plan would be required to be reviewed and approved concurrently with the Multi-Family Site Development Plan application.
- **Rezone (R20-0001)** - A rezone would be required to change the existing Mixed-Use-3 (MU-3) zoning to Specific Plan Area (SPA).
- **Multi-Family Site Development Plan (MFSDP20-0001)** - The Site Development Plan approval would be required to construct 151 multi-family residential units and address the details of the architectural style, building elevation, fencing, landscaping, among other criteria, within the development.
- **Tentative Subdivision Map (TSM20-0001)** – A Tentative Subdivision Map would be required for formation of residential condominium units, private driveways, and open space areas.
- **Conditional Use Permit (CUP20-0007)** - A Conditional Use Permit would be required for potential use of a temporary rock crusher.

- **Grading Variance (GV20-0002)** - A Grading Variance would be required to allow manufactured slopes and/or retaining walls in excess of 20 feet in height without benching within the project area.

2.2.2 Project Characteristics

This section details the characteristics of the proposed project.

2.2.2.1 Land Use

The Specific Plan will be comprised of a residential land use component containing open space, as detailed below.

Residential Land Use

The proposed project proposes 151 multi-family residential units situated on approximately 10.6 gross acres. The site plan is included as Figure 2-2. Residential buildings compose approximately 2.8-acres of the project site. Multi-family residential dwelling units are comprised of one, two, and three-story condominiums with ten dwelling unit types interspersed throughout the project site. Overall building heights will not exceed 40 feet.

Open Space

There are two main categories of open space proposed for the project – common open space and private open space. Common open space will total approximately 5.35 acres and includes open space with grades 10 percent and greater, common open space with grades less than ten percent, the water quality basin/bioretention area and recreational areas.

Private open space is associated with private patio and deck areas on the residential units. The open space concept plan is included as **Figure 2-3** and **Table 2-1** summarizes the proposed open space areas.

Common Open Space

Common open space is divided into: 1) common open space area with grades 10 percent or greater; 2) common open space area with grades less than 10 percent; 3) the water quality basin/bioretention area; and 4) recreational areas.

Common Open Space – Grades 10 Percent or Greater

The first category is common open space with grades of 10 percent or greater. According to the City of San Marcos Zoning Ordinance, open space of 10 percent grade or greater cannot be counted as usable open space. This category includes open space features such as landscaping and slopes and encompasses 134,776 square feet (s.f.).

Common Open Space – Grades Less than 10 Percent

Common open space areas with grades less than 10 percent are considered to be usable open space. These are landscaped areas and other areas which encourage relaxation activities such as observing nature, bird watching, painting, photography, and picnicking as well as recreational open space areas such as open turf areas. This encompasses 64,913 s.f.

Table 2-1. Proposed Open Space Summary

Open Space Description	Square Feet Provided
Common Open Space	
Common Open Space (Grades 10 percent or greater)	134,776(1)
Common Open Space (Grades less than 10 percent)	64,913(2)
Water Quality Basin/Bio-retention Area	6,764(1)
Recreational Areas	10,742(2)
Private Open Space	
Private Open Space (Patios/Decks)	26,390

Notes: (1) Per the Zoning Ordinance, open space areas with grades of 10 percent or greater and the water quality basin/bioretention areas do not count as usable open space
(2) Open space with grades of less than 10 percent and recreational areas count towards the project's usable open space calculation.

Common Open Space – Water Quality Basin/Bioretention Area

The project includes a 6,764-s.f. water quality basin area. This is a non-usable open space area located in the northwest corner of the project site which is used to direct water during rain events to control for flooding and to treat water before it is discharged from the site. The water quality basin/bioretention area does not count towards usable common open space.

Common Open Space – Recreational Areas

The proposed project includes five recreational open space areas totaling 10,742 s.f., inclusive of multi-age play areas, tot lots, seating, barbeque stations, open turf areas, and patio areas. These areas will be maintained by the Homeowners Association and include:

- A 3,564 s.f. primary recreation area will provide residents with amenities such as a barbeque counter and patio space, a bocce ball court, and a tot lot with seating and open turf area. Excluding the tot lot, other recreational amenities within the primary recreation area may be substituted to make room for a pool.
- A 2,345 s.f. multi-age recreation area has been established adjacent to Building 12 and includes a multi-age play structure, open turf area, and bench seating.
- A 1,805 s.f. amenity space adjacent to Building 1 will include an enhanced paved patio area, tables with seating, open turf areas and a dog wash station.
- A 1,552 s.f. overlook tot lot area provided adjacent to Building 17 includes features such bench seating, a fire pit with seating, walkways, and a tot lot.
- A 1,476 s.f. amenity space adjacent to Building 25 includes a dog wash and open turf area.

Private Open Space

Private open space within the proposed project consists of private patio space and private balcony/deck space. The City requires that each unit with ground floor living must provide 250 s.f. of private open space. Units with living space on the second floor and above must provide 50 s.f. of private open space in the form of decks or balconies. There is a total of 88 units within the proposed project that include ground floor living space and 63 units with living area on the second floor or above. Therefore, according to the City of San Marcos Zoning Ordinance, the units with ground floor living would be required to provide 22,000 s.f. of private patio space and the units with living space on the second floor and above would be required to provide approximately 3,150 s.f. of balcony/deck space. Combined, the minimum private open space required for the proposed project equates to 25,150 s.f. The proposed project provides a total of 26,390 s.f. of outdoor private space and will exceed the City's requirement.

Landscape Plan

The proposed landscape plan includes a mix of trees, shrubs, grasses and groundcover and the plant selection emphasizes moderate water use species. The landscape concept plan is included as **Figure 2-4a** and the plant material guide is included as **Figure 2-4b**.

Proposed tree species include desert willow, majestic beauty Indian hawthorn, California laurel, columnar Italian cypress, fern pine, western redbud, European olive, Mexican palo verde, African suman, strawberry tree, flaxleaf paperbark, and date palms. See Figure 2-4b for a comprehensive list of proposed plant materials. The project will also comply with the City's Model Water Efficient Landscape Ordinance (WELO) and Municipal Code, Title 20.

2.2.2.2 Architectural Design

The project will have a Contemporary Spanish architectural style. Proposed materials include wood, stucco, brick with decorative metal accents and trims. The project includes a variety of floor plans to allow for the articulation of the building elevations. One-story, two-story and three-story product types are included with the project. The project proposes 19 7-Plex Buildings (133 units) and six 3-plex buildings (18 units) for a total of 151 units. A 1,160 s.f. central recreation building is also proposed that would have a kitchen, living room, dining room, California room, patio, restroom and storage area. **Figure 2-5a** presents the architectural concept for the 3-plex buildings and **Figures 2-5b** and **2-5c** presents the architectural concepts for the 7-plex buildings.

2.2.2.3 Walls, Fencing, Entry Monuments and Lighting

Walls, fences, and monuments within the proposed project are functional boundaries framing outdoor spaces and complementary pieces of the landscape design. Walls, fences, and monuments create partitions between private open space, screen the development from roadways, reduce noise from roadways, and enhance the overall site design.

Fencing and Walls

Fence and wall types allowed under the Specific Plan include tubular steel, split face block/earth-tone color, living hedge with tubular steel gate, wood, or vinyl privacy fencing. Walls and fences would be designed in such a way as to become a visual amenity, compatible with the surrounding natural landscape's colors and materials. **Figure 2-6** presents the conceptual fence and wall plan.

Standard masonry walls and masonry retaining walls would be used where engineering requires more stability and strength. Masonry retaining walls would be split face block and may incorporate fencing along the top of the wall.

Private open space fencing would utilize wood, vinyl, block, or tubular steel and be fire resistant as needed. Living walls (hedges) are encouraged as a private open space fencing option. Fencing around recreational areas would be tubular steel or other similar material and design.

Lighting

Lighting for the proposed project will be used to accent landscaping and provide safety and accent lighting for multi-family building clusters. All lighting fixtures for the proposed project will be energy efficient architecturally appropriate, and designed to minimize glare, conflict, and light pollution, while providing illumination levels that create a safe environment for both vehicles and pedestrians. Street area lights will be full cut-off fixtures and will utilize house-side shields to reduce light trespass and prevent light pollution. Common area lighting will be used to enhance and complement the character of the development. Conceptual lighting fixtures and locations are illustrated on **Figure 2-7**. Lighting will be required to conform with the City's lighting ordinance and standards.

2.2.2.4 Access, Circulation and Parking

Access

Access to the project site will be via two unsignalized driveways on E. Barham Drive. The western driveway will be 40-feet wide and serve as the primary entry to the project site and provide full access. The eastern driveway will be 26-feet wide and will also provide full access. Based upon mitigation measures identified in Section 3.10, Land Use (MM-LU-2 and MM-LU-3), the project will be required to limit left turns out of both driveways between the PM Peak Hour (4:00 PM to 6:00 PM).

A secondary emergency-only access is provided through the western boundary of the project site at the western terminus of Street "C". This access will connect to an existing emergency access driveway on the adjacent property which connects to Saddleback Way and then to E. Barham Drive. This access point is for emergency vehicles only and bollards would be put in place.

Circulation

Internal roadways are designed to provide safe movement of bicycle, pedestrian, and vehicle traffic through the project site and to provide attractive frontages to residential lots. **Figure 2-8** presents the conceptual circulation plan. Typical cross sections for the proposed private driveways and alleys are shown on **Figure 2-9a** and **Figure 2-9b**.

Vehicular circulation through the project will be via three private 26-foot-wide internal streets, Driveways "A", "B" and "C". These streets provide access to private alleys (Alleys A through K). In addition, the proposed project provides an accessible path of travel through the site and to each residence via pedestrian pathways that also connect to the sidewalk on E. Barham Drive which is identified as an Urban Trail per the City's Master Trails Plan.

Parking

The project proposes a total of 349 parking spaces. This includes 283 garage spaces associated with the units, which will be pre-wired for electric vehicle charging stations. One-bedroom units will have a

one-car garage and all other units will have a two-car garage. An additional 66 outdoor parking spaces would be provided with 10 of these spaces assigned to units and 56 spaces for guests. Of those outdoor spaces, three will be ADA spaces. The project will provide three EV charging stations in the guest parking area.

2.2.2.5 Grading and Construction Phase

The project is expected to start construction in late 2022 with an occupancy of 2025. The project would be constructed in one phase and all construction materials would be stored onsite.

Grading

Grading will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of material. The grading concept plan is presented in **Figure 2-10**. Material import is expected to take 103 days. Assuming the use of a 15 CY haul truck, approximately 3.090 trips will be required, which is approximately 30 truck trips per day. The import and export of earth material is guided by Section 17.32.080 of the City's Municipal Code and prior to any import of soils, a haul route will be submitted for review and approval by the City Engineer. Additionally, grading and other earth moving activities are restricted to the hours of 7:00 AM and 4:30 PM, Monday through Friday, per Section 17.32.180 of the City's Municipal Code.

The project would implement fugitive dust control measures outlined in Section 87.426 of the City's Grading Ordinance, which would include watering the site a minimum of twice daily to control dust, as well as reducing speeds on unpaved surfaces to 15 mph or less, replacing ground cover in disturbed areas quickly, and reducing dust during loading/unloading of dirt and other materials.

Grading Variance

A grading variance is required for projects including slopes and/or retaining walls that exceed 20 feet in height without benching. Areas where slopes are proposed to be greater than 20 feet include the southern extent of development (31.6-foot maximum slope height), a small area on the western edge of the project site (25.8-foot maximum slope height) and a portion of the project frontage with E. Barham Drive (22.8-foot maximum slope height with 6-foot retaining wall). **Figure 2-11** depicts the areas that are proposed to have manufactured slopes without benching in excess of 20 feet in height. Approval of a grading variance allows for reduced grading and lower overall slope heights due to the removal of benching.

Blasting and Rock Crushing

Due to granitic bedrock conditions, blasting and rock crushing may be required during the project grading and site preparation activities. If required, blasting would be needed in the northeast portion of the project site. The project would comply with all provisions identified in the City's Municipal Code Section 17.60.06 as it relates to blasting and blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday. Blasting also required issuance of a Blasting Permit from the San Marcos Fire Department. The project's requested approvals include a Conditional Use Permit, which would allow for the use of the temporary rock crusher.

2.2.2.6 Public Utilities and Services

Water Facilities

The project site lies within Rincon Del Diablo Municipal Water District (RDDMWD) Improvement District 1 service area and will be served by RDDMWD for potable water and for water for fire protection. RDDMWD has confirmed their ability to serve the project (RDDMWD 2021).

RDDMWD will extend the existing 8-inch waterline that currently terminates within the Mira Lago community, through a portion of the project site to loop and connect to the existing 10-inch Vallecitos Water District (VWD) line in E. Barham Drive. The project would connect into this new on-site line. RDDMWD's connection to the VWD waterline also provides a secondary water source if water service from RDDMWD were to be interrupted.

Water lines within the project site will consist of an 8-inch fire main and a 4-inch domestic main water line. Both lines will circulate beneath the main driveways throughout the project site as shown on **Figure 2-12**. The 8-inch fire main will run under private driveways "A", "B", and "C". The 4-inch domestic water lines will loop through alley's "A," through "K" teeing off from driveway's "A", "B" and "C." The 8-inch fire main and 6-inch domestic water lines will connect to the existing 10-inch and 8-inch public water mains underneath E. Barham Drive.

Wastewater Facilities

The project site is within the service area of VWD for wastewater service, specifically within VWD's Sewer Improvements District "A". The project will connect to existing VWD sewer infrastructure and VWD has indicated they can serve the project (VWD 2020).

Preliminary sewer design for the project determined a 6-inch PVC sewer main will be needed to adequately service individual homes and community areas discharging wastewater. Pipes will be located underneath the internal private driveways and alleys. The internal sewer main will connect to the existing VWD 8-inch sewer line located beneath E. Barham Drive via the primary project driveway. **Figure 2-13** presents the proposed wastewater concept.

Site Drainage and Stormwater Management

Storm drain systems and connections would be designed to accommodate the proposed future development. One biofiltration basin is proposed at the northwest corner of the project site. The biofiltration basin would be approximately 6,764 s.f. Stormwater flows will be conveyed to the filtration system via storm drains, where water will be cleaned prior to being discharged. The conceptual drainage plan is presented in **Figure 2-14**. Hydromodification will be required with final engineering submittals in conformance with the 2016 City of San Marcos Best Management Practices Design Manual.

Electricity and Gas

Electricity and natural gas would be provided by San Diego Gas & Electric (SDG&E). The proposed project would connect to the existing underground 69KV line at the project frontage with E. Barham Drive. SDG&E also maintains a gas distribution system within E. Barham Drive. If the project utilizes gas utilities, the gas line will be extended to the project site through the same joint trench alignment as electrical, cable and telephone facilities.

Solid Waste Disposal

Solid waste collection and recycling services to the proposed project would be provided by EDCO Waste & Recycling. Non-recyclable waste, including general trash and green materials, is collected and transported to the Sycamore Sanitary Landfill in Santee. Recyclable materials are transferred to the Escondido Resources Recovery Transfer Station for further processing.

Fire Protection

The project is located within the San Marcos Fire Protection District boundary. The San Marcos Fire Department (SMFD) would provide fire protection for urban and wildland fires and emergency services to the project site. SMFD services San Marcos with four stations, the closest of which is Fire Station No. 3 located at 404 Woodland Parkway approximately 0.50 miles north of the project site.

Police Protection

Police protection for the proposed project would be provided by the County of San Diego Sheriff's Department. The County Sheriff provides contract law enforcement services to the City of San Marcos through the station located at 182 Santar Place located within City limits. The station's location is approximately 0.60 miles northwest of the project site. The Sheriff's Department provides services to San Marcos and the surrounding unincorporated areas.

Schools

The project site is within the San Marcos Unified School District (SMUSD) boundary. SMUSD is 49 square miles in size and encompasses most of the City of San Marcos and portions of the Cities of Vista, Escondido and Carlsbad, as well as unincorporated areas of the County of San Diego between these cities. Students generated by the project would attend Knob Hill Elementary School, Woodland Park Middle School, and Mission Hills High School.

Parks

There are 16 major community parks and 18 mini parks located throughout the City. The City residents in the project area are currently served by several nearby parks. The closest parks to the project site are the Alder Glen tot lot and Jack's Pond Park. The Alder Glen tot lot includes a kiosk, permanent restrooms, play equipment and trail connections. Jack's Pond Park consists of picnic areas, trails, tot play lot, restrooms, Native Center, and turf area.

Libraries

The City is served by the San Diego County Library. The San Marcos Branch is located at 2 Civic Center Drive, approximately 1.25 miles northwest of the project site.

2.2.2.7 Offsite Improvements

As part of the project, RDDMWD will extend an existing 8-inch waterline from the Mira Lago community through the project site to loop and connect with an existing VWD waterline in E. Barham Drive. This will include approximately 50 feet of water line that would be offsite within E. Barham Drive. The water line extension is presented in Figure 2-12.

To connect the project's proposed sewer lines to the existing VWD sewer line within E. Barham Drive, approximately 75-feet of off-site connection will be required. The sewer connection is presented in Figure 2-13.

Both of the extensions described would take place within E. Barham Drive and would not impact any vegetation.

2.2.2.8 Economic Characteristics

As discussed in Chapter 6 of the Hallmark-Barham Specific Plan (Appendix A.1), the proposed project would include a Public Facilities and Financing Plan to ensure improvements are implemented in a timely and successful manner. The financing mechanisms for each improvement will be timed with any development of the project site, the City's conditions of approval, and site plan/design review approval. Refer to Chapter 6 of Appendix A.1 for additional details regarding the methods of financing of construction and operation of public improvements and services.

Project Design Features

The project incorporates the following design features and will adhere to specific regulatory requirements that will minimize potential environmental effects. These are summarized, in **Table 2-2**.

Table 2-2. Project Design Features

Aesthetics • Implementation of the Landscape Plan to provide a cohesive and visually-appealing planting scheme. • Compliance with the City of San Marcos Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080, Light and Glare Standards.
Air Quality • Compliance with the San Diego Air Pollution Control District's (SDAPCD's) fugitive dust rules and fugitive dust control measures outlined in Section 87.426 of the City's Grading Ordinance. • In accordance with SDAPCD Rule 67.0 (Architectural Coatings), the project would utilize low-volatile organic compound (VOC) paint that does not exceed 100 grams of VOC per liter for interior surfaces and 150 grams of VOC per liter for exterior surfaces. • Heavy diesel construction equipment shall be rated Tier IV or better.
Geology and Soils • Implementation of all remedial grading and drainage recommendations contained within Chapters 7 and 9 of the geotechnical report prepared for the project (GEOCON 2020).
Greenhouse Gas Emissions • Each garage will be wired for EV charging stations. • Provision of three Level 2 EV charging station in the community parking area. • Installation of rooftop solar consistent with Title 24. • The project design includes bicycle racks. • The HOA manager will provide transit information to the owners and make a good faith effort in offering transit fare subsidies.

- The CC&Rs will have a requirement that the HOA will also inform community members about public transit and carpool options.
- The project will include a parking for carpool vehicles.
- Provision of a workspace in the community building for telecommute employees.
- The project's landscaping plan incorporates shade trees.
- Compliance with the City's Model Water Efficient Landscape Ordinance (WELO) and Municipal Code, Title 20.
- None of the units will have fireplaces.

Hazards

- Future residents shall be notified of potential annoyances commonly associated with proximity to airports (e.g., noise, vibrations, and overflights) through the recording of overflight notification documents as outlined in the McClellan-Palomar Airport Land Use Compatibility Plan and Chapter 20.265 of the City's Municipal Code.

Hydrology/Water Quality

- Source control BMPs include, but are not limited to:
- Preventing illicit discharges into the MS4
- Stenciling the future on-site public road storm drain inlets
- Protecting trash storage areas from rainfall, run-on, runoff, and wind dispersal.
- Site design BMPs include:
- Conserving natural areas, soils, and vegetation
- Minimizing impervious areas
- Runoff collection through multiple private inlets
- Landscaping with native or drought tolerant species.

Noise

- Grading, excavation and other earth moving activities would occur between 7:00 AM and 4:30 PM, Monday through Friday. No grading, excavation and other earth moving activities would occur on the weekends or holidays in accordance with the City's Municipal Code, Section 17.32.180.
- Blasting activities shall comply with the City's Municipal Code, Section 17.60.070 (Blasting Operations Procedures).

Public Services – Fire Protection, Police Protection and Schools

- The applicant/developer/property owner shall submit an executed version of petition to annex into and establish, with respect to the property, the special taxes levied by the following Community Facility District: CFD 2001-01 (Fire and Paramedic).
- The applicant/developer/property owner shall submit an executed version of petition to annex into and establish, with respect to the property, the special taxes levied by the following Community Facility District: CFD98-01 (Police). The applicant shall pay the San Marcos Unified School District developer fees that are in effect at the time of building permit issuance. The current residential fee is $4.38 per square foot.

Transportation (Vehicle Miles Traveled)

- The project design results in a greater average residential density on the project site (14.3 dwelling units/acre) compared to the residential density for the Traffic Analysis Zone (TAZ) in which is located (TAZ 1026), which has a residential density of 7.03 dwelling units per acre. This allows for a reduction in vehicle miles traveled.
- The project design includes bicycle racks.

• The HOA manager will provide transit information to the owners and make a good faith effort in offering transit fare subsidies. • The CC&Rs will have a requirement that the HOA will also inform community members about public transit and carpool options. • The project will include a parking for carpool vehicles. • Provision of a workspace in the community building for telecommute employees. • The applicant/developer/property owner shall submit an executed version of petition to annex into and establish, with respect to the property, the special taxes levied by the following Community Facility District: CFD2011-01 (Congestion Management).
Utilities • The applicant shall pay Water Capital Facility (Capacity) Fees that are in effect at the time of building permit issuance to Rincon del Diablo Municipal Water District per Ordinance No. 21-98.21. • The applicant shall pay Wastewater Capital Facility Fees per Vallecitos Water District per Ordinance No. 176.
Wildfire • 150-foot onsite fire fuel modification buffer is incorporated into the project design. • Designed per code for fire resistive building materials

2.3 Environmental Setting

2.3.1 Existing Land Use and Setting

On-Site

The project site is generally undeveloped but appears to have been disturbed historically based on the presence of non-native grassland distinct from adjacent habitats and visible in historical aerial photographs of the area. Based upon historical aerial photography reviews, a residential structure and associated outbuilding were constructed on the project site sometime between 1949 and 1968. All structures and outbuilding were removed sometime between 1983 and 1996.

Elevations range from 710 feet above mean sea level (amsl) in the southeast portion of the site to 650 feet amsl in the northwest portion of the site. The majority of the project site supports non-native grassland, with Diegan coastal sage scrub habitat occurring along the southern project site boundary. A smaller area of Diegan coastal sage scrub – *Baccharis* dominated habitat occurs along the eastern project boundary, and disturbed land and ornamental vegetation occur scattered throughout the non-native grassland across the majority of the site. Developed, ruderal, and ornamental land border the north, east, and west project boundaries.

Surroundings

The project vicinity is developed primarily with residential uses. To the east of the project is the Mira Lago residential development and to the southeast is the Williamsburg residential development. West of the project site is Grace Church and the Barham Park & Ride. Southwest of the project site is residential development associated with the Walnut Hills II Specific Plan. The northern boundary of the project site is E. Barham Drive and immediately north of E. Barham Drive is landscaping, a sound wall, and State Route 78 (SR-78). South of the project site is preserved open space, a private

community park/viewpoint and additional residences within the Williamsburg residential development.

2.3.2 Existing General Plan and Zoning

Existing General Plan Land Use Designation

The project site has an existing General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. According to Table 2-3 of the Land Use Element of the City's General Plan, this designation "Provides for a variety of commercial and office uses integrated as a cohesive development. These uses may be mixed 'vertically' (on separate floors of a building) or 'horizontally' (on a single site or adjacent parcels). Structured parking, while not required to achieve the maximum FAR, may be allowed. Shared parking arrangements may also be allowed consistent with the nature of mixed uses. Typical uses include retail, commercial services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants, and health care facilities. To maintain a pedestrian scale and orientation, retail and other active services are encouraged at street level. This designation does not allow residential uses. A Specific Plan is required for development" (City of San Marcos 2012).

Existing Zoning Designation

The project site has a zoning designation of MU-3. According to Section 20.225.060 of the City's Zoning Ordinance, this zone is intended to "support a job-based mixed-use area combining a variety of commercial and office uses integrated as a cohesive development. This business-oriented area shall be complementary to the MU-1 and MU-2 Zones; residential uses are not permitted in the MU-3 (SP) Zone. Typical uses include commercial retail, business services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants and health care facilities. Horizontal and vertical mixed use is permitted" (City of San Marco 2021).

2.3.3 Regional Setting

The following provides a general description of various aspects of the project's environmental setting. Additional descriptions of the project's environmental setting as it relates to environmental issue areas can be found in Chapter 3.

2.3.3.1 Climate

The weather of the San Diego region, as in most of Southern California, is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average summertime high temperature in the region is approximately 74°F, with highs approaching 76°F in August on average. The average wintertime low temperature is approximately 49°F. Precipitation in the local area is approximately 10 inches per year, with the bulk of precipitation falling between December and March.

2.3.3.2 Air Basin

The City and project site is within the San Diego Air Basin (SDAB) and is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). The SDAB is one of 15 air basins that geographically divide the State of California. The SDAB lies in the southwest corner of California and comprises the entire San Diego region, covering 4,260 square miles, and it is an area of high air pollution potential.

The SDAB experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The SDAB is currently classified as a federal nonattainment area for ozone (O_3) and a state nonattainment area for particulate matter less than or equal to 10 microns (coarse particulate matter (PM_{10})), particulate matter less than or equal to 2.5 microns (fine particulate matter ($PM_{2.5}$)), and O_3.

2.3.3.3 Soils

Four surficial soil types and one geologic formation was encountered during the field investigation for the geotechnical study. The surficial soil types consist of undocumented fill, topsoil, alluvium and colluvium. The formational unit is Cretaceous-age granitic rock.

Undocumented fill was observed in one exploratory trench, and is estimated to be approximately one-foot thick and consists of loose, moist, silty sand, with some minor trash debris. Topsoil is estimated to blanket the property beyond the main northwest-trending drainage and varies in thickness from approximately one to five feet. This surficial soil is characterized as loose, damp to moist, silty fine- to medium-grained sand. Alluvial and colluvial soils deposits are present along the entire length of the northwest-trending drainage and adjacent hillsides, and vary in thickness from approximately 3 to 11-feet-thick. These deposits generally consisted of loose to dense, damp to moist, silty to clayey, and fine- to coarse-grained sand. Cretaceous-age granitic rock underlies the surficial deposits throughout the property. The soils derived from excavations within the decomposed portion of this unit typically consist of low-expansive, silty, fine- to coarse-grained sands and provide suitable foundation support in either a natural or properly compacted condition.

2.3.3.4 Terrain and Topography

The project site is located within the 7.5-minute San Marcos Quadrangle map. The site consists of a northwest-trending drainage with moderate to steep slopes along the flanks. Elevations range from 710 feet amsl in the southeast portion of the site to 650 feet amsl in the northwest portion of the site.

2.3.3.5 Watersheds and Hydrology

The project site is located within the Carlsbad Watershed Hydrologic Unit. The Carlsbad Watershed Hydrologic Unit (904.00) is a triangular area covering approximately 210 square miles. This hydrologic unit is bordered by San Luis Rey Hydrologic Unit to the north and San Dieguito Hydrologic Unit to the east and south. The Carlsbad Hydrologic Unit includes one small coastal lagoon (Loma Alta Slough) and four major coastal lagoons, including Buena Vista, Agua Hedionda, Batiquitos, and San Elijo. The project site is located within the San Marcos Hydrologic Subarea (904.5).

2.3.3.6 Regional Biology

The City of San Marcos Subarea Habitat Conservation Plan/Natural Community Conservation Plan (NCCP) has not been finalized or implemented, and the City is no longer an active participant in the NCCP program and the subregional Multiple Habitat Conservation Program (MHCP) conservation planning effort. However, it is the City's General Plan policy to comply with the conservation policies identified in the MHCP through use of the Draft San Marcos Subarea Plan as an implementation tool. The project site is not located within a Focused Planning Area (FPA) in the City's Draft Subarea Plan.

Based upon the biological resources study prepared for the project (Rocks 2020a), the site is primarily non-native grassland with smaller areas of Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated, developed, disturbed, ornamental and ruderal vegetation. No special status plant species were observed on the project site. Focused breeding season surveys for the coastal California gnatcatcher were negative.

2.4 Intended Uses of EIR

This EIR was prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.), CEQA Guidelines (14 CCR 15000 et seq.).

The EIR is an informational document that will provide the City's decision makers, public agencies, responsible and trustee agencies, and members of the public with information about (1) the potential for significant adverse environmental impacts that would result from the development of the proposed project, (2) possible ways to minimize any significant environmental impacts, and (3) feasible alternatives to the proposed project that would reduce or avoid significant impacts associated with the proposed project (California Public Resources Code, Section 21002.1[a]; 14 CCR 15121[a]). Responsible and trustee agencies may use this EIR to fulfill their legal authority to issue permits for the proposed project. The analysis and findings in this EIR reflect the independent judgment of the City.

Lead Agency

As defined by CEQA Guidelines Section 15367, a "Lead Agency" means the public agency which has the principal responsibility for carrying out or approving a project. The City is the lead agency for the proposed project because it will perform the entitlement processing of the proposed project. As the designated lead agency, the City has assumed responsibility for preparing this EIR, and the analysis and findings in this EIR reflect the City's independent judgment. When deciding whether to approve the proposed project, the City will use the information in this EIR to consider potential impacts to the physical environment associated with the proposed project.

Responsible Agencies

As defined by CEQA Guidelines Section 15381, a "Responsible Agency" includes all public agencies other than the lead agency which have discretionary approval power over the project. Subsequent to certification of the Final EIR, agencies with permitting authority over all or portions of the proposed project will use the Final EIR as the basis for their evaluation of environmental effects related to the proposed project that will culminate with the approval or denial of applicable permits.

2.4.1 Scope of the EIR

For the proposed project, the City determined that a Project EIR, as defined by CEQA Guidelines, Section 15161, was required. The City made this determination based on the scope and the location of the proposed project, as well as preparation of an Initial Study in accordance with CEQA Guidelines, Section 15063 (included as Appendix B.1 to this EIR).

This EIR evaluates all subject areas listed in Appendix G to the CEQA Guidelines, with the exception of those subject areas determined not to have a potentially significant impact on the environment, as determined during preparation of the Initial Study (refer to Chapter 5 of this EIR). Chapter 3 of this EIR evaluates in detail, the following subject areas: aesthetics, air quality, biological resources, cultural

resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, wildfire, cumulative impacts, and growth-inducing impacts.

As a "Project EIR," this EIR is "focused primarily on the changes in the environment that would result from the development project" (CEQA Guidelines Section 15161). In addition, as a Project EIR, this EIR examines all phases of the proposed project including planning, construction, and operation (CEQA Guidelines Section 15161). Where environmental impacts have been determined to be significant, this EIR recommends mitigation measures directed at reducing or avoiding those significant environmental impacts. The project will have a significant and unmitigated impact related to transportation (inconsistency with the Mobility Element of the General Plan due to level of services and vehicle miles traveled) and land use (inconsistency with the Mobility Element of the General Plan due to level of service). Alternatives to the proposed project are identified to evaluate whether there are ways to minimize or avoid significant impacts associated with the proposed project.

2.4.2 Notice of Preparation and Scoping

CEQA establishes mechanisms to inform the public and decision makers about the nature of the proposed project and the extent and types of impacts that the proposed project and alternatives to the proposed project would have on the environment should the proposed project or alternatives be implemented. Pursuant to Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) dated March 31, 2021, to interested agencies, organizations, and parties. The NOP was also sent to the State Clearinghouse at the California Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No 2021040009) to this EIR.

The NOP is intended to encourage interagency and public communication regarding the proposed action so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR. An online public scoping meeting was held on April 15, 2021. The 30-day public scoping period ended on April 30, 2021. A total of five NOP comment letters were received:

- California Department of Fish and Wildlife
- Caltrans
- Native American Heritage Commission
- San Diego Archaeological Society
- Sylvia J. Williams

Comments received during the NOP public scoping period were considered part of the preparation of this EIR. The NOP and written comments are included in Appendices B.2 and B.3 to this EIR. Topics raised include:

- Biological Resources: sensitive species, scope of biological analysis, analysis of direct and indirect impact to biological resources, and recommended mitigation measures.
- Cultural and Tribal Cultural Resources: compliance with Assembly Bill 52 and Senate Bill 18.

- Transportation: scope of the study area, existing roadway congestion, appropriate and adequate mitigation, safety.

Public scoping comments regarding the proposed project's potential impact on the environment have been incorporated in the analysis in this EIR in Sections 3.3 (biological resources), 3.4 (cultural resources), 3.16 (tribal cultural resources), 3.10 (land use – level of service analysis for traffic) and 3.15 (transportation).

2.4.3 Draft EIR and Public Review

This Draft EIR was prepared under the direction and supervision of the City. The Draft EIR will be made available to members of the public, responsible agencies, and interested parties for a 45-day public review period in accordance with CEQA Guidelines, Section 15105.

Public review of the Draft EIR is intended to focus "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (14 CCR 15204). The Notice of Completion of the Draft EIR will be filed with the State Clearinghouse as required by CEQA Guidelines, Section 15085. In addition, the Notice of Availability of the Draft EIR will be distributed pursuant to CEQA Guidelines, Section 15087.

Interested parties may provide comments on the Draft EIR in written form. This EIR and related technical appendices are available for review during the 45-day public review period at:

City of San Marcos
Development Services Department Counter
1 Civic Center Drive
San Marcos, CA 92069

The document is also available online at: https://www.san-marcos.net/departments/development-services/planning/environmental-review-sustainability/environmental-documents.

Interested agencies and members of the public may submit written comments on the adequacy of the Draft EIR to the City's Development Services Department at the address above, addressed to Norm Pedersen, Associate Planner, or emailed at: npedersen@san-marcos.net

Comments on the Draft EIR must be received by the close of business on the last day of the 45- day review period.

2.4.4 Final EIR Publication and Certification

Once the 45-day public review period has concluded, the City will review all public comments on the Draft EIR and provide a written response to all written comments pertaining to environmental issues as part of the Final EIR. The Final EIR will include all written comments received during the public review period; responses to comments; and, if applicable, edits and errata made to the Draft EIR. The City will then consider certification of the Final EIR (14 CCR 15090). If the EIR is certified, the City may consider project approval (14 CCR 15092).

When deciding whether to approve the proposed project, the City will use the information provided in the Final EIR to consider potential impacts to the physical environment. The City will also consider all written comments received on the Draft EIR during the 45-day public review period in making its

decision to certify the Final EIR as complete and compliant with CEQA and in making its determination whether to approve or deny the proposed project. Environmental considerations, as well as economic and social factors, will be weighed by the City to determine the most appropriate course of action.

Prior to approving the proposed project, the City must make written findings and adopt a Statement of Overriding Considerations with respect to any significant and unavoidable environmental effect identified in the Draft EIR (14 CCR 15091, 15093). If the proposed project is approved, the City will file a Notice of Determination with the State Clearinghouse and San Diego County Clerk within five working days after project approval (14 CCR 15094.)

Subsequent to certification of the Final EIR, agencies with permitting authority over all or portions of the proposed project will use the Final EIR's evaluation of the proposed project's environmental effects in considering whether to approve or deny applicable permits.

2.5 Matrix of Project Approvals

Consistent with the City's General Plan and San Marcos Municipal Code Zoning Ordinance Title 20, the proposed project requires certain entitlements be submitted, reviewed, and approved by the City. The requested entitlements include a General Plan Amendment, Specific Plan, Rezone, Multi-Family Site Development Plan, Tentative Subdivision Map, Conditional Use Permit and a Grading Variance. These entitlements, listed and described in **Table 2-3**, would govern the development of the project site.

The City will use this EIR and associated documentation in its decision to approve or deny the required discretionary permits. Other responsible and/or trustee agencies can use this EIR and supporting documentation in their decision-making process to issue additional approvals. These additional approvals may include but are not limited to approval of a site-specific Stormwater Pollution Prevention Plan. Additional permits and approvals from responsible and other agencies are also listed in Table 2-3.

2.6 Project Inconsistencies with Applicable Regional and General Plans

Throughout Chapter 3 of this EIR, the project has been evaluated in relation to the applicable goals, policies, and objectives of: the City's General Plan and San Marcos Municipal Code Zoning Ordinance Title 20 (Section 3.10, Land Use); Regional Air Quality Strategy (Section 3.2, Air Quality); San Diego Air Pollution Control District policies (Section 3.2, Air Quality); City's Climate Action Plan (Section 3.7, Greenhouse Gas Emissions); Regional Water Quality Control Board permits (Section 3.9, Hydrology and Water Quality); the Multiple Habitat Conservation Program (Section 3.3, Biological Resources); Airport Land Use Compatibility Plans (Sections 3.8, Hazards and Hazardous Materials, 3.10, Land Use, and 3.11, Noise); and various other applicable regional and local plans and policies.

Table 2-3. Required Actions and Approvals

Agency	Required Action/Approval
City of San Marcos – Lead Agency	• General Plan Amendment • Specific Plan • Rezone • Conditional Use Permit

Agency	Required Action/Approval
	• Multi-Family Site Development Plan • Tentative Subdivision Map • Grading Variance • Grading Plan/Permit • Public Improvement Plan/Permit • Landscape Plan/Permit • Building Permits
	National Pollutant Discharge Elimination System Construction General Permit (State Water Resources Control Board Order 2009-09-DWQ)
Vallecitos Water District	Approval for sewer service
Rincon del Diablo Municipal Water District	Approval for water service

2.7 List of Past, Present and Reasonably Anticipated Future Projects in the Project Area

CEQA requires an EIR to analyze cumulative impacts. Section 15355 of CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines provides guidance for analyzing significant cumulative impacts in an EIR. The discussion of cumulative impacts "need not provide as great detail as is provided for the effects attributable to the project alone," but instead is to be "be guided by standards of practicality and reasonableness" (CEQA Guidelines §15130(b)). The discussion should also focus only on significant effects resulting from the project's incremental effects and the effects of other projects. According to Section 15130(a)(1), "an EIR should not discuss impacts which do not result in part from the project evaluated in the EIR."

Cumulative impacts can result from the combined effect of past, present, and future projects located in proximity to the project under review. Therefore, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future developments whose impacts might compound or interrelate with those of the project under review.

According to Section 15130(b)(1) of the CEQA Guidelines, a cumulative impact analysis may be conducted and presented by either of two methods:

- A list of past, present, and probable activities producing related or cumulative impacts; or
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

With the exception of the impact analyses of air quality and greenhouse gas emissions, the cumulative list approach has been used in this cumulative analysis, as discussed below. The cumulative impacts of air quality and greenhouse gas emissions have been evaluated using the summary of projections method because the geographic scope of such impacts tends to be broad and area-wide.

An inventory of past, present, and reasonably foreseeable future projects within the vicinity of the project site is presented in **Table 2-4** and shown on **Figure 2-15**.

Table 2-4. Cumulative Projects

No.(1)	Project	Location	Description
City of San Marcos			
1	Block 3 Student Housing	Northwest corner of Campus Way and Barham Drive	342 beds
2	Carmel Street Apartments	Southwest corner of Industrial and Carmel Street	170 MFR dwelling units
3	Kaiser Permanente Master Plan	400 Craven Road	Approximately 70,700 s.f. of medical/hospital use (206 beds)
4	Main Square	Southeast corner of San Marcos Boulevard and McMahr Road	486 apartments and approximately 44,000 s.f. of commercial
5	San Elijo Hills	San Elijo Road	11,700 s.f. of commercial
6	Pacific Commercial	Northeast corner of Grand Avenue and Pacific Street	122 hotel rooms
7	Brookfield Residential	S. Twin Oaks Valley Road	220 MFR dwelling units
8	San Marcos Highlands	North end of N. Las Posas Road	187 SFR dwelling units
9	El Dorado II Specific Plan	Southwest corner of Richmar Avenue and Pleasant Way	72 MFR dwelling units and 2,000 s.f. of commercial
10	Villa Serena	Richmar Avenue & Marcos Street	12 MFR units
11	Montiel Partners	Montiel Road	8 SFR dwelling units
12	Sandy Lane Estates	Sandy Lane	9 SFR dwelling units
13	Creekside Assisted Living	Southeast corner of Twin Oaks Valley Road and Richmar Avenue	174 bed assisted living facility
14	Carkel SM – Starbucks	Southeast corner of San Marcos Boulevard and Bent Avenue	1,797 s.f drive-thru restaurant
15	South Lake Park Phase 1	Twin Oaks Valley Road, South of Village Drive	Parking lot and fishing dock
16	McDonald Group	San Marcos Boulevard (Former Sears site)	5,000 s.f. commercial and 82 MFR dwelling units
17	JR Legacy II	Montiel Road	128 room hotel

No.[1]	Project	Location	Description
18	Meadowlark Canyon	San Marcos Boulevard	33 SFR dwelling units
19	Mariposa II – Phase 1	Richmar Avenue and Los Olivos Drive	60 MFR dwelling units
20	Mariposa II – Phase 2	Richmar Avenue and Los Olivos Drive	66 MFR dwelling units
21	Murai	N. Las Posas Road	89 SFR dwelling units
22	Pacifica San Marcos	S. Rancho Santa Fe Road and Creek Street	31 MFR dwelling units and 4,375 s.f. of commercial
23	Discovery Village South	Future Discovery Street	220 SFR dwelling units
24	Discovery Village North	Craven Road	41 acres office/commercial/residential
25	Jump Ball LLC	San Marcos Boulevard and Bent	3,200 s.f. drive through restaurant
26	Fitzpatrick Viewpoint	Fitzpatrick Road and Richmar Avenue	78 MFR and 2 SFR dwelling units
27	Mission 24	Mission Road at Avenida Chapala	24 MFR dwelling units
28	Mission 316 West	Northeast corner of Mission Road and Woodward Street	67 MFR dwelling units
29	Lanikai	Northwest corner of Mission Road and Woodward Street	115 senior dwelling units
30	Mesa Rim Climbing Center	285 Industrial Street	28,000 s.f. of commercial
31	Artis Senior Living	San Elijo Road at Paseo Plomo	64 bed senior living complex
32	Kiddie Academy	Twin Oaks Valley Road northeast of Windy Way	11,430 s.f. preschool
33	Edenpark	1601 San Elijo Boulevard	Approximately 180,500 s.f. of commercial
34	Montiel Commercial	2355 and 2357 Montiel Road	Approximately 33,000 s.f. of office use
35	California Allstars	East side of Twin Oaks Valley Road	Approximately 28,000 square foot industrial use
36	Bodhi Hill Buddhist Center	Poinsettia Avenue near Linda Vista Drive	Approximately 44,000 s.f. of institutional uses
37	Mercy Hill and Marian Center	Borden Road	Approximately 22,800 s.f. of institutional uses

No.(1)	Project	Location	Description
County of San Diego			
38	Sunrise	Barham Drive, west of Myers Avenue	193 MFRs with passive and recreational open space on 14.4 acres.
39	Harmony Grove Village	North and south of Harmony Grove Road, and east and west of Country Club Drive	Up to 742 dwelling units, commercial services, park and community gathering locales, and equestrian facilities on a 468-acre site.
40	Harmony Grove Village South	Country Club Drive/Harmony Grove Road	453 dwelling units and 5,000-s.f. of commercial/civic uses, open space, and parks on a 111-acre site.
41	Valiano Development	South of Hill Valley Drive and west of Country Club Drive	334 SFRs, parks and open space on a 210-acre lot.
City of Escondido			
42	Escondido Innovation Center	1925 and 2005 Harmony Grove Road	Industrial development project consisting of 212,088-s.f. on an 11.04- acre site.
43	Escondido Research and Technology Center	Citracado Parkway	74,400 s.f. medical office building
44	Stone Brewery Hotel	Citracado Parkway, opposite of existing Stone Brewing	44-room boutique hotel

Notes: (1) See Figure 2-15 for location of cumulative projects.
(2) SFR = Single-Family Residential, MFR= Multi-Family Residential

Figure 2-1. Project Location

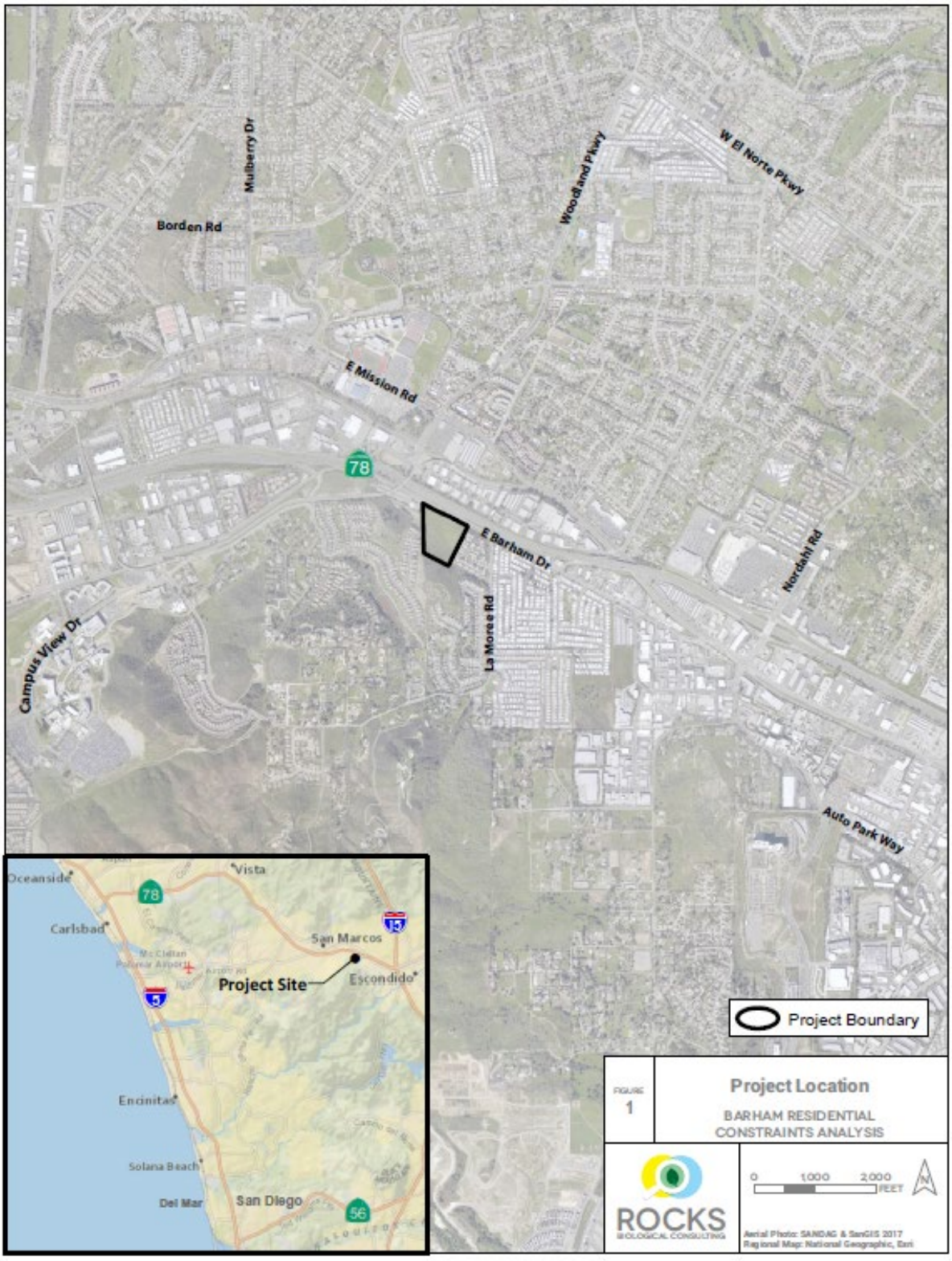


Figure 2-2. Conceptual Site Plan

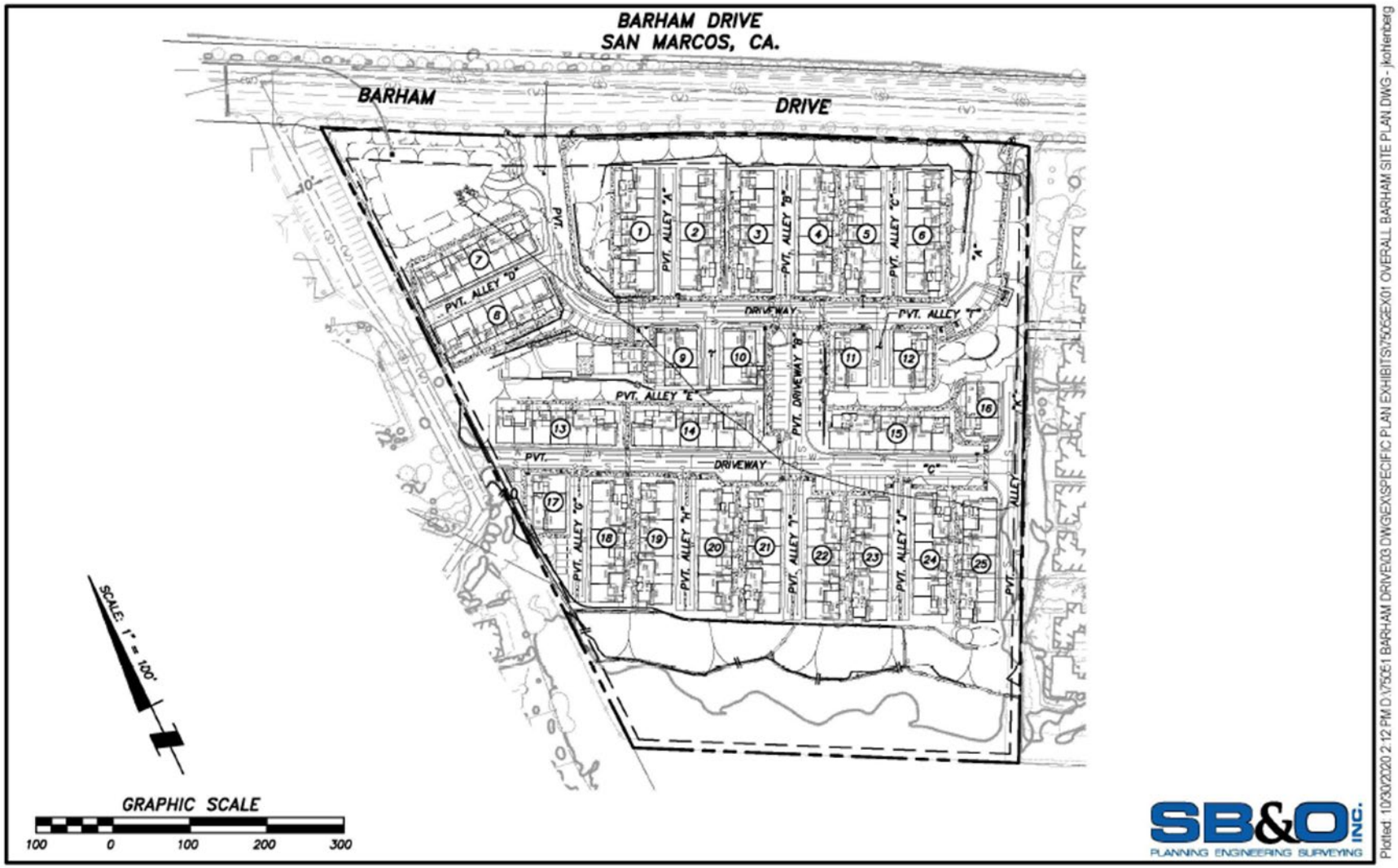


Figure 2-3. Open Space

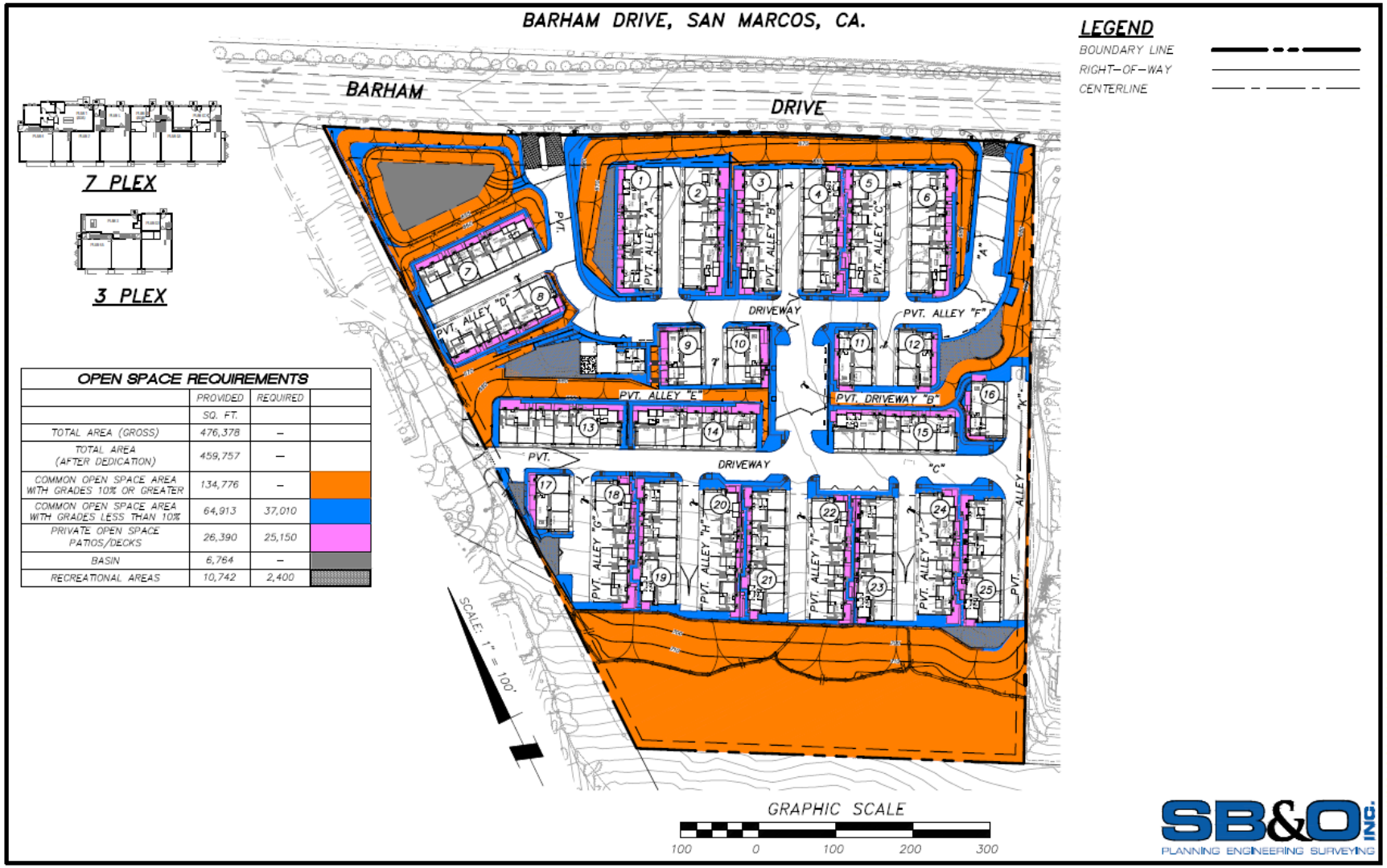


Figure 2-4a. Landscape Concept

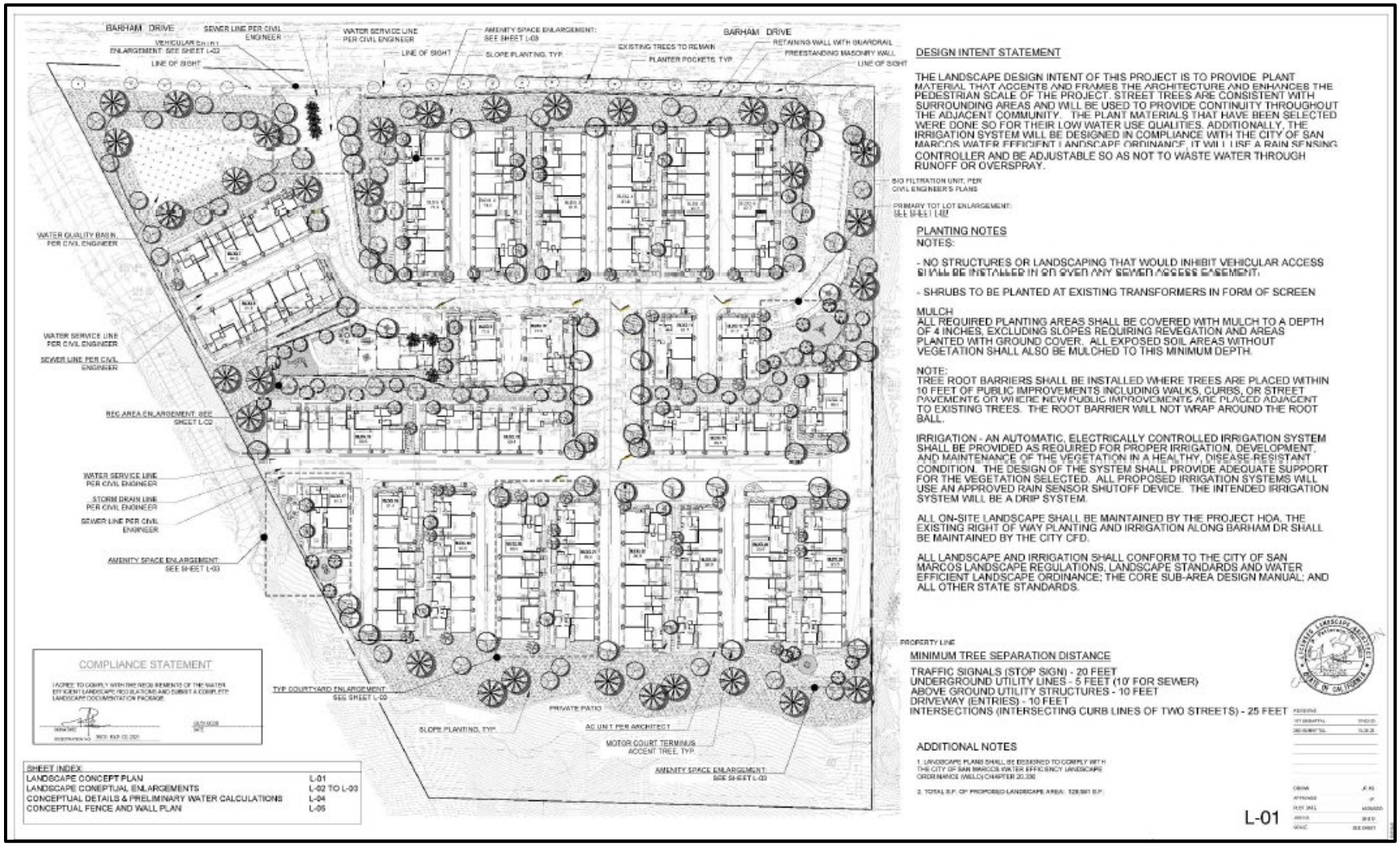


Figure 2-4b. Plant Materials

Tree Symbol From Landscape Exhibit	Location/Species/Specifications	WUCOLS
	**COURTYARD** MAX SPREAD 15' / MAX HEIGHT 20'	
	CHILOPSIS LINEARIS `ARTS SEEDLESS` / DESERT WILLOW	L
	RHAPHIOLEPIS INDICA `MAJESTIC BEAUTY` TM / MAJESTIC BEAUTY INDIAN HAWTHORN	L
	UMBELLULARIA CALIFORNICA / CALIFORNIA LAUREL	L
	**COLUMNAR**	
	CUPRESSUS SEMPERVIRENS `STRICTA` / COLUMNAR ITALIAN CYPRESS	M
	PODOCARPUS GRACILIOR / FERN PINE	M
	**COMMON AREAS/ACCENT** MAX SPREAD 20' / MAX HEIGHT 25'	
	CERCIS OCCIDENTALIS/WESTERN REDBUD	L
	OLEA EUROPAEA / EUROPEAN OLIVE	L
	PARKINSONIA ACULEATA / MEXICAN PALO VERDE	L
	RHUS LANCEA / AFRICAN SUMAC MULTI-TRUNK	L
	**SLOPE** MAX SPREAD 20' / MAX HEIGHT 20'	
	ARBUTUS UNEDO / STRAWBERRY TREE MULTI-TRUNK	L
	MELALEUCA LINARIIFOLIA / FLAXLEAF PAPERBARK	L
	QUERCUS AGRIFOLIA / COAST LIVE OAK	L
	RHUS LANCEA / AFRICAN SUMAC MULTI-TRUNK	L
	**PALMS** MAX SPREAD 40' / MAX HEIGHT 50'	
	PHOENIX CANARIENSIS / CANARY ISLAND DATE PALM	L
	PHOENIX DACTYLIFERA `MEDJOOL` / DATE PALM	L
	EXISTING TREE TO REMAIN	
	**SHRUB (MEDIUM)**	WUCOLS
	BOUGAINVILLEA X `TEMPLE FIRE` / BOUGAINVILLEA	L
	CALLISTEMON VIMINALIS `LITTLE JOHN` / DWARF WEEPING BOTTLEBRUSH	L
	CARISSA	M
	MACROCARPA / NATAL PLUM	M
	LIGUSTRUM JAPONICUM `TEXANUM` / WAX LEAF PRIVET	M
	MYRTUS COMMUNIS / COMMON MYRTLE	M
	PITTOSPORUM CRASSIFOLIUM / KARO PITTOSPORUM	M
	ROSMARINUS OFFICINALIS `TUSCAN BLUE` / TUSCAN BLUE ROSEMARY	L
	GRASS	
	CAREX PRAEGRACILIS / SLENDER SEDGE	L
	CHONDROPETALUM TECTORUM / CAPE RUSH FESTUCA	M
	SISKIYOU BLUE / BLUE FESCUE	L
	MUHLENBERGIA CAPILLARIS `REGAL MIST` TM / MUHLY	L
	ACCENT SHRUB	
	AGAVE ATTENUATA / AGAVE	L
	AGAVE VILMORINIANA / OCTOPUS AGAVE	L
	ALOE BAINESII / ALOE	L
	ALOE GLAUCA / ALOE	L
	ALOE SPICATA / LEBOMBO ALOE	L
	ANIGOZANTHOS X `BUSH GOLD` / KANGAROO PAW	L
	DASYLIRION WHEELERI / GREY DESERT SPOON	M

Tree Symbol From Landscape Exhibit	Location/Species/Specifications	
	PHORMIUM X `DARK DELIGHT` / PURPLE FLAX	
	SHRUB (SMALL)	
	DIANELLA TASMANICA `VARIEGATA` / FLAX LILY	M
	DIETES BICOLOR / FORTNIGHT LILY	M
	LOMANDRA LONGIFOLIA `BREEZE` / DWARF MAT RUSH	M
	**SLOPE SHRUBS**	
	ARCTOSTAPHYLOS HOOKERI / HOOKER`S MANZANITA	L
	CEANOTHUS CUNEATUS / BUCKBRUSH	L
	CEANOTHUS GRISEUS HORIZONTALIS `YANKEE POINT` / CALIFORNIA LILAC M	M
	CEANOTHUS PROSTRATUS / SQUAW CARPET	L
	CISTUS LAURIFOLIUS / ROCKROSE	L
	CISTUS X PURPUREUS / ORCHID ROCKROSE	L
	ENCELIA CALIFORNICA / CALIFORNIA ENCELIA	L
	ESCALLONIA FRADESII / ESCALLONIA	M
	LANTANA MONTEVIDENSIS / TRAILING LANTANA	L
	LEPTOSPERMUM SCOPARIUM `RUBY GLOW` / RED NEW ZEALAND TEA TREE	M
	LIGUSTRUM JAPONICUM / JAPANESE PRIVET	M
	RHAPHIOLEPIS INDICA `CLARA` / INDIAN HAWTHORN	L
	RHUS INTEGRIFOLIA / LEMONADE BERRY	L
	SLOPES	
	BACCHARIS PILULARIS `TWIN PEAKS` / TWIN PEAKS COYOTE BRUSH	L
	MYOPORUM PARVIFOLIUM `PUTAH CREEK` / PUTAH CREEK MYOPORUM	L
	ROSMARINUS OFFICINALIS `PROSTRATUS` / DWARF ROSEMARY	L
	**WATER QUALITY BASINS**	
	AREX TUMULICOLA / BERKELEY SEDGE	L
	CHONDROPETALUM TECTORUM / CAPE RUSH	M
	MUHLENBERGIA RIGENS / DEER GRASS	L
	**TURF**	M

WUCOLS = Water Use Classification of Landscape Species

Figure 2-5a. Architectural Concept (3-Plex)

Figure 2.5b. Architectural Concept (7-Plex, Option 1)

Figure 2.5c. Architectural Concept (7-Plex, Option 2)

Figure 2-6. Conceptual Fence and Wall Plan

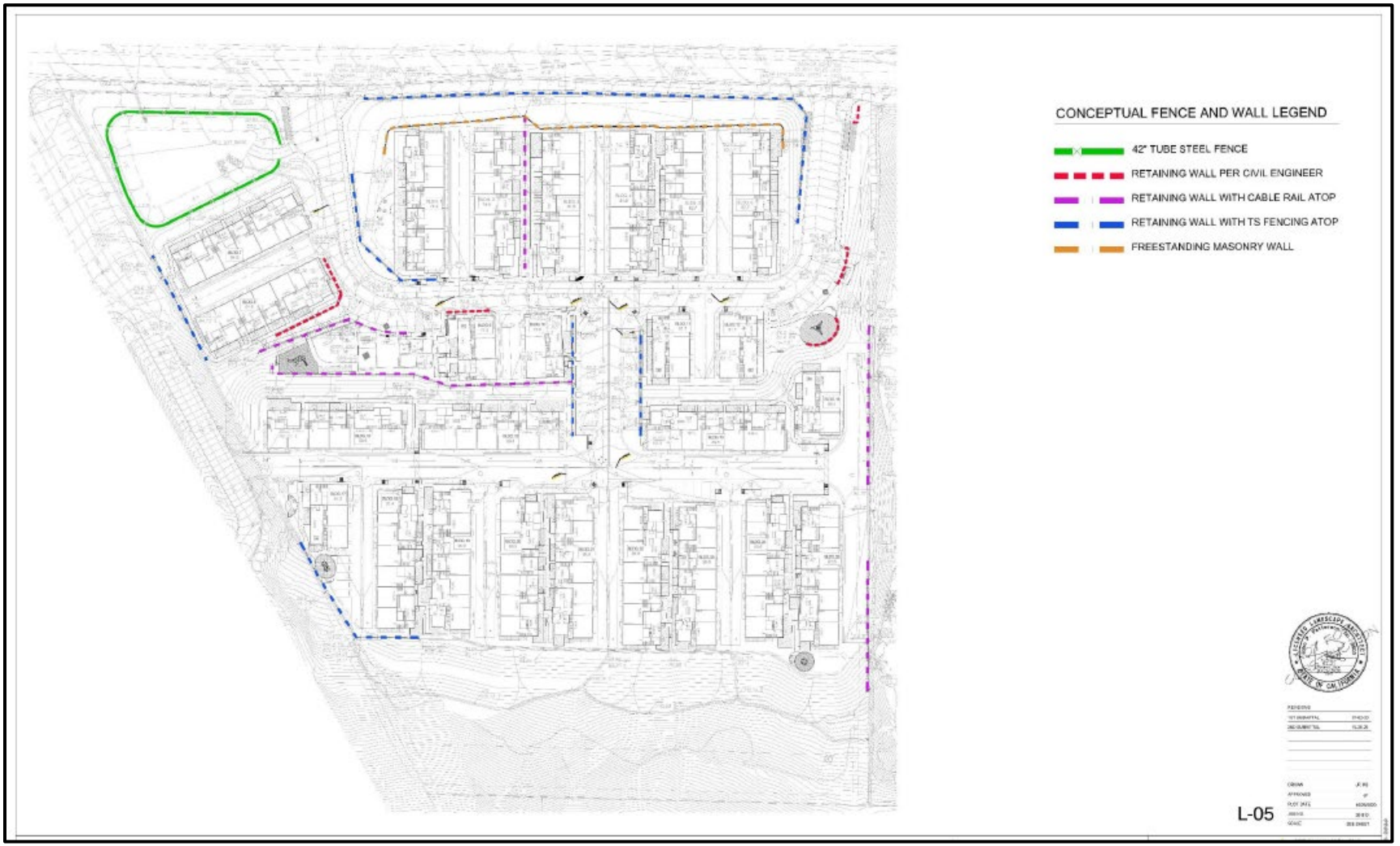


Figure 2-7. Lighting Plan

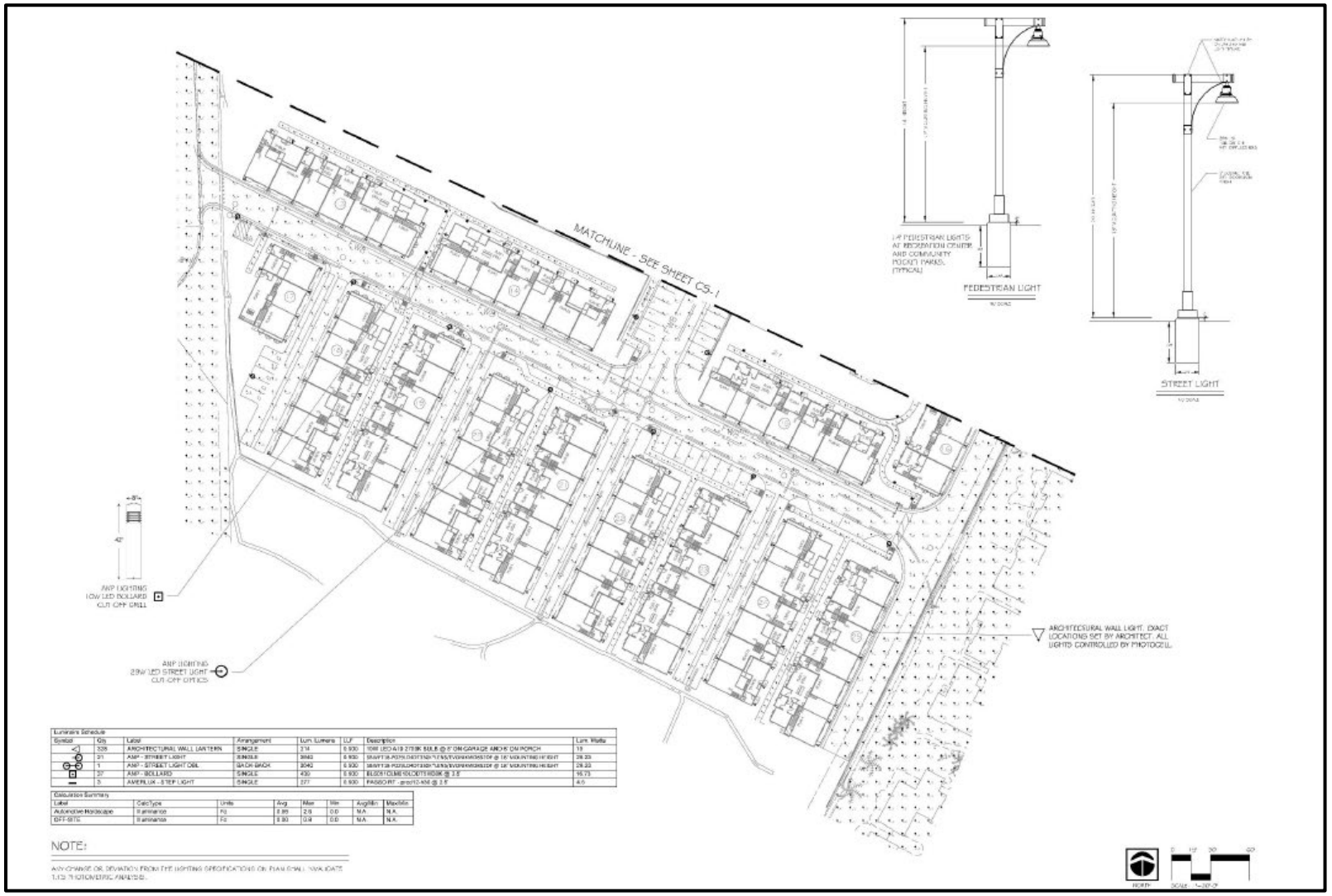


Figure 2-8. Conceptual Circulation Plan

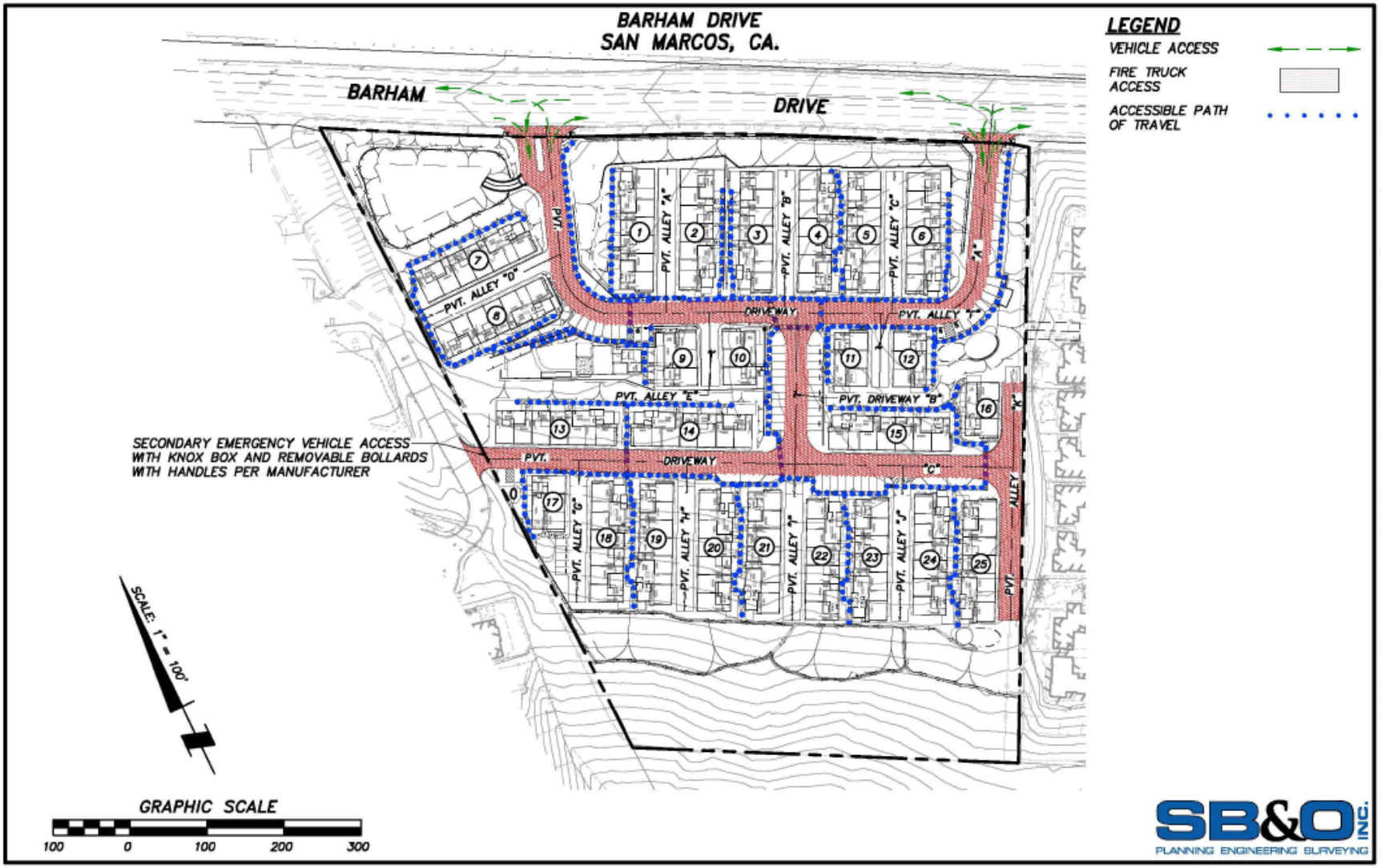


Figure 2-9.a. Private Alley and Driveway Cross Sections (1 of 2)

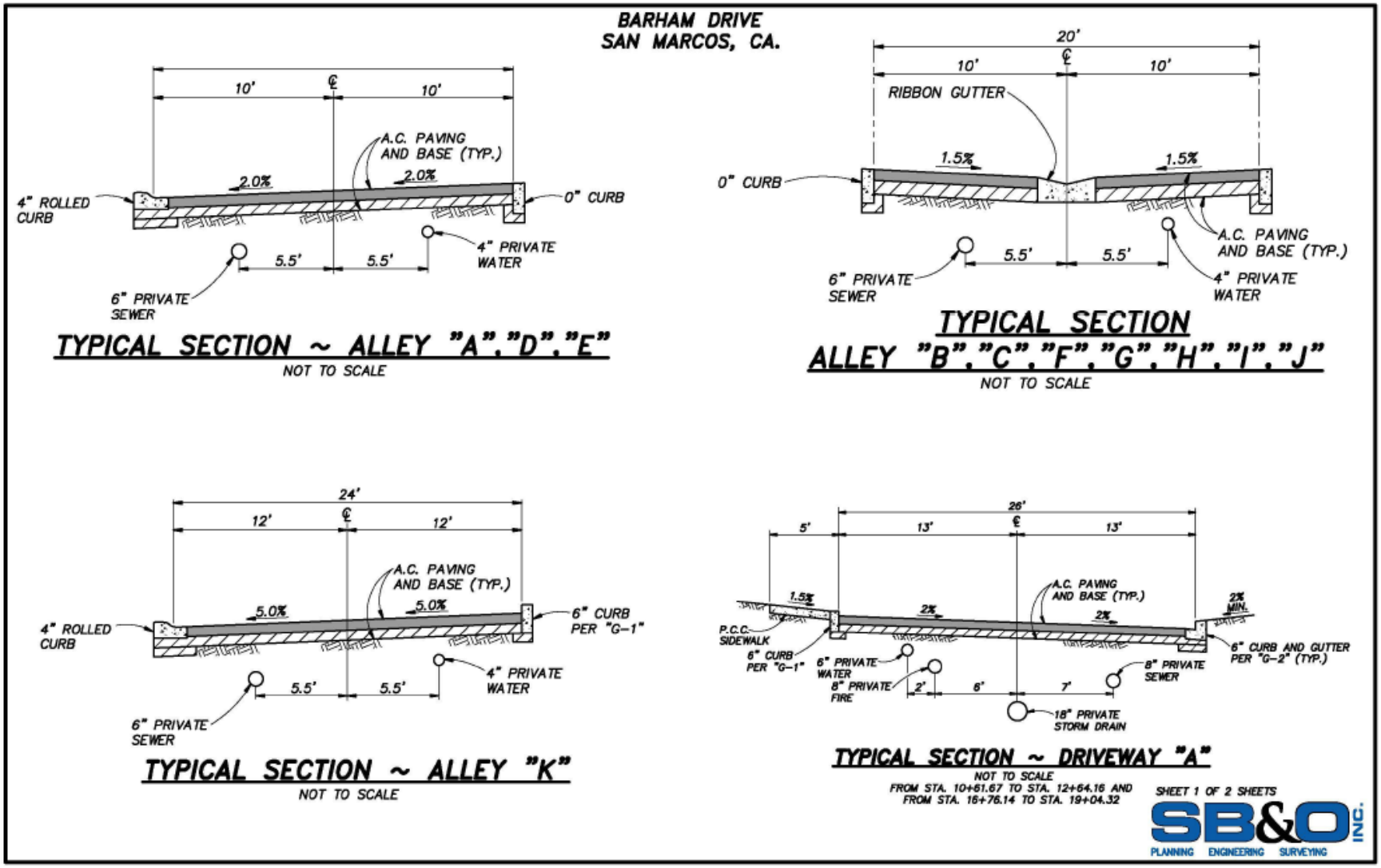


Figure 2-9b. Private Alley and Driveway Cross Section (2 of 2)

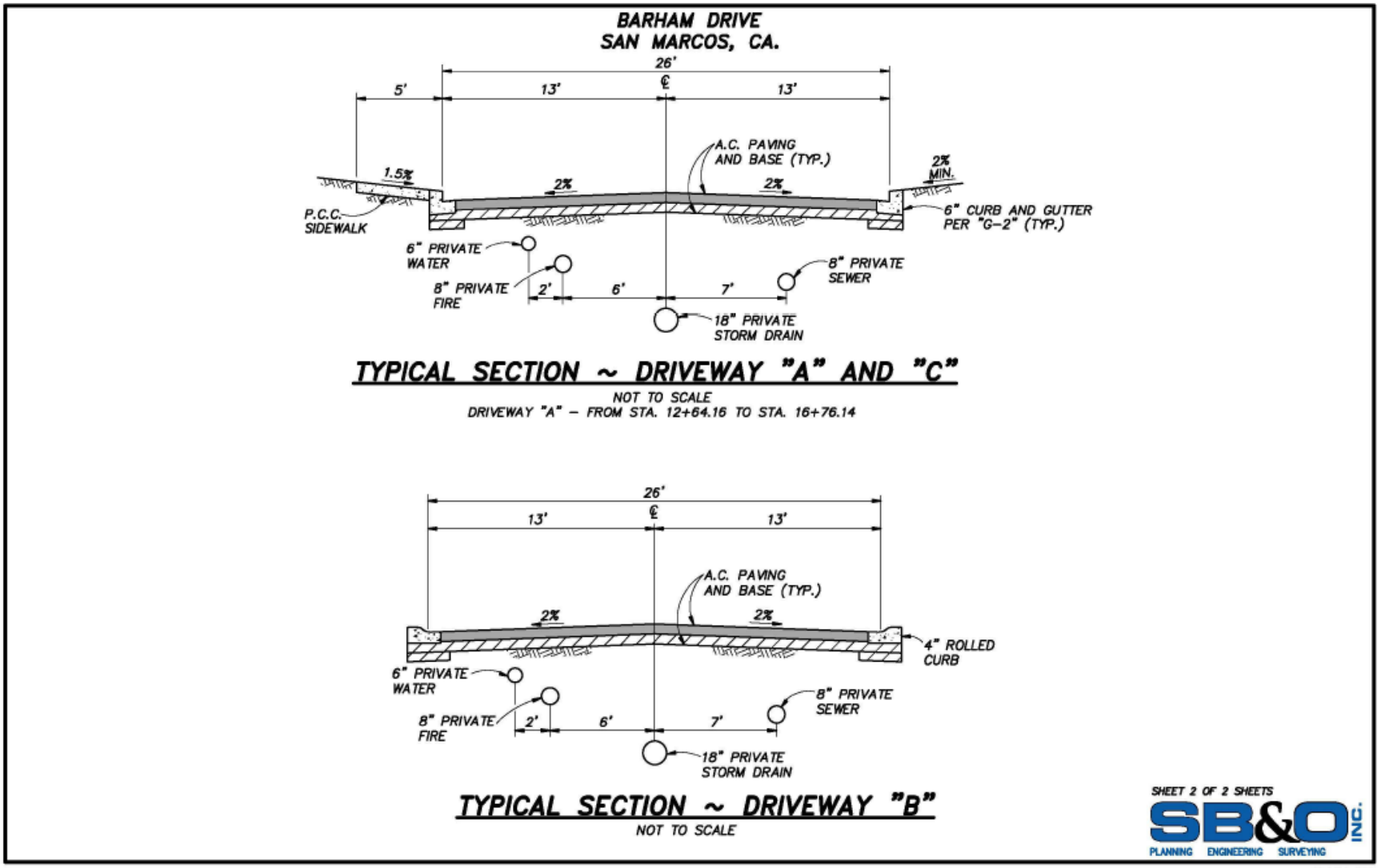


Figure 2-10. Grading Plan

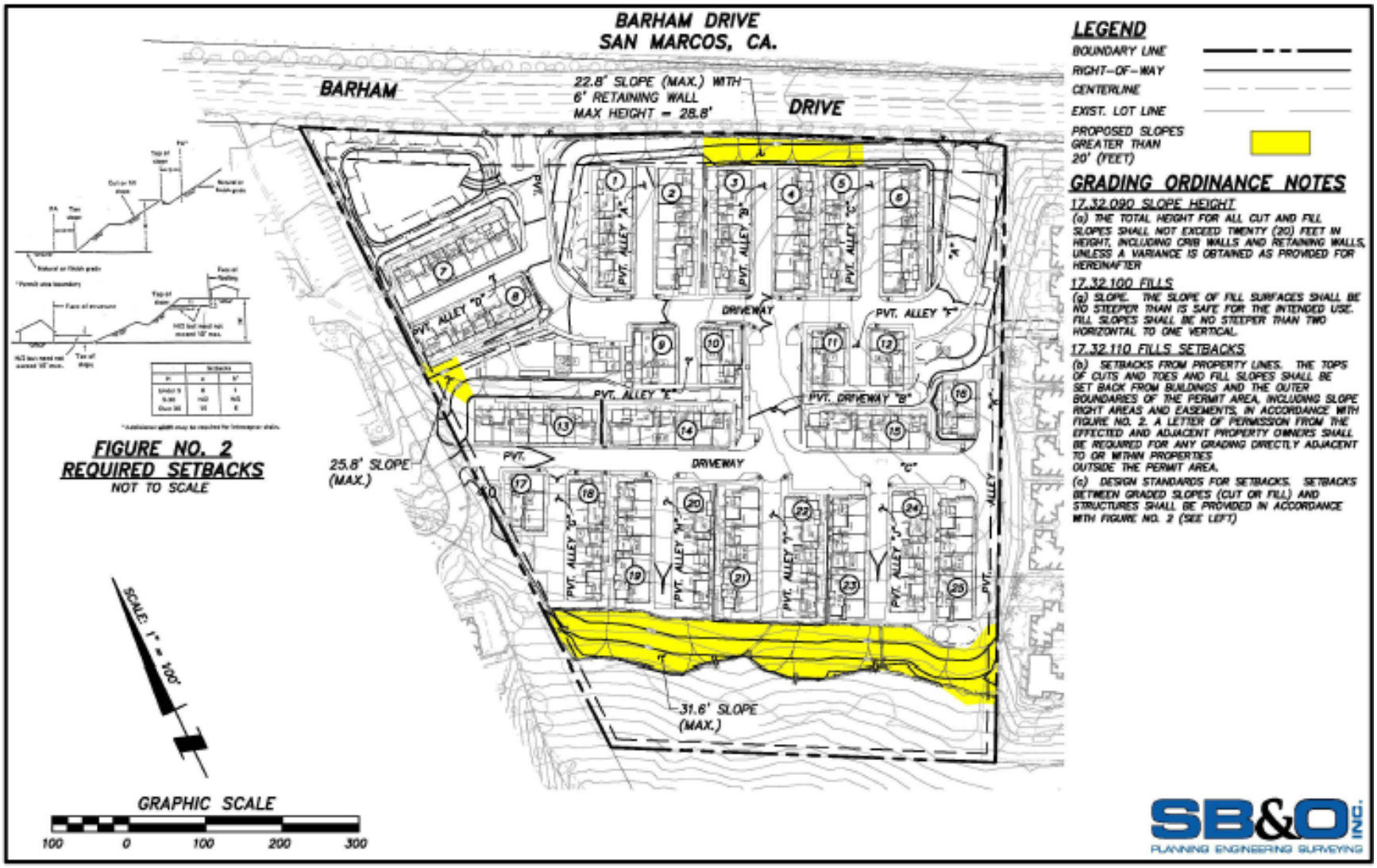


Figure 2-11. Grading Variance Exhibit

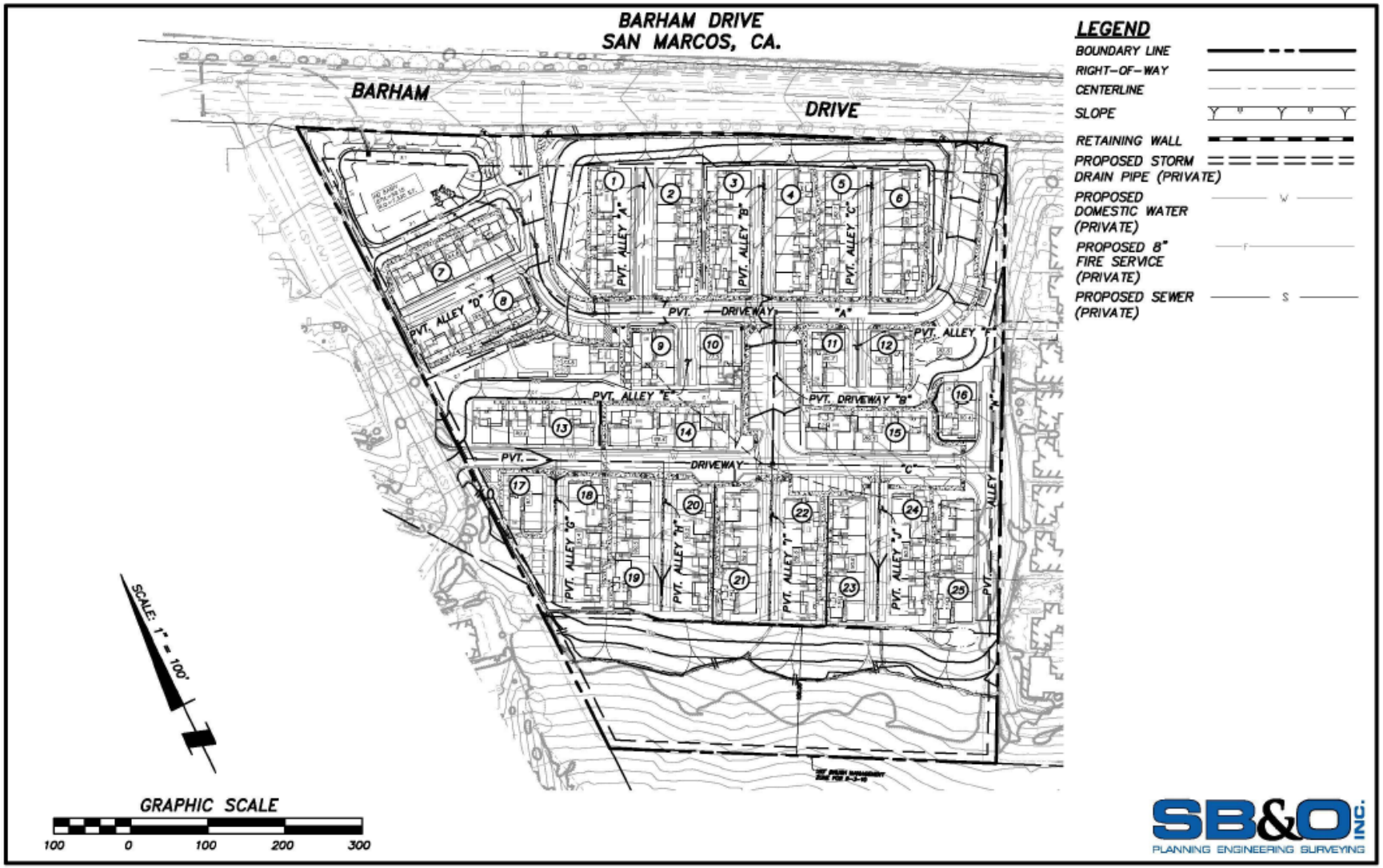


Figure 2-12. Proposed Water Exhibit

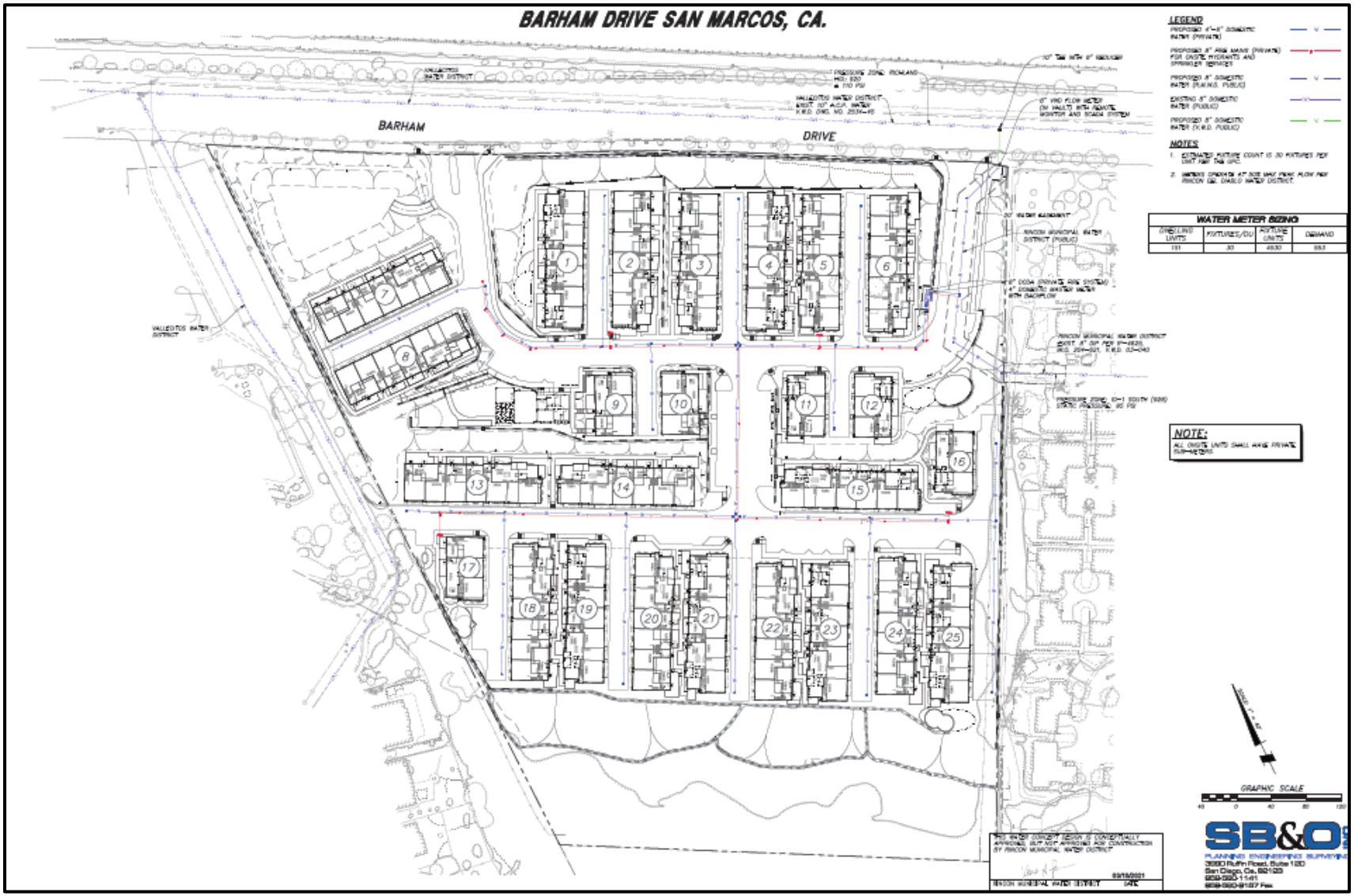


Figure 2-13. Proposed Wastewater Exhibit

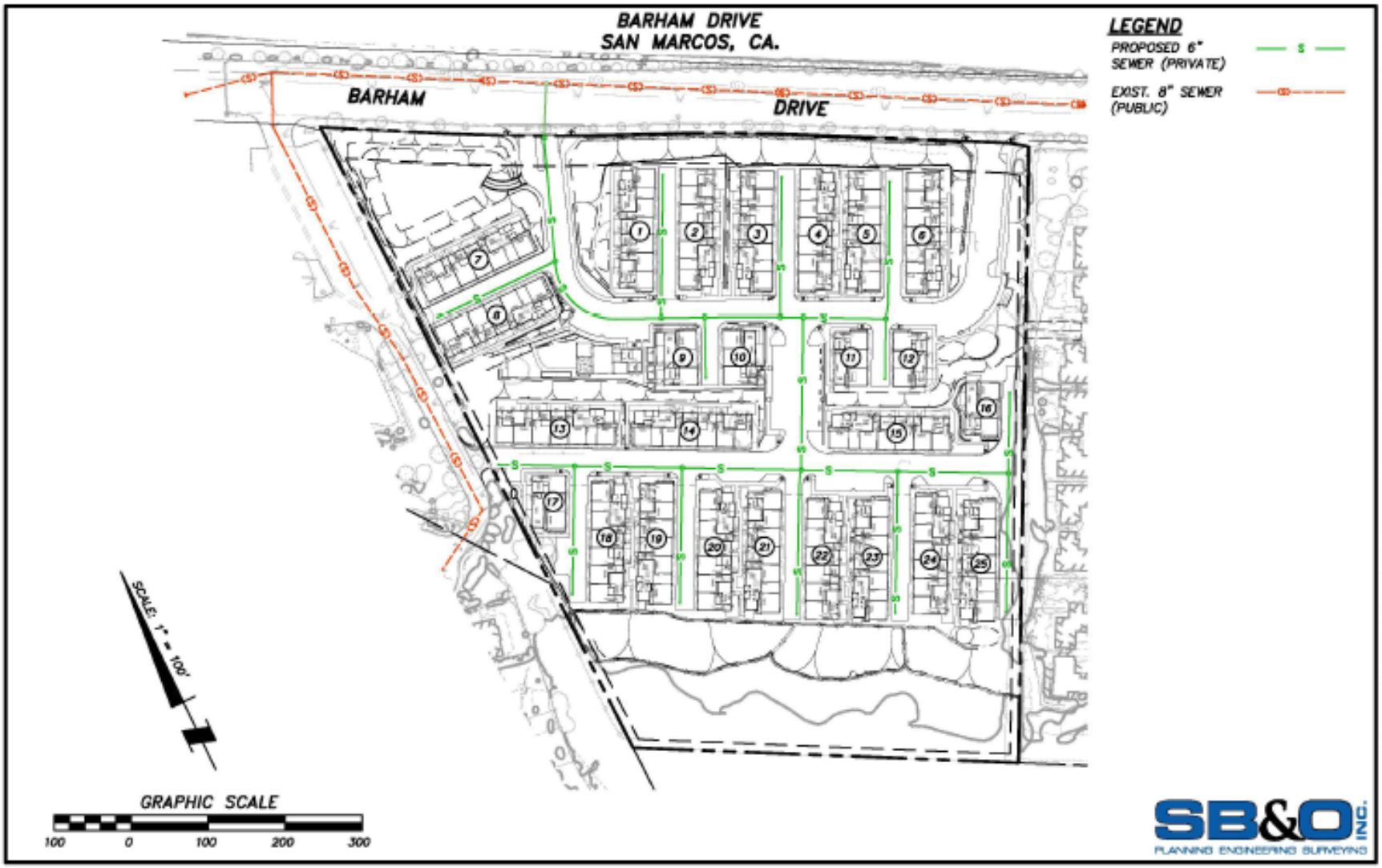


Figure 2-14. Conceptual Drainage Plan

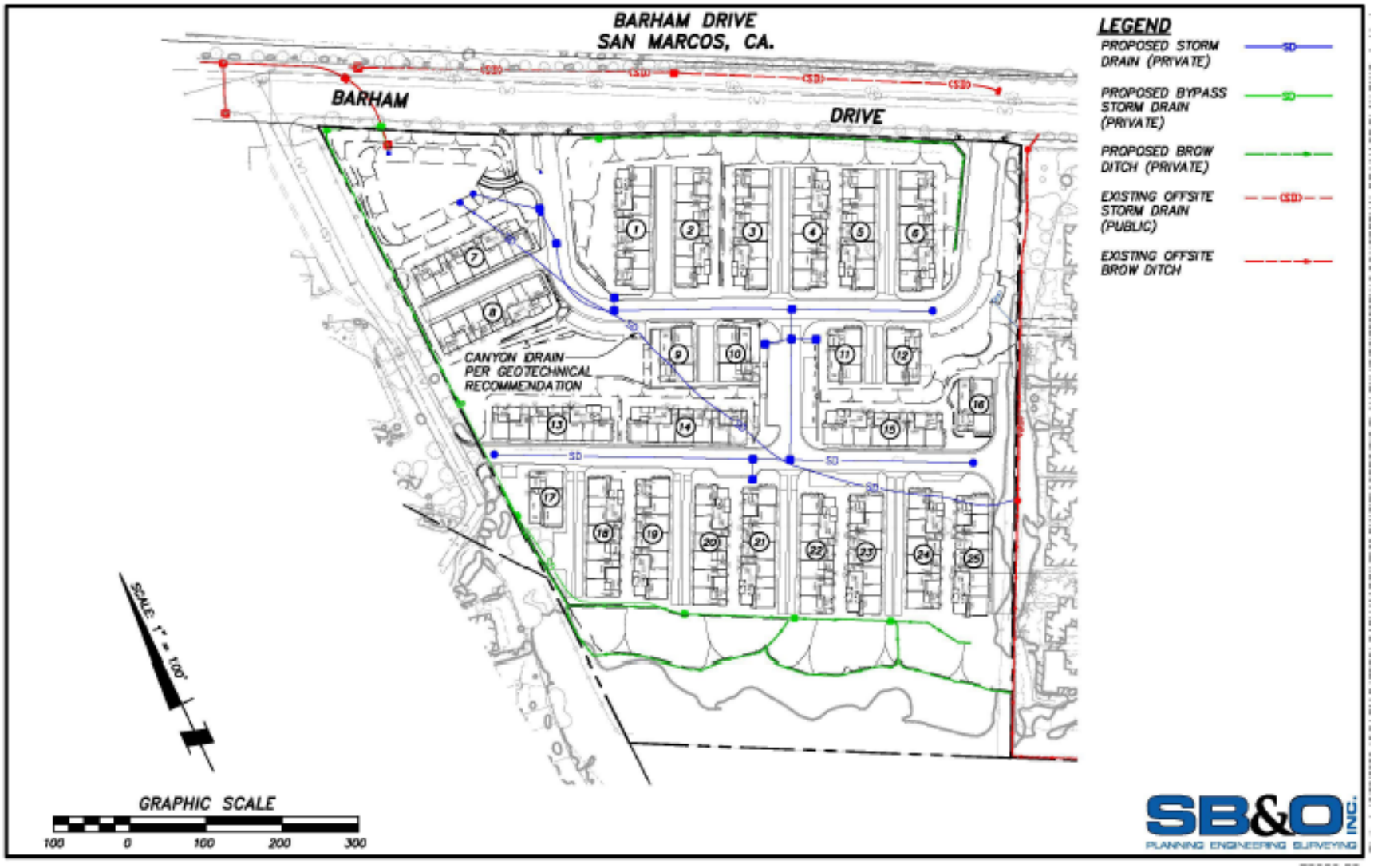
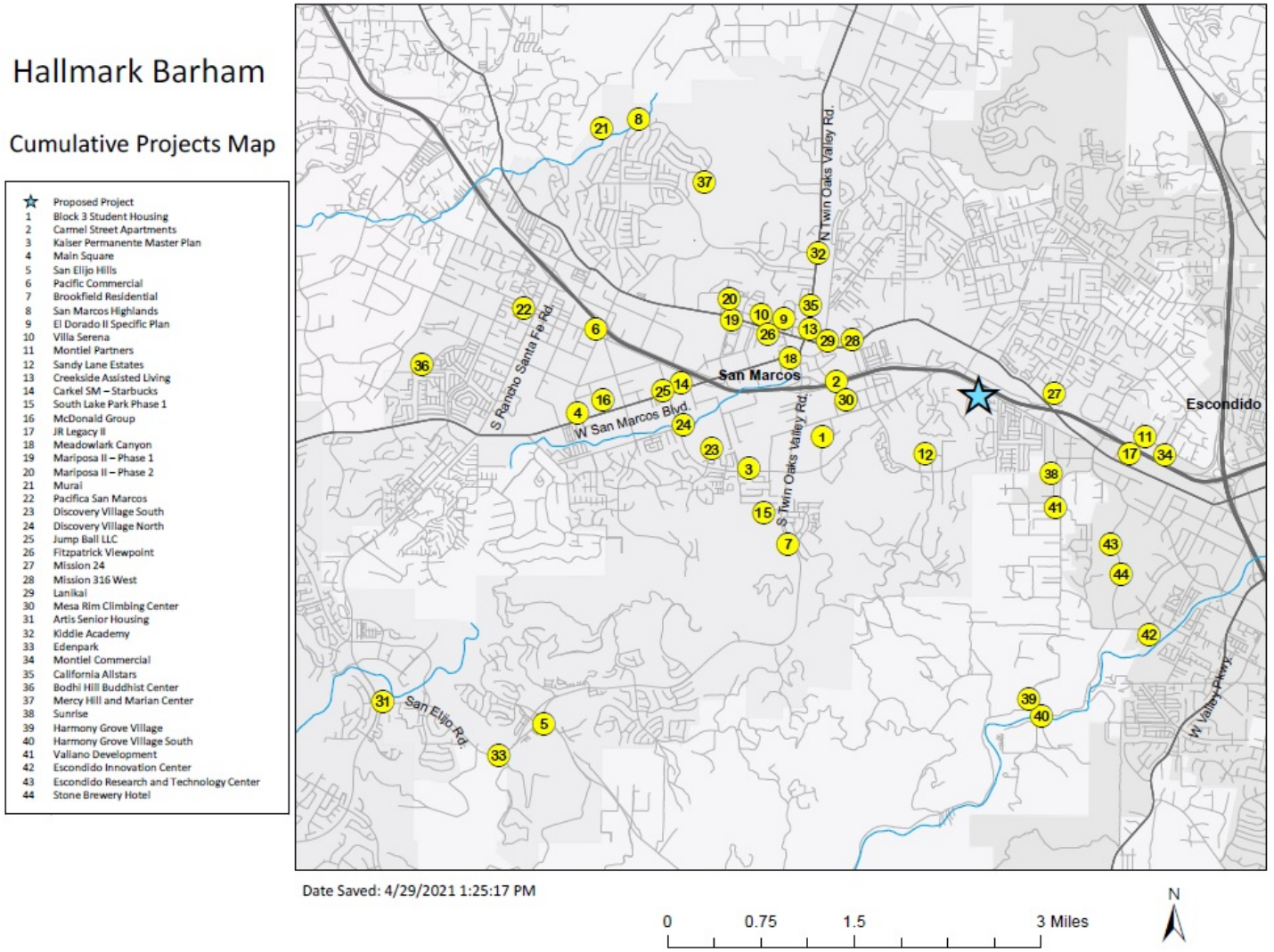


Figure 2-15. Cumulative Projects



3.0 Environmental

3.1 Aesthetics

Introduction

This section addresses the aesthetic resources of the proposed project area and the potential effects that implementation of the proposed project may have related to aesthetics, including impacts to scenic vistas, scenic resources, degradation of visual character and lighting/glare. The analysis also considers the California Environmental Quality Act (CEQA) Guidelines Appendix G, and applicable State and Local regulations, including the City of San Marcos General Plan. The General Plan is available on the City's website.[1]

Table 3.1-1 summarizes the project- and cumulative-level impact analysis by threshold for the proposed project.

Table 3.1-1. Aesthetics Summary of Impacts

Threshold of Significance	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
#1 - Have a substantial adverse impact on a scenic vista.	Less Than Significant	Less Than Significant	Less Than Significant
#2 - Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.	Less Than Significant	Less Than Significant	Less Than Significant
#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, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant	Less Than Significant	Less Than Significant
#4 - Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less Than Significant	Less Than Significant	Less Than Significant

1 http://www.san-marcos.net/work/economic-development/general-plan

3.1.1 Existing Conditions

Scenic Highways

According to Caltrans' California Scenic Highway Mapping System, the project site is not located adjacent to, or in the vicinity of, a designated state scenic highway (Caltrans 2011). State Route 78 (SR-78) is a designated state scenic highway from the west boundary of the Anza-Borrego Desert State Park to the east boundary of the State Park. SR-78 is located approximately 200 feet north of the project site, however the portion designated as a state scenic highway begins approximately 37 miles east of the project site. Additionally, the portion of SR-78 from the west boundary of the Anza-Borrego Desert State Park to the junction of SR-78 and SR-79 in Santa Ysabel is eligible for state scenic highway designation (Caltrans 2011). The project site is located approximately 25 miles east of the closest point of this eligible state scenic highway. Interstate 5 (I-5) and State Route 76 (SR-76) are also eligible state scenic highways, though not officially designated. I-5 is located approximately 11 miles west and SR-76 approximately 11 miles northwest of the project site.

At a local level, the City has designated SR-78 as a view corridor for its unobstructed visual passageway. The highway corridor provides views of the Merriam Mountains, Mount Whitney, Double Peak, CSUSM, and Palomar Community College. The project site is visible from both eastbound and westbound SR-78.

Scenic Vistas

A scenic vista is typically defined as a panoramic view or vista from an identified view/vista point, public road, public trails, public recreational areas, or scenic highways. The City's General Plan does not identify any designated scenic vistas; however, the General Plan more generally aims to protect the City's scenic resources such as the San Marcos, Merriam, and Double Peak Mountains, creek corridors, mature trees, rock outcroppings, and ocean views (City of San Marcos 2012).

Visual Character

The following is a description of the existing visual characteristics and quality of the project site and surroundings.

The City of San Marcos is in the northern portion of San Diego County. The majority of the City is located on the valley floor, with SR-78 running through the center of the City. Landforms such as the mountain ranges to the north and south of San Marcos contribute to its scenic corridors.

The project site is located at 943 E. Barham Road, on the south side of Barham Road, approximately 475 feet east of Woodland Parkway. The project site is generally undeveloped but appears to have been disturbed historically based on the presence of non-native grassland distinct from adjacent habitats and visible in historical aerial photographs of the area. Based upon historical aerial photography reviews, a residential structure and associated outbuilding were constructed on the project site sometime between 1949 and 1968. All structures and outbuilding were removed sometime between 1983 and 1996.

On-site elevations range from 710 feet above mean sea level (amsl) in the southeast portion of the site to 650 feet amsl in the northwest portion of the site. Visually, the project site is heavily influenced by the existing vegetation that covers the project site. As detailed in the Biological Technical Report prepared for the project, the site is primarily non-native grassland with smaller areas of Diegan coastal

sage scrub, Diegan coastal sage scrub – *Baccharis* dominated, developed, disturbed, ornamental and ruderal vegetation (RBC 2020a). **Figures 3.1-1 through 3.1-6** present photos of the project site.

The project vicinity is developed primarily with residential uses. To the east of the project is the Mira Lago residential development and to the southeast is the Williamsburg residential development. West of the project site is Grace Church and the Barham Park & Ride. Southwest of the project site is residential development associated with the Walnut Hills II Specific Plan. The northern boundary of the project site is E. Barham Drive and immediately north of E. Barham Drive is landscaping, a sound wall, and SR-78. South of the project site is preserved open space, a private community park/view point and additional residences within the Williamsburg residential development.

Existing Light and Glare Conditions

The project site is currently undeveloped and thus does not contain any existing sources of light or glare. Additionally, the project site does not contain any reflective surfaces that would act as sources for glare. The project vicinity contains sources of nighttime lighting typical of residential, commercial, and industrial development. Residential developments existing to the east and southwest of the project site contain typical sources of residential lighting, including outdoor lighting fixtures on structures and on residential streets. No sources of substantial glare are present in this area.

Commercial and light industrial developments north of the project site on the opposite side of SR-78. Sources of nighttime lighting in this area could occur from exterior building lighting, street lighting, and lighting in parking lots. No sources of substantial glare are present in this area.

3.1.2 Regulatory Setting

This section describes the state and local regulations related to aesthetics that are applicable to the proposed project.

State

California Scenic Highway Program

The California Department of Transportation manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. No state-designated scenic highways are in the planning area. SR-78 is a designated state scenic highway from the west boundary of the Anza-Borrego Desert State Park to the east boundary of the State Park. SR-78 is located approximately 200 feet north of the project site, however the portion designated as a state scenic highway begins approximately 37 miles east of the project site. Additionally, the portion of SR-78 from the west boundary of the Anza-Borrego Desert State Park to the junction of SR-78 and SR-79 in Santa Ysabel is eligible for state scenic highway designation (Caltrans 2011). The project site is located approximately 25 miles east of the closest point of this eligible state scenic highway.

Local

San Marcos General Plan – Conservation and Open Space Element

The following goal and policies from the City of San Marcos General Plan, Conservation and Open Space Element pertain to aesthetics and visual quality:

- Goal COS-3: Protect natural topography to preserve and enhance the natural beauty of San Marcos.
    - Policy COS-3.1: Preserve scenic resources, including prominent landforms such as Double Peak, Owens Peak, San Marcos Mountains, Merriam Mountains, Cerro de Las Posas, Franks Peak, and canyon areas through conservation and management policies.
    - Policy COS-3.2: Encourage and maintain high-quality architectural and landscaping designs that enhance or complement the hillsides, ridgelines, canyons, and view corridors that comprise the visual character in San Marcos.
    - Policy COS-3.3: Continue to work with new development and redevelopment project applicants in designing land use plans that respect the topography, landforms, view corridors, wildlife corridors, and open space that exists.
    - Policy COS-3.4: Evaluate potential impacts to visual and aesthetic resources, including the potential to create new light sources, while still maintaining and being sensitive to rural lighting standards.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with all the applicable goals and policies.

San Marcos Municipal Code and Zoning Ordinance. Title 20

The provisions of Title 20 of the San Marcos Municipal Code are referred to as the Zoning Ordinance. The San Marcos Municipal Code Zoning Ordinance Title 20 is the primary implementation tool for the policies of the General Plan. The Zoning Ordinance provides more detailed direction related to design and development standards; permitted, conditionally permitted, and prohibited uses; and other regulations such as lighting and sign regulations. The land uses specified in the Zoning Ordinance are based upon and consistent with the land use policies set forth in the General Plan. Specifically, building design, setbacks, lighting, and signage standards as well as open space requirements for development to protect open space and ambient light levels in the City. Lighting standards of the Ordinance require energy-efficient lighting that limits light and glare for private projects, with exceptions for specialized streetscape lighting. Private developments are required to submit lighting plans to ensure consistency with dark sky needs of the region (City of San Marcos 2021a).

Title 20, Section 20.300.080, Site Planning and General Development Standards

The City of San Marcos Street Lighting Standards and Specifications describes the lighting and glare standards for the City. These standards require lighting to be directed downward, and limit the type and spacing of lighting to maintain reasonable lighting levels that do not contribute to light pollution. The City uses International Dark Sky Association (IDA) thresholds to inform its own testing, leading to a policy that allows for the use of energy-efficient lighting sources that include, but are not limited to, light-emitting diode (LED) and induction lighting technologies (City of San Marcos 2021a).

Title 20, Chapter 20.260, Ridgeline Protection and Management Overlay Zone

The City of San Marcos adopted a Ridgeline Protection and Management Overlay Zone in November 2008, set forth in Ordinance 2008-1314, to minimize visual impacts to important ridgelines. These guiding principles are in place to protect natural viewsheds, minimize physical impacts to ridgelines, and establish innovative site and architectural design standards. The Ordinance identifies primary and secondary ridgelines within the City, plus buffer zones, and Ridgeline Overlay Zones (ROZ), surrounding

these ridgelines (City of San Marcos 2021b). No primary or secondary ridgelines are located within or adjacent to the project site; the nearest ridgeline is a secondary ridgeline is located approximately two miles southwest of the project site. The nearest primary ridgeline is located approximately 2.25 miles southwest of the project site.

The San Marcos Municipal Code and Zoning Ordinance are the primary implementation tools for the policies of the General Plan. The Zoning Ordinance provides more detailed direction related to design and development standards; permitted, conditionally permitted, and prohibited uses; and other regulations such as lighting and sign regulations. The land uses specified in the Zoning Ordinance are based upon and consistent with the land use policies set forth in the General Plan. Specifically, building design, setbacks, lighting, and signage standards as well as open space requirements for development to protect open space and ambient light levels in the City. Lighting standards of the Ordinance require energy-efficient lighting that limits light and glare for private projects, with exceptions for specialized streetscape lighting. Private developments are required to submit lighting plans to ensure consistency with dark sky needs of the region.

The City of San Marcos Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080 describes the lighting and glare standards for the City. These standards require lighting to be directed downward, and limit the type and spacing of lighting to maintain reasonable lighting levels that do not contribute to light pollution. The City uses International Dark Sky Association thresholds to inform its own testing, leading to a policy that allows for the use of energy-efficient lighting sources that include, but are not limited to, LED and induction lighting technologies

3.1.3 Thresholds of Significance

According to Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, visual quality and aesthetics impacts are considered potentially significant if the project would:

- **Threshold #1:** Have a substantial adverse impact on a scenic vista;
- **Threshold #2:** Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- **Threshold #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, would the project conflict with applicable zoning and other regulations governing scenic quality;
- **Threshold #4:** Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.4 Project Impact Analysis

Project construction involves grading and site preparation activities to prepare the site for future residential buildings, and circulation and infrastructure improvements. Construction could require staging areas with construction equipment and supplies, and portable trailers to serve as temporary office space or storage. Grading on the site would change or alter the existing topography on the project site to prepare the site for development. The project plans are included in Appendix A.2.

The project proposes 151 multi-family residential units situated on approximately 10.6 gross acres. The site plan is included as Figure 2-2 in Chapter 2. Residential buildings compose approximately 2.8-acres of the project site. Multi-family residential dwelling units are comprised of one, two, and three-story condominiums with ten dwelling unit types interspersed throughout the project site. Overall building heights will not exceed 40 feet.

The proposed landscape plan includes a mix of trees, shrubs, grasses and groundcover and the plant selection emphasizes moderate water use species. The landscape concept plan and the plant material guide are included as Figures 2-4a and 2-4b in Chapter 2. Proposed tree species include desert willow, majestic beauty Indian hawthorn, California laurel, columnar Italian cypress, fern pine, western redbud, European olive, Mexican palo verde, African suman, strawberry tree, flaxleaf paperbark, and date palms.

The project will have a Contemporary Spanish architectural style. Proposed materials include wood, stucco, brick with decorative metal accents and trims. The project includes a variety of floor plans to allow for the articulation of the building elevations. One-story, two-story and three-story product types are included with the project. The project proposes 19 7-Plex Buildings (133 units) and six 3-plex buildings (18 units) for a total of 151 units. A 1,160 square foot (s.f.) central recreation building is also proposed that would have a kitchen, living room, dining room, California room, patio, restroom and storage area. Architectural concepts for the presented in Chapter 2, Project Description. Figure 2-5a presents the architectural concept for the 3-plex buildings and Figures 2-5b and 2-5c presents the architectural concepts for the 7-plex buildings. A rendering of the project site in presented in **Figure 3.1-7**.

Threshold #1: Have a substantial adverse impact on a scenic vista

The project site is not identified as a protected scenic vista. The proposed residential development would be adjacent to existing residential development to the east and southwest and an existing church and preschool to the west with additional residential uses in the project vicinity. To the north is E. Barham Drive, a sound wall, and then SR-78. The project vicinity is urbanized. Thus, the proposed project would be compatible with the surrounding environment and blend with adjacent developments. While the project site is not identified as a scenic vista in the San Marcos General Plan, the General Plan does include policies regarding the protection of scenic resources (City of San Marcos 2012). Below is a summary of the proposed project's consistency with applicable scenic resource preservation policies.

Policy COS-3.1 of the Conservation and Open Space Element of the General Plan call for the preservation of scenic resources, including prominent landforms such as Double Peak, Owens Peak, San Marcos Mountains, Merriam Mountains, Cerro de Las Posas, Franks Peak, and canyon areas through conservation and management policies. The proposed project site does not fall within any of the specific areas called out in this policy, therefore the project would not conflict with this policy.

Policy COS-3.2 encourages high-quality architectural and landscaping designs that enhance or complement the hillsides, ridgelines, canyons, and view corridors that comprise the visual character of San Marcos (City of San Marcos 2012). The Hallmark-Barham Specific Plan includes design rules and themes to create a foundation for development (see EIR Appendix A.1). The project proposes a high-quality architectural and landscaping design that will enhance the project site and be compatible with the existing visual character of the vicinity. The architectural style proposed for the project is Contemporary Spanish. Proposed materials include wood, stucco, brick with decorative metal accents and trims. The project includes a variety of floor plans to allow for the articulation of the building elevations. One-story, two-story and three-story product types are included with the project. The

proposed landscape plan includes a mix of trees, shrubs, grasses and groundcover and the plant selection emphasizes moderate water use species. The landscape concept plan and the plant material guide areas are included as Figures 2-4a and 2-4b in Chapter 2. Proposed tree species include desert willow, majestic beauty Indian hawthorn, California laurel, columnar Italian cypress, fern pine, western redbud, European olive, Mexican palo verde, African suman, strawberry tree, flaxleaf paperbark, and date palms.

Implementation of the proposed project would result in changes in the existing visual character and quality of the project site; however, these changes are not characterized as a substantial degradation. The project incorporates extensive design features that address landscaping, and architectural treatments and design. In summary, the project would not have a substantial adverse impact on a scenic vista, or City scenic resources, and impacts would be **less than significant**.

Threshold #2: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway

SR-78 is located approximately 200 feet north of the project site and provides views of the San Marcos Mountains, Merriam Mountains, Mount Whitney, Double Peak, CSUSM, and Palomar Community College. As previously noted, the section of SR-78 proximate to the project site is not identified as a Scenic Highway per the Caltrans State Scenic Highways Program, although the City has designated SR-78 as a view corridor to surrounding ridgelines.

The project site is visible from SR-78 and future development on the site would be visible from SR-78. However, due to the site topography and the site's location at a lower level than other topographic features in the area, views of the surrounding hillsides would remain unobstructed from SR-78 and the existing views to these hillsides would not be significantly altered.

Based upon the cultural resources study and historical evaluation prepared for the project (ASM 2020 and ASM 2021), several historic features were identified on a slightly elevated knoll in the northeastern portion of the project site, including several concrete and rock foundation remains, concrete rubble, historic debris scatters, and metal t-post and wire fencing remnants. ASM recorded and documented these features as a historic site on the appropriate DPR forms. A total of six historic features were identified at the site, including the remains of what appear to be a formed concrete retaining wall, a cinder block house foundation and associated septic tank and concrete stairs, a cinder block garage foundation, a concrete and cinder block water storage cistern, a concrete shed foundation, and a small concrete pad. The historic building remains and historic refuse were not eligible for listing in the California Register of Historical Resources.

In addition, the project site does not support any significant trees or rock outcroppings as identified or protected by the City's General Plan. Therefore, the proposed project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. Impacts would be **less than significant.**

Threshold #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, would the project conflict with applicable zoning and other regulations governing scenic quality

The City of San Marcos (which includes the project site) is considered an urbanized area per the Public Resources Code (PRC). Per PRC Section 21071, an "urbanized area" is defined 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 July 1, 2019, the US Census Bureau estimated the population of San Marcos to be 96,664 persons (USCB 2019). While this is less than 100,000 persons, the City of San Marcos is contiguous with the City of Escondido, which has an estimated population of 151,625 persons as of July 1, 2019 (USCB 2019). The combined estimated population of these two contiguous cities is 248,289 persons, which is well over the 100,000 persons threshold. Thus, the City would be considered an urbanized area per CEQA. Therefore, the first question of this aesthetics threshold does not apply to the proposed project, as it is directed at non-urbanized areas.

The second part of this threshold is for projects in urbanized areas, which is what applies to the project. A significant impact would occur if the project conflicts with the applicable zoning and other regulations that govern scenic quality.

The City of San Marcos adopted a Ridgeline Protection and Management Overlay Zone in November 2008, set forth in Ordinance 2008-1314, to minimize visual impacts to important ridgelines. These guiding principles are in place to protect natural viewsheds, minimize physical impacts to ridgelines, and establish innovative site and architectural design standards. The Ordinance identifies primary and secondary ridgelines within the City, plus buffer zones, or Ridgeline Overlay Zones (ROZ), surrounding these ridgelines (City of San Marcos 2021b). No primary or secondary ridgelines are located within or adjacent to the project site; the nearest ridgeline is a secondary ridgeline located approximately two miles southwest of the project site. The nearest primary ridgeline is located approximately 2.25 miles southwest of the project site. Therefore, the project will conflict with the ordinance.

The project's consistency with goals and policies related to scenic views and aesthetics is presented in Table 3.10-5 in Section 3.10. No conflicts were identified.

Grading will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of material. A grading variance is requested for the project, since the design includes slopes that exceed 20 feet in height without benching. Areas where slopes are proposed to be greater than 20 feet include the southern extent of development (31.6-foot maximum slope height), a small area on the western edge of the project site (25.8-foot maximum slope height) and a portion of the project frontage with E. Barham Drive (22.8-foot maximum slope height with 6-foot retaining wall). Figure 2-11 in Chapter 2 depicts the areas that are proposed to have manufactured slopes without benching in excess of 20 feet in height. These slopes will be landscaped and visibility to these slopes will be limited due to intervening residential buildings.

The project design incorporates architectural treatments and design to break up the bulk and scale of the residential buildings. The site design takes into consideration the existing topography of the site and will stair step the residential buildings on the site. The highest elevation areas of the project site, located in the southern portion of the site, will not be developed and will remain as part of the 150-foot fire fuel modification buffer. The proposed landscaping plan will further enhance the project site through implementation of a comprehensive and aesthetically pleasing landscape design, which will be maintained by the Home Owner's Association. This includes street trees along E. Barham Drive.

The project would not conflict with applicable zoning and other regulations governing scenic quality and impacts would be **less than significant**.

Threshold #4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Lighting in the project vicinity is associated with roadway lighting along E. Barham Drive and lighting associated with existing residential uses in the area and immediately adjacent to the project site. Development of the proposed project would introduce lighting to a site that is currently undeveloped and does not have lighting.

Excessive, poorly designed, or unshielded lighting can be detrimental to astronomical observations. Two significant observatories are located in San Diego County: Palomar Observatory, - located over 20 miles northeast of the proposed project site/ and Mount Laguna Observatory - located approximately 50 miles southeast of the proposed project site.

The project's lighting plan is included in Figure 2-7 in Chapter 2. As proposed, the project's exterior lighting will include street lights, wall lanterns, bollard lights and step lights. All lighting proposed for the project will be energy efficient, architecturally appropriate fixtures designed to minimize glare, conflict, and light pollution, while providing illumination levels that create a safe environment for both vehicles and pedestrians. To achieve these goals, all areas of the community will be aptly lit to coincide with their relevant use and activities. Street area lights will be full cut-off fixtures and will utilize house-side shields to reduce light trespass and prevent light pollution. Lighting using the highest efficiency fixtures and lamps are preferred. Common area lighting within the project will be used to enhance and complement the character of the development. Lighting will need to be varied and appropriate for each use within the common areas of the development.

Exterior lighting proposed for the project shall be guided by the City of San Marcos Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080, Light and Glare Standards. These standards require downward-directed LED lighting, with the exception of specialized streetscape lighting or architectural detail lighting, which aid in the preservation of dark-sky conditions that are needed by the local observatories. The location, type, and direction of the lighting would be reviewed during Improvement Plan review to ensure compliance with City requirements.

The project does not propose features that would be characterized as creating a new source of glare that would adversely affect daytime or nighttime views in the area. Section 2.2.3 of the Specific Plan (Appendix A of the EIR) details the proposed materials that will be used in the project. Materials used in the project would include concrete roof tiles, wood, stucco, brick with decorative metal accents and trims. These components would be neutral in color. These roof and wall colors and materials are not reflective and would not create significant sources of glare. Since the project would be required to comply with the lighting standards set forth by the City, all lighting would be shielded to minimize light scatter and maintain dark sky conditions, and the proposed materials to be used in the homes are not glare-inducing, the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be **less than significant**.

3.1.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future projects producing related impacts; or (2) a summary of projects contained in an adopted local, regional, or statewide plan, or a related planning document that

describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to aesthetics, the cumulative analysis is based upon a list approach. All of the cumulative projects within the City identified in Table 2-3 are considered in this cumulative analysis.

Development of past, current, and future proposed projects continue to alter the visual environment in the City of San Marcos and surrounding area. In general, the aesthetic impacts of the related projects are site-specific and would not necessarily combine with other projects that are not in the same viewshed to create a cumulative impact. Any related projects in proximity to the project site could potentially contribute to a cumulative impact to visual resources in combination with the impacts of the project site development.

Cumulative effects of lighting are visible over a wide area, due to the potential for lighting from a number of projects to create sky glow. Currently, the project site does not have night lighting since it is undeveloped. Existing sources of light include residential developments to the east and northwest of the project site and commercial and light industrial developments north of the project site on the opposite side of SR-78. As described in Section 3.1.4, the project would introduce new lighting sources at the project site; however, these fixtures would be shielded to minimize light scatter and maintain dark sky conditions and would be required to comply with the lighting standards set forth by the City. Cumulative project would also be required to adhere to the lighting standards of the jurisdictions in which they are located. Therefore, the project would not have a considerable contribution to sky glow such that a new significant cumulative sky glow impact would occur. Cumulative impacts would be **less than significant**.

3.1.6 Mitigation Measures

Based upon the analysis in section 3.1.4 and 3.1.5, aesthetics impacts would be less than significant and no mitigation measures are required.

3.1.7 Conclusion

Development of the proposed project would result in a less than significant impact to scenic vistas and resources. The project would not develop on any primary or secondary ridgelines nor would the project substantially affect a scenic vista.

The project site is not located proximate to a Scenic Highway per the Caltrans State Scenic Highway Program, although the City has designated SR-78 a view corridor to surrounding ridgelines. While the be visible from SR-78, the project would not impede views to any primary or secondary ridgelines from SR-78.

Implementation of the project would result in changes to the visual character of the site from undeveloped to residential development; however, impacts would be less than significant due to incorporation of landscaping and architectural treatments and design features. These design features provide for smooth transitions between graded and natural areas and provide landscaping and architectural components for a pleasing aesthetic.

Lighting and glare impacts were also determined to be less than significant, as the future multi-family buildings would not include highly reflective finishes or excessive lighting. Further, exterior lighting proposed for the project will comply with the City of San Marcos Street Lighting Standards and Specifications and San Marcos Municipal. Cumulative impacts were determined to be less than significant. Therefore, aesthetic impacts are concluded to be less than significant.

Figure 3.1-1 Site Photos 1 and 2

Photograph #1
View to the east along northern site boundary.

Photograph #2
View to the south along eastern site boundary.

Figure 3.1-2 Site Photos 3 and 4

Photograph #3
View to the north along eastern site boundary.

Photograph #4
View to the west along southern site boundary.

Figure 3.1-3 Site Photos 5 and 6

Photograph #5
View to the north along western site boundary.

Photograph #6
View to the east along southern site boundary.

Figure 3.1-4 Site Photos 7 and 8

Photograph #7
Concrete foundation debris in central-eastern portion of the Site.

Photograph #8
Concrete foundation debris in central-eastern portion of the Site.

Figure 3.1-5 Site Photos 9 and 10

Photograph #9
Concrete foundation debris in the central-eastern portion of the Site.

Photograph #10
Cage debris in the central-eastern portion of the Site.

Figure 3.1-6 Site Photos 11 and 12

Photograph #11
Water line located in the central-northern portion of the Site.

Photograph #12
Barham Drive to the north of the Site, beyond which is State Route 78.

Figure 3.1-7. Architectural Rendering

3.2 Air Quality

Introduction

This air quality section identifies, describes, and evaluates air quality issues associated with the proposed project. This section analyzes short-term construction impacts and long-term operational impacts to air quality and determines whether the project would result in a significant impact. This section is based upon the following report, which is included as Appendix D of this document2:

- *Air Quality Assessment*, East Barham Residential Development Project, prepared by LDN Consulting, September 23, 2021 (LDN 2021).

Table 3.2-1 summarizes the project- and cumulative-level air quality impacts, by threshold.

Table 3.2-1. Air Quality Summary of Impacts

Threshold of Significance	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
#1 - Conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant	Less than Significant	Less than Significant
#2 - Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant	Less than Significant	Less than Significant
#3 - Expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	Less than Significant	Less than Significant
#4 – Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant	Less than Significant	Less than Significant

3.2.1 Existing Conditions

This section introduces the meteorologic/climate conditions for the project area and presents the current physical setting and pollutant levels in the proximity of the proposed project.

Meteorology/Climate

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing

2 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.

winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure systems drop to the south and brings cooler, moister weather from the north.

Meteorological trends within the City of San Marcos produce daytime highs typically ranging between 69°F in the winter to approximately 85°F in the summer with August usually being the hottest month. Median temperatures range from approximately 55°F in the winter to approximately 74°F in the summer. The average humidity is approximately 64% in the winter and about 74% in the summer (LDN 2021).

Baseline Air Quality

Regional

The project site is located in the land use jurisdictions of the City of San Marcos (City) within the County of San Diego, within the northwestern coastal portion of the SDAB under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). The SDAB is one of 15 air basins that geographically divide the State of California.

Project area air quality can best be characterized from ambient measurements made by the SDAPCD. SDAPCD operates a network of ambient air monitoring stations throughout San Diego County, which measure ambient concentrations of pollutants and determine whether the ambient air quality meets national and state air quality standards. Pursuant to the 1990 Clean Air Act amendments, U.S. Environmental Protection Agency (USEPA) 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. 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. As explained further below, these standards are set by USEPA or the California Air Resources Board (CARB) for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. 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 meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated 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, calls for the designation of areas as "attainment" or "nonattainment," but based on the California Ambient Air Quality Standards (CAAQS) rather than the NAAQS.

Current attainment designations for the SDAB are presented in **Table 3.2-2.** As shown, the SDAB currently exhibits a non-attainment status for the federal 8-hour standard for ozone (O_3). Additionally, the SDAB is either in attainment or unclassified for federal standards of 1-hour 03, carbon monoxide (CO), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). The SDAB is also in attainment of state air quality standards for all pollutants except for O_3, PM_{10}, and $PM_{2.5}$.

Table 3.2-2. San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (O_3) – 8-hour	Nonattainment	Nonattainment
Ozone (O_3) – 1-hour	Attainment	Nonattainment(1)
Carbon Monoxide (CO)	Attainment	Attainment
Respirable Particulate Matter (PM_{10})	Unclassifiable(2)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead (Pb)	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: SDAPCD 2021.

Notes: (1) The federal 1-hour standard of 12 parts per hundred million (pphm) was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.
(2) At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

Local

The SDAPCD air quality monitoring stations located in Carmel Mount Ranch and Camp Pendleton are the closest stations to the project area that monitors the full spectrum of air quality. **Table 3.2-3** summarizes the two most recent years of monitoring data from the Carmel Mountain Ranch and Camp Pendleton monitoring stations which are 11 and 15.5 miles from the project site, respectively.

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, as identified by CARB, include children, the elderly, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. The project vicinity is developed primarily with residential uses. To the east of the project is the Mira Lago residential development and further east is a mobile home park. To the southeast is the Williamsburg residential development. West of the project site is Grace Church, which includes a day

care and preschool, and the Barham Park & Ride. Southwest of the project site is residential development associated with the Walnut Hills II Specific Plan.

Table 3.2-3. Two Year Ambient Air Quality Summary Near the Project Site (Camp Pendleton or Carmel Mountain Ranch Stations)

Pollutant(1)	Averaging Time	CAAQS	NAAQS	2019	2020	Days Exceeded Over 2 Years
O_3 (ppm)	1 hour	0.09 ppm	No Standard	0.08	0.09	0
	8 hour	0.070 ppm	0.075 ppm	0.06	0.07	6
PM_{10} (µg/m3)	24 hour	50 µg/m3	150 µg/m3	PM_{10} Data Not Available for Monitoring Sites near Project Site.		
	Annual	20 µg/m3	No Standard			
$PM_{2.5}$(2) (µg/m3)	24 hour	No Standard	35 µg/m3	18.9	40.2	N/A
	Annual	12 µg/m3	15 µg/m3	8.2	9.3	N/A
NO_2 (ppm)	Annual	0.030 ppm	0.053 ppm	0.011	0.013	N/A
	1 hour	0.18 ppm	0.100 ppm	0.086	0.056	N/A
CO(2) (ppm)	8 hour	9 ppm	9 ppm	4.1	3.3	N/A
	1 hour	35 ppm	20 ppm	2.5	1.78	N/A

Source: LDN Consulting 2021.

Notes: (1) SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.
(2) Data was collected from Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.

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. The criteria air pollutants that are monitored by the USEPA are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than or equal to 10 microns or 2.5 microns in diameter (PM_{10}, and $PM_{2.5}$) sulfur dioxide (SO_2), and lead (Pb). These pollutants, as well as toxic air contaminants (TACs), are discussed in the following text. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. Examples of sources and effects of these pollutants are identified below:

Ozone (O_3): A strong smelling, pale blue reactive toxic chemical gas consisting of three oxygen atoms. It is a product of the photochemical process involving the sun's energy. O_3 exists in the upper atmosphere O_3 layer, as well as at the earth's surface. O_3 at the earth's surface causes numerous adverse health effects, including lung inflammation, tissue damage, and impaired lung functioning, is a major component of smog, and can damage materials such as rubber, fabrics, and plastics.

Carbon Monoxide (CO): Carbon monoxide is a colorless, odorless, tasteless, and toxic gas resulting from the incomplete combustion of fossil fuels. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects including fatigue, headaches, confusion, and dizziness.

Nitrogen Dioxide (NO_2): NO_2 is formed when nitrogen (N_2) combines with oxygen (O_2). Its life span in the atmosphere ranges from one to seven days. NO_2 is typically created during combustion processes and is a major contributor to smog formation and acid deposition. NO_2 may result in numerous adverse health effects, including respiratory damage. It absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility.

Particulate Matter Less Than or Equal to 10 Microns in Diameter (PM_{10}): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (equal to 10 microns or smaller, about 0.0004 inch or less in diameter) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects, including allergies, asthma, and respiratory illness. PM_{10} also causes visibility reduction.

Particulate Matter Less Than or Equal to 2.5 Microns in Diameter ($PM_{2.5}$): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which are often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 released from power plants and industrial facilities and nitrates that are formed from NO_x released from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles depends mostly on location of the emissions, time of year, and weather conditions. Adverse health effects of $PM_{2.5}$ are similar to those of PM_{10}.

Sulfur Dioxide (SO_2): Typically strong smelling, colorless gas that is formed by the combustion of fossil fuels. SO_2 and other sulfur oxides contribute to the problem of acid deposition as well as adverse health effects including respiratory constriction and, with continued exposure, increased incidents of pulmonary symptoms.

Lead (Pb): Lead in the atmosphere occurs as particulate matter. Lead has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to accumulate over time and cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

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 several 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 systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

CARB classified "particulate emissions from diesel -fueled engines" (i.e., diesel particulate matter [DPM]) as a TAC in August 1998. 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. DPM is emitted from a broad range of diesel engines: 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 diesel particulate matter, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

3.2.2 Regulatory Setting

The following section provides a general description of the applicable regulatory requirements pertaining to air quality, including federal, state and local guidelines.

Federal

Federal Clean Air Act

The federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. Environmental Protection Agency is responsible for implementing most aspects of the Clean Air Act, including setting National ambient air quality standards (NAAQS) for major air pollutants, setting hazardous air pollutant standards, approving state attainment plans, setting motor vehicle emission standards, issuing stationary source emission standards and permits, and establishing acid rain control measures, stratospheric 03 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the criteria pollutants O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead and shown in **Table 3.2-4.**

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 O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, 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 USEPA 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 (SIP) that demonstrates how those areas will attain the standards within mandated time frames.

These plans must include pollution control means that demonstrate how the standards will be met as expeditiously as possible.

Table 3.2-4. Ambient Air Quality Standards

Pollutant	Average Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Measurement Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry		Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM_{10})[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3				
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)				
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10]	-	

Pollutant	Average Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Measurement Method[7]
				(for Certain Areas) (See Footnote 9)		(Pararoosaniline Method)[9]
	3 Hour			-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 13				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, 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.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three 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 one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon 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.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

Pollutant	Average Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Measurement Method[7]

6. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health
7. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
8. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
9. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
10. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 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 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
11. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (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.
12. 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 1-hour national 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 one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
13. The ARB 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.
14. 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 one 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.
15. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: CARB 2016, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf
ppm = parts per million
µg/m3 = micrograms per cubic meter
mg/m3= milligrams per cubic meter

The NAAQS were amended in July 1997 to include an additional standard for O_3, and to adopt a standard for fine particulates ($PM_{2.5}$). In June 2002, a stringent statewide $PM_{2.5}$ standard was adopted. In 2012, the $PM_{2.5}$ standard was lowered further based on air quality monitoring data.

National Ambient Air Quality Standards (NAAQS)

To gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect public health and welfare. Primary standards set limits for the protection of public health, including those people most susceptible to further respiratory distress such as asthmatics, children, and the elderly, or sensitive receptors. Secondary standards set limits to protect public welfare and include protection against decreased visibility and damage to animals, crops, vegetation,

and buildings. Research has shown that chronic exposure to O_3 at levels that just marginally meet clean air standards may nevertheless have adverse health effects. State and federal agencies, therefore, have promulgated a more stringent 8-hour O_3 standard that better reflects human health response to more chronic exposure, shown in Table 3.2-4.

State

California Ambient Air Quality Standards (CAAQS)

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.

The CARB has established California ambient air quality standards (CAAQS), which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. 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 O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. Additionally, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants in California. The CAAQS currently in effect in California are also shown in Table 3.2-4 and include the most recently adopted federal standards for chronic (8-hour) O_3 exposure and for ultra-small diameter particulate matter of 2.5 microns or less in diameter ($PM_{2.5}$). CAAQS restrict four additional contaminants: visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Current attainment designations for the SDAPCD are presented in Table 3.2-2.

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. Air pollution from commercial and industrial facilities is regulated by local air quality management districts, whereas mobile sources of air pollution are regulated by the California Air Resources Board (CARB) and the USEPA. All air pollution control districts have been formally designated as "attainment" or "nonattainment" for each state air quality standard, as shown in Table 3.2-2. Areas in California where ambient air concentrations of pollutants are higher than the state standard are considered to be in "non-attainment" status for that pollutant. Non-attainment designations are categorized into three levels of severity: (1) moderate, (2) serious, and (3) severe. If there are inadequate or inconclusive data to make a definitive attainment designation, districts are considered "unclassified."

Local

San Diego Air Pollution Control District

Although CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The project is located within the SDAB and is subject to SDAPCD guidelines and regulations. In San Diego County, O3 and particulate matter are the pollutants of main concern, because exceedances of the CAAQS for those pollutants are experienced here in most years.

For this reason, the SDAB has been designated as a nonattainment area for the state PM_{10}, $PM_{2.5}$, and O_3 (1-hour and 8-hour) standards. San Diego County is currently designated as a Serious Nonattainment Area for the 2008 ozone NAAQS (75 ppb), and a Moderate Nonattainment Area for the 2015 ozone NAAQS (70 ppb). Accordingly, the SDAPCD must prepare and submit to the USEPA, via CARB, two ozone SIPs identifying control measures and associated emissions reductions necessary to demonstrate attainment of the 75-ppb standard by July 20, 2021 (2020 attainment year) and attainment of the 70-ppb standard by August 3, 2024 (2023 attainment year). The 2020 Plan for Attaining the National Ozone Standards (SDAPCD 2020) addresses all requirements for both ozone standards.

SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The Regional Air Quality Strategy (RAQS) for the SDAB was initially adopted in 1991 and is updated every 3 years (most recently in 2016) (SDAPCD 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O3. The RAQS details how the region will manage and reduce O3 precursors (NOx and VOCs) by identifying measures and regulations intended to reduce these contaminants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and USEPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans. Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS.

In December 2005, SDAPCD prepared a report titled "Measures to Reduce Particulate Matter in San Diego County" to address implementation of Senate Bill (SB) 656 in San Diego County (SB 656 required additional controls to reduce ambient concentrations of PM10 and PM2.5). In the report, SDAPCD evaluates the implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion (SDAPCD 2005).

City of San Marcos General Plan – Conservation and Open Space Element

The Conservation and Open Space Element of the City's General Plan identifies one goal and a number of policies regarding air quality. Those policies that are applicable to the project are listed below:

- Goal COS-4: Improve regional air quality and reduce greenhouse gas emissions that contribute to climate change.
    - Policy COS-4.1: Continue to work with the U.S. EPA, CARB, SANDAG, and the SDAPCD to meet State and federal ambient air quality standards.
    - Policy COS-4.5: Encourage energy conservation and the use of alternative energy sources within the community.

- Policy COS-4.6: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.
- Policy COS-4.8: Encourage and support the generation, transmission and use of renewable energy.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5, the project is consistent with the applicable General Plan goals and policies pertaining to air quality.

3.2.3 Thresholds of Significance

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* which provides guidance that a project would have a significant environmental impact if it would:

- Threshold #1: Conflict with or obstruct implementation of the applicable air quality plan;
- Threshold #2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Threshold #3: Expose sensitive receptors to substantial pollutant concentrations;
- Threshold #4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

To determine whether a project would: (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$ or exceed quantitative thresholds for O_3 precursors, nitrogen oxides (NO_x) and volatile organic compounds (VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD, the agency responsible for air quality planning, monitoring, and enforcement within this basin. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIAs) (SDAPCD 1998).

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. Since SDAPCD does not have AQIA thresholds for emissions of VOCs, the use of the Coachella Valley VOC threshold from the South Coast Air Quality Management District is acceptable.

The thresholds listed in **Table 3.2-5** represent screening-level thresholds that can be used to evaluate whether project-related emissions could cause a significant impact on air quality for both construction and operation. Emissions below the screening-level thresholds would not cause a significant impact. If emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal AAQS, including appropriate background levels. For nonattainment pollutants (PM_{10} and $PM_{2.5}$ plus O_3, with O_3 precursors NO_x and VOCs), if emissions exceed the thresholds shown in Table 3.2-5, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). SDAPCD Regulation XII establishes acceptable risk levels and emission control requirements for new and modified facilities that may emit additional TACs. Under Rule 1210 (adopted in 1996 and revised several times, most recently 2021), emissions of TACs that result in a cancer risk of 10 in 1 million or less and a health hazard index of one or less would not be required to notify the public of potential health risks. If a project has the potential to result in emissions of any TAC or HAP that results in a cancer risk of greater than 10 in 1 million, the project would be deemed to have a potentially significant impact and would be required to implement toxics best available control technology (T-BACT) (SDAPCD 1996).

Table 3.2-5. Screening-Level Criteria for Air Quality Impacts

Pollutant	Total Emissions (Pounds/Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10})	100
Particulate Matter ($PM_{2.5}$)	55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) (SCAQMD)	75
Operational Emissions	
Respirable Particulate Matter (PM_{10})	100
Particulate Matter ($PM_{2.5}$)	55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

Source: LDN Consulting 2021.

Air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project that has the

potential to directly impact a sensitive receptor located within one mile and that results in a health risk greater than 10 in 1 million would be deemed to have a potentially significant impact[3].

SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person (SDAPCD 1976). A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors. The impacts associated with construction and operation of the project were evaluated for significance based on the aforementioned significance criteria.

3.2.4 Project Impact Analysis

Threshold #1: Conflict with or obstruct implementation of the applicable air quality plan

As part of the RAQS and SIP planning process, the SDAPCD develops an emission inventory, based on growth projections from SANDAG and existing emissions figures within the SDAB. The SDAPCD then uses the emission inventory to conduct modeling to demonstrate that the SDAB will attain and maintain the state and federal O_3 standards. This inventory could be thought of as an "emissions budget" for the SDAB, accounting for current emissions as well as previously approved projects consistent with current General Plan policies.

Projects that are consistent with the currently adopted General Plan are determined to be consistent with SDAB's air quality plans, including the RAQS and the SIP. If a project proposes development that is consistent with or less than estimates provided in the General Plan, the project would not conflict with or obstruct implementation of the RAQS or SIP.

The project site has an existing General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. The project includes a General Plan amendment request to change the existing MU3 designation to Specific Plan. The proposed project seeks to construct 151 multi-family residential units. The existing site would allow for up to 275,000 s.f. of office use and approximately 18,000 SF of commercial (retail) use and would generate 5,410 trips (LLG 2021) or more than four times more traffic than the proposed residential uses. Therefore, the project's development intensity and density will decrease from its current General Plan designation. The project is therefore considered consistent with the County's RAQS and would comply with the state's SIP. Impacts would be **less than significant.**

Threshold #2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard

Air quality impacts associated with the proposed project would likely come from two potential sources. The first is related to project construction, such as impacts related to construction equipment emissions, grading and rock crushing activities, and haul trucks for soils import. The second is operational from mobile source emissions from vehicles traveling to and from the proposed project as well as natural gas emission sources. Presented below are the analyses and findings for these two impact areas.

Construction Emissions Analysis

Construction activities are a source of fugitive dust emissions that may have a temporary, but substantial, impact on local air quality. These emissions are generally associated with grading, heavy

equipment usage, blasting, and from construction worker commutes. Dust emissions and impacts vary with the level of activity, specific operations conducted, and prevailing winds. For the proposed project, rough grading activities assume site preparation, rock drilling, grading, paving, building construction and architectural coating. It should be noted that the project would utilize Tier IV or better construction equipment, which include diesel particulate filters, as required by current regulations.

Construction grading operations for the project are anticipated to include 46,341 cubic yards (cy) of imported fill. It is anticipated that earthwork activities would include a rock crusher and blasting. The project would start grading late 2022 with construction of the residential buildings to start shortly thereafter. Construction of all residential buildings would be expected sometime in 2024.

The California Emissions Estimator Model (CalEEMod) 2020.4.0 was used to calculate worst case construction-related emissions. Emissions resulting from blasting and rock crushing, as well as fugitive dust generation were evaluated using emission factors from the USEPA AP-42 publication. The AERSCREEN dispersion model was used to determine the concentration for air pollutants at any location near the pollutant generator as well as predict the maximum exposure distance and concentrations. The following design features were assumed within the CalEEMod analysis:

- All heavy diesel construction equipment will be classified as Tier IV.
- In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite.
- Compliance with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.

Table 3.2-6 presents construction-related emissions. As shown in Table 3.2-6, construction emissions for all criteria pollutants will be below the screening level thresholds.

Table 3.2-6. Construction Emissions (lbs/day)

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2022	1.79	28.17	50.38	0.18	22.50	0.37	22.79	10.86	0.36	11.14
2023	1.41	23.39	48.14	0.17	12.09	0.30	12.39	4.42	0.29	4.71
2024	42.91	3.44	22.83	0.04	1.32	0.06	1.37	0.35	0.06	0.41
Blasting Emissions		102	402		20.59		20.59			
Total Construction Emissions With Blasting	**46.11**	**157**	**523.35**	**0.39**	**56.5**	**0.73**	**57.14**	**15.63**	**0.71**	**16.26**
Screening Level Threshold	*75*	*250*	*550*	*250*	-	-	*100*	-	-	*55*

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
Exceed Threshold?	No	No	No	No	-	-	No	-	-	No

Source: LDN Consulting 2021

The proposed project would utilize approximately six tons of ammonium nitrate per blast, which would generate up to 402 lbs (67 lbs/ton * 6 tons) of carbon monoxide and up to 102 lbs (17 lbs/ton * 6 tons) of nitrogen oxides during a blast. These quantities would be additive to the mass grading operations for the entire project site and could be added to the worst-case mass grading daily CO and NOx output. Additional particulates derived from each blast is estimated over a 20,000 s.f. area roughly 100-foot by 200-foot in dimension. Given this and according to USEPA guidance (USEPA 1995), it's estimated that each blast would generate 20.59 lb/blast as is shown in the equation below:

$$PM_{10}(lb/Blast) = 0.000014 * (20{,}000 ft^2)^{1.5} * 0.52 = 20.59(lb/blast)$$

Assuming six tons of ANFO use per day, maximum daily emissions from explosives would be 451 pounds per day of CO and 140 pounds per day of NO_x, as shown in Table 3.2-6.

Architectural Coatings

The project will use architectural coatings (e.g., paint and interior finishing products) in home construction. According to the USEPA, VOC exposure in humans can result in health effects in humans including eye, nose, and throat irritation (USEPA 2017). In San Diego County any person who manufactures, blends or repackages, supplies, sells, offers for sale, applies, or solicits the application of any architectural coating for use within the County must comply with SDAPCD Rule 67.0.1 (Architectural Coatings). As required by Rule 67.0.1, the project would utilize low-VOC paint that does not exceed 100 grams of VOC per liter for interior surfaces and 150 grams of VOC per liter for exterior surfaces3. This assumption was added into the CalEEMod model run for the project.

In summary, and as shown in Table 3.2-6, construction-related emissions would be below the screening level thresholds for all pollutants. Therefore, construction-related air emissions would not violate any air quality standards and impacts are **less than significant**.

Operational Emissions Analysis

Daily project operations would generate emissions from sources such as area, energy, mobile, waste and water use. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Operational emissions were calculated using the CalEEMod 2020.4.0 model for both summer and winter scenarios. The traffic inputs for CalEEMod were adjusted to be consistent with the proposed project traffic study. Based on that study, the proposed project would generate 1,208 net average daily trips (LLG 2021). The project traffic trip distances are based on an average trip distance within the County which can be calculated using the total daily VMT within the county (86,284,768) miles divided by the total trips in the County (16,007,853) or roughly 5.4 miles.

Table 3.2-7 summarizes project-related operational emissions, including vehicular and fixed-source emissions. As shown, total operational emissions of the project would be below the SDAPCD screening

3 https://www.arb.ca.gov/DRDB/SD/CURHTML/R67.0.1.pdf

thresholds for all criteria pollutants in both summer and winter. Therefore, operation-related impacts would not violate any air quality standard and would be **less than significant**.

Table 3.2-7. Operational Emissions (lbs/day)

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Scenario						
Area Source	4.13	0.14	12.45	0.00	0.07	0.07
Energy Use	0.06	0.51	0.22	0.00	0.04	0.04
Mobile Emissions	2.71	2.29	20.38	0.04	4.47	1.21
Total	**6.90**	**2.95**	**33.05**	**0.05**	**4.58**	**1.32**
Screening Level Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Above threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Scenario						
Area Source	4.13	0.14	12.45	0.00	0.07	0.07
Energy Use	0.06	0.51	0.22	0.00	0.04	0.04
Mobile Emissions	2.61	2.49	21.41	0.04	4.47	1.21
Total	**6.80**	**3.15**	**34.08**	**0.04**	**4.58**	**1.32**
Screening Level Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LDN Consulting 2021a.
Notes: Daily pollutant generation assumes trip distances within CalEEMod

Threshold #3: Expose sensitive receptors to substantial pollutant concentrations

Sensitive receptors are defined as schools, hospitals, resident care facilities, or day-care centers, as well as residential receptors in the project vicinity. The nearest sensitive receptors are the existing residences to the east of the project site. The threshold related to sensitive receptors addresses whether the project could expose sensitive receptors to substantial pollutant concentrations of criteria pollutants or TACs.

As identified above, if a project has the potential to result in emissions of any TAC that results in a cancer risk of greater than 10 in 1 million or substantial non-cancer risk, the project would be deemed to have a potentially significant impact.

To address the potential for emissions of construction-related TAC emissions to result in exposure of sensitive receptors to substantial pollutant concentrations, a screening health risk assessment was conducted for construction emissions. The risk-driving toxic air contaminant that would be emitted during construction would be diesel particulate matter.

Risks were calculated based on the Office of Environmental Health Hazards Assessment update guidance (OEHHA 2015). Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home, and the exposure duration divided by averaging time, to yield the excess cancer risk. Based upon the air quality modeling, worst-case onsite PM_{10} from onsite construction exhaust would cumulatively produce 0.0086 tons over the construction duration (503 calendar days) or an average of $4.36x10^{-9}$ grams/second.

Utilizing these figures and based on the AERSCREEN dispersion model, the maximum 1-hr concentration is 0.016 µg/m3 during the worst-case construction period. The annual concentration is 0.0123 µg/m^3. Therefore, the inhalation cancer risk is 3.10 at the point of maximum exposure 125 meters (410 feet) away. As a condition of project approval, the project would be required to utilize Tier 4 diesel equipment. Since the threshold is 10 per million exposed with T-BACT installed, the project would have a less than significant impact and would be in compliance with the City's thresholds. It should be noted that sensitive residential receptors are adjacent to the project site. Since the maximum risk is 3.10 per million exposed (and the threshold is 10 per million), all sensitive receptors would have cancer risks at or less than 3.10 per million exposed which would also represent a less than significant impact. Therefore, toxic air contaminant impacts associated with the project would be **less than significant.**

Threshold #4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

Construction activities associated with development of the project site could generate trace amounts of substances such as ammonia, carbon dioxide, hydrogen sulfide, methane, dust, organic dust and endotoxins. Any generation of odors related to these substances would occur intermittently during construction. Construction activities may also generate odors associated with diesel equipment at various locations. Odors would be strongest at the source and would quickly dissipate. The buffer between the project site and nearby residences, combined with the short term and intermittent duration of any odor emissions, would ensure construction-related impacts are **less than significant**.

Operation

Future development on the project site includes multi-family residences. This type of use is not typically characterized as one that would generate odors, compared to uses such as industrial and manufacturing. Therefore, odor-related impacts from future uses on the project site are determined to be **less than significant**.

3.2.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative

impact with respect to air quality, the cumulative analysis is based upon a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document air quality.

As part of the RAQS and SIP planning process, the SDAPCD develops an emission inventory, based on growth projections from SANDAG and existing emissions figures within the SDAB. The SDAPCD then uses the emission inventory to conduct modeling to demonstrate that the SDAB will attain and maintain the state and federal O_3 standards. This inventory could be thought of as an "emissions budget" for the SDAB, accounting for current emissions as well as previously approved projects consistent with current General Plan policies.

Projects that are consistent with the currently adopted General Plan are determined to be consistent with SDAB's air quality plans, including the RAQS and the SIP. If a project proposes development that is consistent with or less than estimates provided in the General Plan, the project would not conflict with or obstruct implementation of the RAQS or SIP. Provided a project's emissions are consistent with the projections within the RAQS and SIP, the project would not result in a cumulatively considerable impact on O_3 within the SDAB.

Currently, the project site has a General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed- use non-residential designation with a maximum FAR of 1.50. The project includes a General Plan amendment to change the existing MU3 designation to Specific Plan Area (SPA). The proposed project seeks to construct 151 multi-family residential units. The existing site would allow for up to 275,000 s.f. of office use and approximately 18,000 s.f. of commercial (retail) use and would generate up to four times more traffic than the proposed residential uses.

Since the largest component of air quality emissions are typically derived from vehicular trips, the site would be considered less intense. Therefore, the project's development intensity and density will decrease from its current General Plan designation. The project is therefore considered consistent with the County's RAQS and would comply with the state's SIP. Cumulative impacts would be **less than significant.**

3.2.6 Mitigation Measures

Based upon the analysis presented in Sections 3.2.4 and 3.2.5, project and cumulative air quality impacts would be less than significant. Therefore, no mitigation measures are necessary.

3.2.7 Conclusion

Implementation of the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction or operation, nor would the project conflict with or obstruct implementation of the RAQS or SIP. Additionally, due to the nature of the project, sensitive receptors would not be exposed to substantial pollutant concentrations nor would a substantial number of people be exposed to objectionable odors.

3.3 Biological Resources

Introduction

This section provides a biological resources impact analysis for the proposed project. The analysis in this section is based upon the following reports prepared by Rocks Biological Consulting (RBC)

- *Barham Drive Residential Project Biological Technical Report*. Prepared by Rocks Biological Consulting, October 27, 2020. (RBC 2020a)
- 45 Day Report for Coastal California Gnatcatcher Surveys for the Barham Drive Residential Project, City of San Marcos, San Diego County, California. Prepared by Rocks Biological Consulting, July 16, 2020. (RBC 2020b)
- Special-Status Plant Survey Results for the Barham Drive Residential Project, San Marcos, California. Prepared by Rocks Biological Consulting, June 17, 2020 (RBC 2020c).
- Jurisdictional Findings for 943 Barham Drive Project Site, San Marcos. Prepared by Helix Environmental Planning. May 27, 2020.

These reports are included as **Appendices E.1, E.2, E3 and E.4.** of this Environmental Impact Report (EIR).

Table 3.3-1 summarizes the project- and cumulative-level impact analysis by threshold for the proposed project.

Table 3.3-1. Biological Resources Summary of Impacts

Threshold of Significance	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
#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 Wildlife or U.S. Fish and Wildlife Service.	Significant Impact	Less than Significant	Mitigated to Less Than Significant
#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 Wildlife or the U.S. Fish and Wildlife Service.	Significant Impact	Less than Significant	Mitigated to Less Than Significant

Threshold of Significance	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
#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, hydrologic interruption, or other means.	Less than Significant	Less than Significant	Less than Significant
#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 site.	Less than Significant	Less than Significant	Less than Significant
#5: Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.	Less than Significant	Less than Significant	Less than Significant
#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.	Less than Significant	Less than Significant	Less than Significant

3.3.1 Existing Conditions

The 10.56-acre project site is generally undeveloped but appears to have been disturbed historically based on the presence of non-native grassland distinct from adjacent habitats and visible in historical aerial photographs of the area. The site has a north-aspect slope with elevations of approximately 650 to 710 feet above mean sea level (AMSL). The site occurs within a relatively developed area, with residential development to the east and west of the site. The northern project boundary borders East Barham Drive, and the southern project boundary borders undeveloped lands that support Diegan coastal sage scrub and chaparral habitat.

The majority of the project site supports non-native grassland, with Diegan coastal sage scrub habitat occurring along the southern project site boundary (**Figure 3.3-1**). A smaller area of Diegan coastal sage scrub – Baccharis dominated habitat occurs along the eastern project boundary, and disturbed land and ornamental vegetation occur scattered throughout the non-native grassland across the majority of the site. Developed, ruderal, and ornamental land border the north, east, and west project boundaries. Site photographs are presented in Appendix A of the Biological Technical Report included in Appendix E.1 of this EIR.

Vegetation Mapping and Biological Surveys

To locate and characterize natural vegetation communities, including habitats for special-status species, within the project area, RBC conducted a field survey in March 2020, including a general biological survey, vegetation mapping, general habitat assessment for special-status specie, and a reconnaissance-level aquatic resource assessment of potential local, state, and/or federal jurisdictional wetland and/or non-wetland waters of the U.S./State. Helix prepared a jurisdictional assessment in April 2020 (Helix 2020) to identify potential areas that may be considered jurisdictional.

RBC biologists identified plant species using The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012) and local botanical knowledge. The project site was traversed on foot and binoculars (10x42) were used to aid in field identification of wildlife species. Plant and wildlife species observed on the project site are presented in Appendix C. Vegetation was mapped directly on a 200-scale (1"= 200') aerial photograph following Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986).

A 50-foot survey buffer was included in vegetation mapping provided in the Biological Technical Report (RBC 2020a). Vegetation was identified in buffer areas via binoculars from the project site during the general biological survey. Buffer areas were included in the analysis in order to assess the potential for special-status species or resources in areas immediately adjacent the project site that could be impacted by the project.

Rare Plant Surveys

RBC biologists conducted special-status plant surveys for the project site in Spring 2020 (RBC 2020c). Two on-site surveys were performed to maximize detection of spring annual and bulb species, one on May 6, 2020 and a second on May 20, 2020. In addition, reference populations of both San Diego thornmint (*Acanthomintha ilicifolia*; federally threatened, state endangered, CRPR 1B.1) and thread-leaved brodiaea (*Brodiaea filifolia*; federally threatened, state endangered, CRPR 1B.1) were visited to ensure proper survey timing as both of these species have a narrow window of observation.

Focal species for the rare plant surveys were San Diego thornmint, thread-leaved brodiaea, spreading navarretia (*Navarretia fossalis*; federally threatened, CRPR 1B.1), San Diego button celery (*Eryngium aristulatum var. parishii*; federally endangered, state endangered, CRPR 1B.1), Del Mar manzanita (*Arctostaphylos glandulosa ssp. crassifolia*; federally endangered, CRPR 1B.1) and wart-stemmed ceanothus (*Ceanothus verrucosus*; CRPR 2B.2); however, all plant species on site were identified during surveys, and other special-status plant species would have likely been incidentally observed, if present.

Surveys were conducted in accordance with Protocols for Surveying and Evaluating Impacts on Special Status Plant Populations and Natural Communities. Biologists walked transects throughout the project site and survey buffer and were prepared to map special-status plant occurrences using handheld ArcGIS Collector. During surveys all vascular plant species on the site were identified to species, subspecies, or varietal level.

Coastal California Gnatcatcher Surveys

RBC biologists conducted six breeding season coastal California gnatcatcher surveys from May 13, 2020 through June 17, 2020 (RBC 2020b). Survey methods followed the United States Fish and Wildlife Service (USFWS) presence/absence breeding season protocol (USFWS 1997) for area that are not within Natural Community Conservation Planning (NCCP) areas. RBC surveyed all suitable coastal

California gnatcatcher habitat within the project site and a 300-foot buffer using taped vocalizations to elicit a response from coastal California gnatcatcher.

Vegetation Communities

The following vegetation communities were identified and mapped during a general biological survey conducted in March 2020. **Figure 3.3-1** shows the geographical extent of the vegetation communities.

Developed

Developed lands within the project site (0.40 acre) support no native vegetation and are comprised of paved roads. Developed lands occur along the northern site boundary, in the form of East Barham Drive.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub habitat within the project site (0.62 acre) occurs along the southern project site boundary and is dominated by coast monkey flower (*Diplacus puniceus*), black sage (*Salvia mellifera*), coastal sagebrush (*Artemisia californica*), and laurel sumac (*Malosma laurina*). This vegetation community is a form of coastal sage scrub comprised of low, soft- woody subshrubs to about one meter (three feet) high, many of which are facultatively drought- deciduous.

Diegan Coastal Sage Scrub - Baccharis Dominated

Diegan coastal sage scrub – *Baccharis* dominated habitat within the project site (0.03 acre) occurs along the eastern project boundary and contains coyote brush (*Baccharis pilularis* ssp. *consanguinea*). This vegetation community is a form of Diegan coastal sage scrub comprised of low, soft-woody subshrubs to about one meter high, containing more than 50% cover of one or more *Baccharis* species.

Disturbed Habitat

Disturbed lands within the project site (0.17 acre) support bare ground or sparse non-native plant species that have been established through human disturbance. Disturbed lands on the project site consist of small patches of human-disturbed land.

Non-Native Grassland

Non-native grassland supports greater than 50 percent cover of non-native grasses. Non-native grassland vegetation within the project site (9.50 acres) largely occurs in the middle of the site and consists of non-native grasses such as ripgut grass (*Bromus diandrus*), slender wild oat (*Avena barbata*), and glaucous barley (*Hordeum murinum* ssp. *glaucum*).

Ornamental

Ornamental plantings are comprised of exotic trees and other ornamental vegetation. The ornamental area within the project site (0.22 acre) includes pepper trees (*Schinus* spp.), Mexican fan palm (*Washingtonia robusta*), and China berry (*Melia azedarach*).

Ruderal

Ruderal areas support vegetation capable of tolerating some form of disturbance. This disturbed community within the project site (<0.01 acre) is dominated by broad-leaf herbaceous species with a less than 50 percent cover of non-native grasses. Ruderal vegetation occurs in the center of the project site and primarily consists of black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and filaree/storksbill (*Erodium spp.).*

Sensitive Vegetation Communities

Vegetation communities (habitats) are generally considered "sensitive" if: (a) they are considered rare within the region by agencies such as U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and other local regulatory agencies; (b) if they are known to support sensitive animal or plant species; and/or (c) they are known to serve as important wildlife corridors. Sensitive habitats are typically depleted throughout their known ranges, or are highly localized and/or fragmented.

Developed, disturbed ornamental and ruderal vegetation communities are not considered by the City of San Marcos as sensitive habitat types in the City's Draft Subarea Plan. Non-native grasslands, Diegan coastal sage scrub, and Diegan coastal sage scrub – Baccharis dominated are considered to be sensitive habitat types.

Wildlife Species

Wildlife species observed during the field survey are presented in Appendix C of the Biological Technical Report (Appendix E.1 of this EIR), and a full assessment of special-status wildlife species' potential to occur on the project sites is provided in **Table 3.3-2**. Focused 2020 breeding season coastal California gnatcatcher surveys for the project were negative. No additional federally or state-listed species have a moderate or high potential to occur on the project site. One CDFW Watch List species, Cooper's hawk, was observed flying over the site during the project biological survey. No additional CDFW Watch List species are anticipated to have a moderate or high potential to occur on the project site.

Table 3.3-2. Wildlife Species Potential for Occurrence

Species	Status	Habitat	Potential to Occur
Reptiles			
Western spadefoot (*Spea hammondii*)	SSC	Found in grassland and occasionally woodland habitats. Species requires ponds to breed.	**Low potential to occur.** Although the site supports potential mesic habitat, this habitat is not capable of supporting breeding populations of western spadefoot.
Birds			
Coastal California gnatcatcher (*Polioptila*	FT, SSC	Found in coastal sage scrub habitats including Diegan coastal sage scrub, often dominated by California buckwheat	**Low potential to occur.** Although suitable Diegan coastal sage scrub is present on site, the habitat is limited, and focused 2020 breeding-season coastal California

Species	Status	Habitat	Potential to Occur
californica californica)		(*Eriogonum fasciculatum*) and California sagebrush (Artemisia californica).	gnatcatcher surveys for the project were negative.
Cooper's hawk (*Accipiter cooperii*)	WL (Nesting)	Found in a variety of habitats including woodlands, shrublands, and urban areas. Nests in woodlands, often near rivers and streams.	**Present.** Species observed flying over the project site during spring 2020 surveys. Species has a low potential to nest on the project site however due to lack of suitable nesting trees.
Tricolored blackbird (*Agelaius tricolor*)	ST, SSC (Nesting colony)	Breeds within dense aquatic vegetation bordering freshwater aquatic habitats including marshes, swamps, lakes and ponds. This species is often found near agricultural areas.	**Not anticipated to occur.** Suitable marsh, swamp, lake and pond aquatic habitats are not present on site.
Mammals			
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC	Roosts in mines, caves, tunnels, and abandoned buildings. Forages in a variety of habitats including coastal sage scrub and arid scrub habitats.	**Not anticipated to occur.** Suitable habitats containing cavity roosts are not present on site.
FT: Endangered Species Act (ESA) Federally Threatened Species ST: California Endangered Species Act (CESA) State Threatened Species SSC: California Department of Fish and Wildlife (CDFW) Species of Special Concern WL: California Department of Fish and Wildlife (CDFW) Watch List species			

Source: RBC 2020a

Avian Species

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is federally listed as threatened and is considered a California Species of Special Concern. This species is a year-round resident of southern California and is found in the six southernmost California counties located within the coastal plain (San Bernardino, Ventura, Los Angeles, Orange, San Diego, and Riverside). The primary cause of this species' decline is conversion of coastal sage scrub vegetation to urban and agricultural uses. USFWS has estimated that coastal sage scrub habitat has been reduced by 70 to 90 percent of its historical extent. Coastal California gnatcatcher generally inhabit coastal sage scrub habitats such as California buckwheat scrub dominated by California sagebrush and flat-topped buckwheat, generally below 1,500 feet in elevation along the coastal slope. When nesting, this species typically avoids slopes greater than 25% with dense, tall vegetation. Gnatcatcher pairs will attempt several nests each year (average of 4), each

placed in a different location inside their breeding territory, but most nest attempts are unsuccessful because of depredation by a variety of species. Clutch size ranges from one to 5 eggs, with 3 or 4 eggs most common. Males and females will remain paired through the non-breeding season and will often expand their home range when not breeding. This species is particularly vulnerable to habitat destruction and fragmentation because of their low dispersal rate, reliance on a specific habitat type, and low breeding success. Coastal California gnatcatcher has been described as "an obligate resident of coastal sage scrub," a vegetation community that is vulnerable to urban pressures. The destruction of coastal sage scrub by wildfire also has a detrimental effect on local populations. This species also inhabits chaparral vegetation where adjacent to coastal sage scrub (RBC 2020a).

This species has been reported within one mile of the project site, with one report occurring approximately 0.15 mile west of the project site (RBC 2020a). This historical sighting is from 1997 and the area where the sighting occurred has been developed into a residential development, likely fragmenting gnatcatcher populations. Suitable gnatcatcher Diegan coastal sage scrub habitat occurs along the southern project boundary. However, this habitat is surrounded by residential developments and lacks connectivity to larger expanses of habitat. Focused 2020 breeding season coastal California gnatcatcher surveys for the project were negative (RBC 2020b).

Cooper's Hawk (Acc*ipiter cooperii*)

Cooper's hawk is a CDFW Watch List species when nesting. This species is found across a variety of habitats, including coastal sage scrub, riparian woodlands, and urban areas. Cooper's hawk feed on small bird species and require large trees to nest. This species often nests in riparian woodlands and will occasionally nest in large ornamental trees.

Cooper's hawk was observed flying over the project site during the 2020 general biological survey (RBC 2020a). Although Cooper's hawk may use the project site as a hunting territory, suitable nesting habitat containing large trees is not present. As such, Cooper's hawk is not anticipated to nest within the project site.

Plant Species

RBC conducted special-status plant surveys for the project site in Spring 2020. No special-status plant species were documented on the project site during the general biological survey or during focused rare plant surveys, and none have a moderate or high potential to occur on the project site due to absence of suitable habitat and soils (RBC 2020c). Plant species observed during the field survey are presented in Appendix C of the Biological Technical Report (Appendix E.3 of this EIR), and an assessment of the potential for special-status plant species to occur on-site is provided in **Table 3.3-3**.

Table 3.3-3. Plant Species Potential for Occurrence

Species	Status	Habitat	Potential to Occur*
Beach goldenaster (Heterotheca sessiliflora ssp. sessiliflora)	CRPR 1B.1	Perennial herb. Blooms March-December. Chaparral (coastal), coastal dunes, coastal scrub. Elev. 0-4,020 ft.	**Not anticipated to occur.** While the project site and survey buffer are within the elevational range, and supports Diegan coastal sage scrub habitat, the species is typically found in coastal locations. Additionally, there are no inland collections of this species in San Marcos.

Species	Status	Habitat	Potential to Occur*
California adolphia (Adolphia californica)	CRPR 2B.1	Perennial deciduous shrub. Blooms December-May. Chaparral, coastal scrub, valley and foothill grassland. Elev. 30-2,430 ft.	**Low potential to occur.** The project site and survey buffer are within the elevational range, and supports Diegan coastal sage scrub habitats. However, this species would have likely been observed if present.
Coulter's goldfields (Lasthenia glabrata ssp. coulteri)	CRPR 1B.1	Annual herb. Blooms February-June. Coastal salt marshes and swamps, playas, vernal pools. Elev. 3- 4,002 ft.	**Low potential to occur.** The site does not support coastal salt marshes or swamps, but supports potential vernal pool habitats that could contain the species.
Coulter's saltbush (Atriplex coulteri)	CRPR 1B.2	Perennial herb. Blooms March-October. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Elev. 5-1,510 ft.	**Low potential to occur.** This species is typically found coastally or in the southern part of the county where it is found inland as well. This species would have likely been observed if present.
Decumbent goldenbush (Isocoma menziesii var. decumbens)	CRPR 1B.2	Perennial shrub. Blooms April-November. Chaparral, coastal scrub (sandy, often in disturbed areas). Elev. 30- 455 ft.	**Low potential to occur.** The site supports sandy soils, disturbed areas, and Diegan coastal sage scrub.
Del Mar manzanita (Arctostaphylos glandulosa ssp. crassifolia)	FE, CRPR 1B.1	Perennial evergreen shrub. Blooms December-July. Chaparral (maritime, sandy). Elev. 0-1,200 ft.	**Low potential to occur.** Species is typically found coastally in maritime chaparral, which doesn't not occur within survey area.
Delicate clarkia (Clarkia delicata)	CRPR 1B.2	Annual herb. Blooms April-June. Often gabbroic soils within chaparral, cismontane woodland. Elev. 770-3,280 ft.	**Not anticipated to occur.** The project site and survey buffer are within the elevational range; however, the site does not support gabbroic soils within habitat on site.
Dunn's mariposa lily (Calochortus dunnii)	SR, CRPR 1B.2	Perennial bulbiferous herb. Bloom (February) April-June. Gabbroic or metavolcanics, rocky soils within closed- cone coniferous forest, chaparral, valley and foothill grassland. Elev. 605-6,500 ft.	**Low potential to occur.** While the project site and survey buffer are within the elevational range and supports grassland habitat, gabbroic soils needed for this species are not found on site. In addition, there are no nearby collections of this species.

Species	Status	Habitat	Potential to Occur*
Encinitas Baccharis (Baccharis vanessae)	FT, SE, CRPR 1B.1	Perennial deciduous shrub. Blooms (August) October- November. Sandstone soils within chaparral (maritime) and cismontane woodland. Elev. 196-2,363 ft.	**Not anticipated to occur.** The project site and survey buffer are within the elevational range; however, the site does not support chaparral habitat suitable for the species. Would have been observed if present.
Felt-leaved monardella (Monardella hypoleuca ssp. lanata)	CRPR 1B.2	Perennial rhizomatous herb. Blooms June-August. Rocky, granitic slopes or hilltops in chaparral, cismontane woodland. Elev. 980-5,165 ft.	**Not anticipated to occur.** The project site and survey buffer are within the elevational range; however, the site does not support suitable soils or habitats for this species.
Munz's sage (Salvia munzii)	CRPR 2B.2	Perennial evergreen shrub. Blooms February-April. Chaparral, coastal scrub. Elev. 375-3,495 ft.	**Low potential to occur.** While the project site and survey buffer are within the elevational range and supports Diegan coastal sage scrub habitat, the species is known only from the southern part of the County.
Nuttall's scrub oak (Quercus dumosa)	CRPR 1B.1	Perennial evergreen shrub. Blooms February-April (May- August). Sandy, clay loam soils within closed-cone coniferous forest, chaparral, and coastal scrub. Elev. 49-1,313 ft.	**Low potential to occur.** The project site and survey buffer are within the elevational range, and supports sandy loam soils and Diegan coastal sage scrub habitat; however, species would have likely been observed if present.
Orcutt's brodiaea (Brodiaea orcuttii)	CRPR 1B.1	Perennial bulbiferous herb. Blooms May-July. Mesic, clay soils within closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Elev. 98-5,552 ft.	**Low potential to occur.** The site does not support clay soils, coniferous forest, chaparral, or cismontane woodland, but supports potential vernal pool habitats that could contain the species.
Palmer's goldenbush (Ericameria palmeri var. palmeri)	CRPR 1B.1	Perennial evergreen shrub. Blooms (July) September- October. Chaparral, coastal scrub. Elev. 95-1,970 ft.	**Low potential to occur.** While the project site and survey buffer support Diegan coastal sage scrub habitat, this species is typically found in the southern part of the County.
Parish's brittlescale (Atriplex parishii)	CRPR 1B.1	Annual herb. Blooms June-October. Alkaline habitats including chenopod scrub,	**Low potential to occur.** The site does not support chenopod scrub or playas, but supports potential mesic habitats that

Species	Status	Habitat	Potential to Occur*
		playas, and vernal pools. Elev. 80-6,235 ft.	have a minor potential to support the species. However, this species would have likely been observed if present.
Parry's tetracoccus (Tetracoccus dioicus)	CRPR 1B.2	Perennial deciduous shrub. Blooms April-May. Gabbroic soil in chaparral, coastal scrub. Elev. 540-3,280 ft.	**Not anticipated to occur.** While the project site and survey buffer are within the elevational range and supports Diegan coastal sage scrub habitat, it does not contain gabbroic (Las Posas) soils that support this species.
Rainbow manzanita (Arctostaphylos rainbowensis)	CRPR 1B.1	Perennial evergreen shrub. Blooms December-March. Chaparral. Elev. 670-2,200 ft.	**Low potential to occur.** The site does not support suitable chaparral habitat for this species.
Ramona horkelia (Horkelia truncata)	CRPR 1B.3	Perennial herb. Blooms May- June. Clay, gabbroic soils within chaparral and cismontane woodland. Elev. 1,310-4,265 ft.	**Not anticipated to occur**. The site does not support clay or gabbroic soils within chaparral and cismontane woodland habitats.
San Diego ambrosia (Ambrosia pumila)	FE, CRPR 1B.1	Perennial rhizomatous herb. Blooms April-October. Found in sandy loam or clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elev. 65- 1,360 ft.	**Low potential to occur.** The site does not support chaparral, but supports sandy loam soils and potential mesic habitats that have a minor potential to support the species. This species would have likely been observed if present.
San Diego barrel cactus (Ferocactus viridescens)	CRPR 2B.1	Perennial stem succulent. Blooms May-June. Found on chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elev. 5- 1,475 ft.	**Low potential to occur.** While the project site and survey buffer are within the elevational range and contains Diegan coastal sage scrub habitat, the species is not known from the vicinity. Would have likely been observed if present.
San Diego button- celery (Eryngium aristulatum var. parishii)	FE, SE, CRPR 1B.1	Annual/perennial herb. Blooms April-June. Mesic habitats in coastal scrub, valley and foothill grassland, and vernal pools. Elev. 65- 2,035 ft.	**Low potential to occur.** The site supports mesic habitats that have a minor potential to support the species; however, this species would have likely been observed if present.
San Diego goldenstar (Bloomeria clevelandii)	CRPR 1B.1	Perennial bulbiferous herb. Blooms April-May. Occurs on clay soils in chaparral, coastal scrub, valley and foothill	**Low potential to occur.** Site does not have suitable clay soils to support this species. Would have likely been observed if present.

Species	Status	Habitat	Potential to Occur*
		grassland, and vernal pools. Elev. 164-1,525 ft.	
San Diego marsh- elder (Iva hayesiana)	CRPR 2B.2	Perennial herb. Blooms April- October. Occurs in marshes, swamps and playas. Elev. 32-1,640 ft.	**Not anticipated to occur.** Site does not support marshes, swamps or playas.
San Diego mesa mint (Pogogyne abramsii)	FE, SE, CRPR 1B.1	Annual herb. Blooms March- July. Vernal pools. Elev. 295- 655 ft.	**Low potential to occur.** The site supports potential mesic habitats that have a minor potential to support the species; however, would have likely been observed if present.
San Diego thorn-mint (Acanthomintha ilicifolia)	FT, SE, CRPR 1B.1	Annual herb. Blooms April-June. Clay, openings within chaparral, coastal scrub, valley and foothill grassland, vernal pools. Elev. 30-3,150 ft.	**Low potential to occur.** Site does not have suitable clay soils to support this species and species was not observed during focused surveys.
Smooth tarplant (Centromadia pungens ssp. laevis)	CRPR 1B.1	Annual herb. Blooms April-September. Chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland. Elev. 0-2,100 ft.	**Low potential to occur.** The site does not support chenopod scrub, meadows and seeps, playas, or riparian woodland, but supports grassland habitat that has minor potential to support the species; however, would have likely been observed if present.
Southern tarplant (Centromadia parryi ssp. australis)	CRPR 1B.1	Annual herb. Blooms May-November. Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools. Elev. 0- 1,575 ft.	**Low potential to occur.** The site supports grassland habitat and potential mesic habitat that has a minor potential to support the species; however, would have likely been observed if present.
Spreading navarretia (Navarretia fossalis)	FT, CRPR 1B.1	Annual herb. Blooms April-June. Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools. Elev. 95-2,150 ft.	**Low potential to occur.** The site supports grassland habitat and potential mesic habitat that has a minor potential to support the species; however, would have likely been observed if present.
Sticky dudleya (Dudleya viscida)	CRPR 1B.2	Perennial herb. Blooms May- June. Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub. Elev. 30-1,805 ft.	**Low potential to occur.** The project site and survey buffer are within the elevational range and supports Diegan coastal sage scrub. However, this species would have likely been observed if present.

Species	Status	Habitat	Potential to Occur*
Summer holly (Comarostaphylis diversifolia ssp. diversifolia)	CRPR 1B.2	Perennial evergreen shrub. Blooms April-June. Chaparral, cismontane woodland. Elev. 98-2,592 ft.	**Not anticipated to occur.** Site does not support chaparral or cismontane woodland.
Thread-leaved brodiaea (Brodiaea filifolia)	FT, SE, CRPR 1B.1	Perennial bulbiferous herb. Blooms March-June. Found in often clay soils in chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Elev. 80-3,675 ft.	**Low potential to occur.** While the site supports Diegan coastal sage scrub habitat and the species is known from the nearby vicinity, appropriate clay soils do not occur on site. Species was not observed during focused surveys.
Variegated dudleya (Dudleya variegata)	CRPR 1B.2	Perennial herb. Blooms April-June. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. Elev. 5-1,905 ft.	**Low potential to occur**. The site supports grassland habitat and potential mesic habitat that has a minor potential to support the species; however, species would have likely been observed if present.
Wart-stemmed ceanothus (Ceanothus verrucosus)	CRPR 2B.2	Perennial evergreen shrub. Blooms December-May. Chaparral. Elev. 3-1,247 ft.	**Not anticipated to occur.** Site does not support suitable chaparral habitat.

Source: RBC 2020a

*: Sensitive plants were not observed during 2020 Focused Rare Plant Surveys
California Rare Plant Rank (CRPR)
1A: presumed extirpated in California and rare or extinct elsewhere 1B: rare, threatened, or endangered in California and elsewhere 2A: presumed extirpated in California but more common elsewhere
2B: rare, threatened, or endangered in California but more common elsewhere 3: plants for which more information needed
4: plants of limited distribution
CRPR Threat Ranks
0.1: Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) 0.2: Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) 0.3: Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
FE: Endangered Species Act (ESA) Federally Endangered Species FT: Endangered Species Act (ESA) Federally Threatened Species
SE: California Endangered Species Act (CESA) State Endangered Species
ST: California Endangered Species Act (CESA) State Threatened Species SR: California Endangered Species Act (CESA) State Rare Species

Potential Federal and State Jurisdictional Aquatic Resources

RBC documented curly dock (*Rumex crispus*), a wetland indicator species with a facultative (FAC) rating within a low-lying area in the center of the site during the general biological survey conducted

on March 11, 2020 (RBC 2020a). In addition, RBC documented two plant species commonly associated with depressional areas confined by clay soils, coastal plantain (*Plantago elongata*; FACW) and slender woolly marbles (*Psilocarphus tenellus*; OBL), within another low-lying area in the southern portion of the site (RBC 2020a). No defined bed or bank or other regular flow indicators were observed during the initial aquatic resources assessment; thus, no potential non-wetland waters of the U.S./State or CDFW streambed were observed on site.

These two areas were further investigated by Helix on April 24, 2020 to determine their anticipated jurisdictional status per United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or CDFW regulations and protocols. Helix staff took four wetland delineation sampling points within and near the two areas noted during RBC's initial aquatic resources assessment. None of the four sampling points met the required federal- or state-jurisdictional wetland parameters per Helix's findings. As such, HELIX concluded that the on-site low-lying areas are not expected to be jurisdictional under the USACE, RWQCB, or CDFW (Helix 2020).

Wildlife Corridors and Habitat Linkages

A wildlife corridor can be defined as a physical feature that links wildlife habitat, often consisting of native vegetation that joins two or more larger areas of similar wildlife habitat. Corridors enable migration, colonization, and genetic diversity through interbreeding and are therefore critical for the movement of animals and the continuation of viable populations. Corridors can consist of large, linear stretches of connected habitat (such as riparian vegetation) or as a sequence of steppingstones across the landscape (discontinuous areas of habitat such as wetlands and ornamental vegetation), or corridors can be larger habitat areas with known or likely importance to local fauna.

Regional corridors are defined as those linking two or more large patches of habitat, and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable wildlife migration corridor consists of more than an unobstructed path between habitat areas. Appropriate vegetation communities must be present to provide food and cover for both transient species and resident populations of less mobile animals. There must also be a sufficient lack of stressors and threats within and adjacent to the corridor for species to use it successfully. According to Figure 4-2 of the City's General Plan, the project area does not occur within a local movement corridor (City of San Marcos 2012).

3.3.2 Regulatory Setting

Federal

United States Army Corps of Engineers – Clean Water Act

Recognizing the potential for continued or accelerated degradation of the Nation's waters, the U.S. Congress enacted the Clean Water Act (CWA), formerly known as the Federal Water Pollution Control Act (33 U.S.C. 1344). The objective of the CWA is to maintain and restore the chemical, physical, and biological integrity of the waters of the United States. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into the waters of the United States, including wetlands.

United States Fish and Wildlife Service – Endangered Species Act

The USFWS is responsible for enforcing the federal Endangered Species Act (ESA), Migratory Bird Treaty Act, and Wildlife Coordination Act, and reviews and comments on applications for Section 404 CWA permits submitted to the USACE. If the proposed project is determined to have an adverse effect on a species that is federally listed as threatened or endangered, consultation with the USFWS would be required. If the proposed project may result in "take" of a federally listed species, an incidental take permit would be required. "Take" is defined in the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The project site does not contain any areas mapped as "critical habitat," as mapped by USFWS.

United States Fish and Wildlife Service – Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed in 50 CFR 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

State

California Department of Fish and Wildlife

The CDFW has the authority to reach an agreement with an agency or private party proposing to affect intermittent or permanent wetlands habitat, pursuant to Sections 1601-1616 of the State Fish and Game Code. Section 1602 of the State Fish and Game Code requires notification to CDFW prior to diversion of, obstruction of, use of material from, or deposition of materials in any river, stream, or lake. In accordance with its policy of *"no net loss of wetland habitats,"* the Department requires mitigation for all impacts to any wetlands, regardless of acreage.

California Endangered Species Act

The California ESA (California Fish and Game Code §2050, et seq.) generally parallels the main provisions of the Federal ESA and is administered by the CDFW. Its intent is to prohibit "take" and protect state listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, the California ESA also applies the take prohibitions to species petitioned for listing (state candidates).

Natural Community Conservation Planning

CDFW's NCCP program is an effort by the State of California, and numerous private and public partners, that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. An NCCP identifies and provides for the regional or areawide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Multiple Habitat Conservation Program (MHCP) - The MHCP is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in Northwestern San Diego

County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46 percent) are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species.

The City of San Marcos began preparing a draft of the City Subarea Plan of the MHCP in December 1999 and although the City's Draft Subarea Plan has not yet been approved by the USFWS and CDFW, the plan is a component of the adopted MHCP, and is currently being used as a guide for open space design and preservation within the City. The intent of the City's Draft Subarea Plan is to identify a citywide preserve system that meets local and regional biological goals while minimizing fiscal and economic impacts to the City and adverse impacts on private property owners. To help achieve this goal, certain areas, known as focused planning areas (FPAs), have been designated with parcel-level preserve goals which would contribute to achieving local and regional conservation goals while minimizing adverse effects on property rights and property values.

The project site is located within the MHCP. However, the project site is not located within a FPA as defined in the MHCP and the City's Draft Subarea Plan.

Local

San Marcos General Plan

The Conservation and Open Space Element of the City's General Plan contains several policies pertaining to the protection of biological resources. The following goals and policies apply to the project:

- Goal COS-1: Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.
    - Policy COS-1.1: Support the protection of biological resources through the establishment, restoration, and conservation of high quality habitat areas.
    - Policy COS-1.2: Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats.
- Goal COS-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.
    - Policy COS-2.1: Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.
    - Policy COS-2.2: Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.
    - Policy COS-2.6: Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As shown in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies.

3.3.3 Thresholds of Significance

CEQA Guidelines define "significant effect on the environment" as a "substantial or potentially substantial adverse change in the environment." CEQA Guidelines further indicate that there may be a significant effect on biological resources if the project would:

- **Threshold #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 Wildlife or U.S. Fish and Wildlife Service.
- **Threshold #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 Wildlife or the U.S. Fish and Wildlife Service.
- **Threshold #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, hydrologic interruption, or other means.
- **Threshold #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 site.
- **Threshold #5:** Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.
- **Threshold #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.

3.3.4 Project Impact Analysis

Impacts resulting from implementation of the proposed project could include both direct and indirect biological resource impacts. Direct impacts refer to any alteration, disturbance, or destruction of biological resources caused by and occurring at the same time and place as the project. Examples include direct losses to native habitats, potential jurisdictional waters, wetlands, and special-status species; the crushing of adult plants, bulbs, or seeds; the diversion of natural surface water flows; injury, death, and/or harassment of listed and/or special-status species; and the destruction of habitats necessary for species breeding, feeding, or sheltering.

Indirect impacts may occur later in time or at a place that is farther removed in distance from the project than direct impacts, but indirect impacts are still reasonably foreseeable and attributable to project-related activities. Examples include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants. Indirect impacts may be both short-term and long-term in their duration.

A 150-foot fire fuel modification buffer is included in the southern end of the project. This area will be subject to ongoing vegetation management to reduced fire fuels. For the purposes of biological resource impacts, any areas subject to ongoing vegetation management are considered to be impacted.

Threshold #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 Wildlife or U.S. Fish and Wildlife Service.

Direct and Indirect Impacts – Special - Status Plants Species

No special-status plant species were documented during general biological surveys or during focused rare plant surveys, and none have a moderate or high potential to occur on the project site. As such, no direct or indirect impacts on special-status plant species would occur with project implementation.

Direct and Indirect Impacts - Special - Status Wildlife Species

No special-status wildlife species were documented during project biological surveys or during focused coastal California gnatcatcher surveys. Two special status species, Coastal California Gnatcatcher and Cooper's Hawk are discussed below. No additional federally- listed, state- listed, or CDFW Watch List species are anticipated to have a moderate or high potential to occur on the project site.

Coastal California Gnatcatcher

This species has been reported within one mile of the project site, with one report occurring approximately 0.15 mile west of the project site (RBC 2020a). This historical sighting is from 1997 and the area where the sighting occurred has been developed into a residential development, likely fragmenting gnatcatcher populations. Suitable gnatcatcher Diegan coastal sage scrub habitat occurs along the southern project boundary. However, this habitat is surrounded by residential developments and lacks connectivity to larger expanses of habitat.

Protocol 2020 breeding season coastal California gnatcatcher surveys for the project were negative (RBC 2020b). As such, the project site is not considered to be occupied and impacts on coastal California gnatcatcher are not anticipated with implementation of the project. A **less than significant impact** is identified.

Cooper's Hawk

Cooper's hawk is a CDFW Watch List species when nesting. This species is found across a variety of habitats, including coastal sage scrub, riparian woodlands, and urban areas. Cooper's hawk feed on small bird species and require large trees to nest. This species often nests in riparian woodlands and will occasionally nest in large ornamental trees.

Cooper's hawk was observed flying over the project site during the 2020 general biological survey (RBC 2020a). Although Cooper's hawk may use the project site as a hunting territory, suitable nesting habitat containing large trees is not present. As such, Cooper's hawk is not anticipated to nest within the project site. Also, the project would be constructed in conformance with nesting bird regulations (see below, Direct and Indirect Impacts – Nesting Birds) which would further ensure direct impacts on Cooper's hawk are avoided. A **less than significant impact** is identified.

Direct and Indirect Impacts - Nesting Birds

The project site has the potential to impact active bird nests if vegetation is removed or ground disturbing activities occur during the nesting season (February 1 to August 31). Impacts on nesting birds are prohibited by the MBTA and CFGC. Clearing, grubbing and construction activities, if conducted during the breeding season, could directly or indirectly impact species protected under the MBTA. This represents a **significant impact** (**Impact BIO-1**) and mitigation is required.

- **Impact BIO-1:** Potential to impact avian species protected under the Migratory Bird Treaty Act if tree removal, vegetation removal, or other construction activities occur during the nesting season.

Threshold #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 Wildlife or the U.S. Fish and Wildlife Service.

Direct Impacts – Sensitive Habitats

The project will impact seven habitats or land uses. **Table 3.3-4** summarizes the impacts by vegetation community/land use and Figure 3.3-2 presents the impacts. The project will result in direct and permanent impacts to three sensitive vegetation communities including 0.61 acre of Diegan coastal sage scrub, 0.03 acre of coastal sage scrub-*Baccharis* dominated and 9.50 acres of non-native grassland. This represents a **significant impact** (**Impact BIO-2**) and mitigation is required.

- **Impact BIO-2:** The project will directly impact 0.61 acres of Diegan coastal sage scrub, 0.03 acres of Diegan coastal sage scrub – *Baccharis* dominated, and 9.50 acres of non-native grassland.

Table 3.3-4. Project Vegetation Community/Land Use Impacts

Vegetation Community/Land Use (Map Code)	Project Site Impacts (Acres)(1)	Grading Off Site (Acres)(1)	150-foot Brush Management Zone for Fire Fuel Modification (Acres)(1)	Total Project Impacts
Developed	0.06	<0.01		0.06
Diegan Coastal Sage Scrub	0.01		0.59	0.61
Diegan Coastal Sage Scrub - *Baccharis* Dominated	0.03			0.03
Disturbed	0.17			0.17
Non-Native Grassland	9.07		0.44	9.50
Ornamental	0.22	0.04		0.26

Ruderal	<0.01			<0.01
TOTAL	9.56	0.05	1.03	10.63

Source: RBC 2020a

Note: (1) Acreages rounded to the hundredths based on raw numbers provided during GIS analysis of the project, which are available upon request.

Indirect Impacts – Sensitive Habitats

The site occurs within a relatively developed area, with residential development to the east and west of the site. The northern project boundary borders E. Barham Drive, and the southern project boundary borders undeveloped lands that support Diegan coastal sage scrub and chaparral habitat. Construction activities would occur adjacent to sensitive coastal sage scrub and other sensitive habitats. Construction activities could result in potentially significant indirect impacts to these habitats through erosion, and intrusion of workers and/or equipment. This represents a **significant impact** (**Impact BIO-3**) and mitigation is required.

- **Impact BIO-3:** Potential for indirect impacts to sensitive habitats during project construction.

The introduction of future residents to the project site also increases the potential for inadvertent access to sensitive habitats, however the project is adjacent to already developed or disturbed areas. Landscaping associated with the development could also introduce non-native invasive species to sensitive habitat areas. This represents a **significant impact** (**Impact BIO-4**) and mitigation is required.

- **Impact BIO-4:** Potential for indirect impacts to sensitive habitats during project operation.

Threshold #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, hydrologic interruption, or other means.

Direct Impacts – Jurisdictional Wetlands and Waters

No vernal pools were documented on the project site. RBC documented curly dock (*Rumex crispus*), a wetland indicator species with a facultative (FAC) rating within a low-lying area in the center of the site during the general biological survey conducted on March 11, 2020 (RBC 2020a). In addition, RBC documented two plant species commonly associated with depressional areas confined by clay soils, coastal plantain (*Plantago elongata*; FACW) and slender woolly marbles (*Psilocarphus tenellus*; OBL), within another low-lying area in the southern portion of the site (RBC 2020a). No defined bed or bank or other regular flow indicators were observed during the initial aquatic resources assessment; thus, no potential non-wetland waters of the U.S./State or CDFW streambed were observed on site.

These two areas were further investigated by Helix on April 24, 2020 to determine their anticipated jurisdictional status per Corps, RWQCB, or CDFW regulations and protocols. Helix staff took four wetland delineation sampling points within and near the two areas noted during RBC's initial aquatic resources assessment. None of the four sampling points met the required federal- or state-jurisdictional wetland parameters per Helix's findings. As such, HELIX concluded that the on-site low-lying areas are not expected to be jurisdictional under the Corps, RWQCB, or CDFW, as they did not meet the required hydrophytic vegetation, hydric soils, and wetland hydrology parameters (Helix 2020). As such, impacts on potentially jurisdictional aquatic features would be **less than significant.**

Indirect Impacts – Jurisdictional Wetlands and Waters

Water quality in jurisdictional areas can be adversely affected by surface water runoff and sedimentation during construction. The use of petroleum products (e.g., fuels, oils, and lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Water quality in aquatic systems and terrestrial species that depend on these resources may be adversely affected. The project is adjacent to already developed or disturbed areas and will comply with stormwater regulations, including implementation of a stormwater pollution and prevention plan (SWPPP) during construction. During project operation, no impact is anticipated due to a comprehensive water quality management approach and implementation of site design, source control, low impact development (LID), and treatment control BMPs further described in Section 3.8, Hydrology/Water Quality. Indirect impacts to jurisdictional wetlands and waters would be **less than significant.**

Threshold #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 site.

Direct and Indirect Impacts – Wildlife Movement Corridors and Habitat Linkages

As discussed above in Section 3.3.1, a wildlife corridor can be defined as a physical feature that links wildlife habitat, often consisting of native vegetation that joins two or more larger areas of similar wildlife habitat. Regional corridors are defined as those linking two or more large patches of habitat, and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable wildlife migration corridor consists of more than an unobstructed path between habitat areas. Appropriate vegetation communities must be present to provide food and cover for both transient species and resident populations of less mobile animals. There must also be a sufficient lack of stressors and threats within and adjacent to the corridor for species to use it successfully.

The project area does not occur within a local movement corridor identified in Figure 4-2 the City's General Plan (San Marcos 2012). As such, impacts on wildlife movement and corridors would be **less than significant** and no mitigation is required.

Threshold #5: Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.

One coast live oak tree was documented on the site survey area but would not be impacted by the proposed development. The project would be consistent with the applicable City of San Marcos Conservation and Open Space Element goals and policies, as detailed in Section 3.10, Land Use and Planning. Therefore, a **less than significant impact** is identified and no mitigation is required.

Threshold #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.

The project site is located within the MHCP. However, the project site is not located within FPA as defined in City's Draft Subarea Plan. Additionally, the project would comply with habitat mitigation requirements outlined in the City's Draft Subarea Plan. As such, no project conflicts with adopted NCCP or HCP plans would occur with project implementation. Therefore, a **less than significant impact** is identified and no mitigation is required.

3.3.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future projects producing related impacts; or (2) a summary of projects contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to biological resources the cumulative analysis is based upon a list approach. All of the cumulative projects within the City identified in Table 2-3 are considered in this cumulative analysis.

The biological cumulative impact analysis focuses on those projects that would have a similar type of biological resource impact as the proposed project. Sensitive habitat impacts associated with the project include direct and indirect impacts to non-native grassland, Diegan coastal sage scrub and Diegan coastal sage scrub – *Baccharis dominated* lands. Additionally, the project has the potential to impact species protected under the MBTA.

The project will add to cumulative loss of sensitive habitats in the region, including non-native grassland (9.50 acre), Diegan coastal sage scrub (0.61 acre), and Diegan coastal sage scrub – Baccharis dominated (0.03 acre). These impacts would be significant prior to mitigation. Implementation of mitigation measures MM-BIO-2 will require the preservation, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof of consistent with the mitigation ratios of the MHCP and City's Draft Subarea Plan. This includes 1:1 ratio for the upland habitat and 0.5:1 for the non-native grassland. Additionally, implementation of mitigation measures MM-BIO-3 and MM-BIO-4 will reduce indirect impacts to sensitive lands through construction monitoring and review and approval of landscape plans to ensure the exclusion of non-native, invasive plant materials.

Of the cumulative projects identified in Table 2-3 in Chapter 2.0, Project Description, several of the identified projects were identified as having impacts to coastal sage scrub: San Marcos Highlands (77.36 acres), Murai (32.11 acres), Valiano (1.8 acres), Harmony Grove Village South (10.4 acres), and Sunrise (4.59 acres). These projects have mitigated or are required to mitigate their individual impacts to coastal sage scrub to below a level of significance through either onsite preservation/restoration or offsite habitat acquisition, either at a 1:1 or 2:1 ratio, depending on whether they are within an FPA or not.

The cumulative projects which remove trees or vegetation during the nesting season could also have the potential for impacts to species protected under the MBTA. These impacts are avoided through restrictions on construction timing, or the performance of pre-construction surveys to ensure that nesting birds would not be impacted. This is similar to the mitigation identified for the proposed project and would ensure that cumulative impacts are less than significant.

It is presumed that all reasonably foreseeable cumulative projects, including those described in Table 2-3, and discussed above, would be required to conform to existing regulations with respect to avoidance, minimization, and mitigation of impacts to sensitive habitat, achieving no-net-loss of wetlands and like/kind replacement for impacts to sensitive habitat that cannot be avoided. Therefore, it is assumed that impacts on a regional basis would be assessed and mitigated pursuant to CEQA, and those projects within the City's jurisdiction would be reviewed by the City during the project review

and approval process. Thus, project impacts to biological resources would not be cumulatively considerable.

3.3.6 Mitigation Measures

Implementation of the following mitigation measures would be required as a condition of project approval:

Nesting Birds (Impact BIO-1)

MM-BIO-1 To avoid direct impacts on raptors and/or native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, a qualified biologist shall conduct a preconstruction survey to determine the presence or absence of nesting birds in the proposed area of disturbance. The pre-construction (precon) survey shall be conducted within ten (10) calendar days prior to the start of construction activities (including removal of vegetation). If nesting birds are observed, a letter report or mitigation plan in conformance with applicable State and Federal Law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the CDFW and/or USFWS as applicable for review and approval and implemented to the satisfaction of those agencies. The project biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. If nesting birds are not detected during the preconstruction survey, no further mitigation is required.

Direct Impact to Sensitive Habitats (Impact BIO-2)

MM-BIO-2 Direct impact to 0.61 acre of Diegan coastal sage scrub and 0.03 acre of Diegan coastal sage scrub – *Baccharis* dominated shall mitigated at a 1:1 ratio for a total of 0.64 acre. Direct Impact to 9.50 acres of non-native grassland shall be mitigated at a 0.5:1 ratio for a total of 4.75 acres. These mitigation ratios are consistent with Tables 4-6 and 4-7 of the MHCP (SANDAG 2003) and Table 4 in Section 5.2.1 of the City's Draft Subarea Plan (City of San Marcos 2001).

This mitigation shall be accomplished by the project applicant through on-site preservation, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager. Proof of onsite preservation, off-site acquisition, payment of in lieu fees, purchase of credits from an approved mitigation bank or a combination thereof shall be provided to the Planning Manager prior to issuance of a grading permit.

Indirect Impact to Sensitive Habitats During Project Construction (Impact BIO-3)

MM-BIO-3 A biologist shall be contracted to perform regular random checks (at minimum once a month) to ensure implementation of the following monitoring requirements and BMPs. Monitoring reports and a post-construction monitoring report will be

prepared to document compliance with these requirements and shall be submitted to the Planning Manager.

- To prevent inadvertent disturbance to areas outside the limits of work, the construction limits shall be clearly demarcated (e.g., installation of flagging or temporary visibility construction fence) prior to ground disturbance activities and all construction activities, including equipment staging and maintenance shall be conducted within the marked disturbance limits. The work limit delineation will be maintained throughout project construction.

- Spoils, trash, and any excavation-generated debris will be removed to an approved offsite disposal facility. Trash and food items will be contained in closed containers and removed daily to reduce the attraction of opportunistic predators to the site, such as common ravens, coyotes, and feral cats and dogs that may prey on listed species.

- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, will be prevented from contaminating the soil.

- Construction activities will be limited to daylight hours to the extent feasible. If nighttime work is necessary, lighting will be shielded away from surrounding natural areas. Fixtures will be shielded to downcast below the horizontal plane of the fixture height and mounted as low as possible.

Indirect Impact to Sensitive Habitats During Project Operation (Impact BIO-4)

MM-BIO-4 To avoid indirect impacts on adjacent sensitive habitats, final landscape plans will be reviewed and approved by a qualified biologist to ensure that no invasive plant materials are included in planting plans.

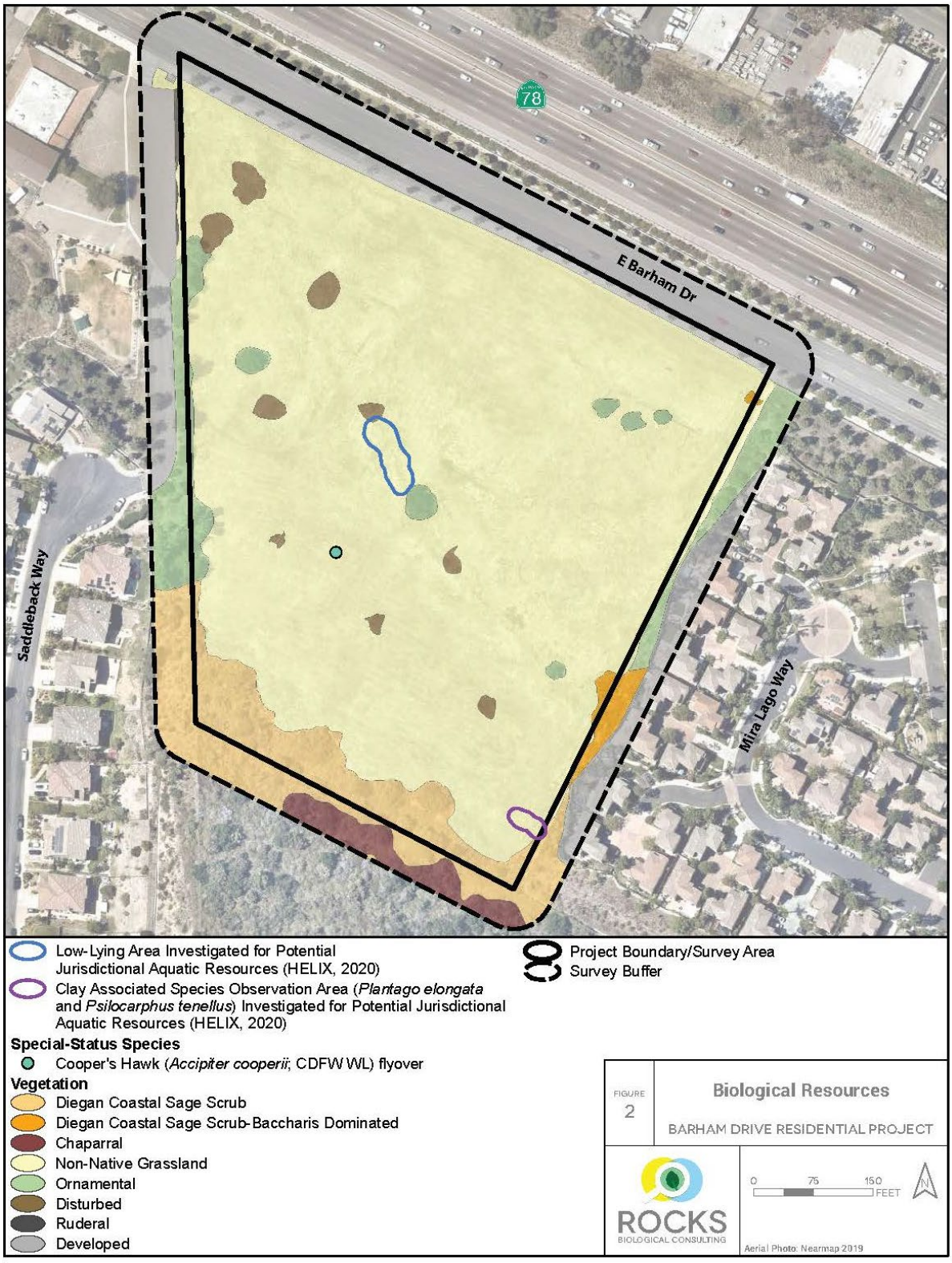
3.3.7 Conclusion

Based on the presence of suitable avian nesting habitat, pre-construction clearance survey for nesting birds would be conducted to ensure that no impacts on nesting birds that are afforded protection under the MBTA occur (see MM-BIO-1). Mitigation measure MM-BIO-1 requires a preconstruction survey if construction is proposed during the nesting season. If nesting birds are found, avoidance measures would be implemented to minimize impacts. With the implementation of MM-BIO-1, direct impacts on nesting birds would be less than significant.

The project would result in a direct impact to sensitive habitats, including Diegan coastal sage scrub, Diegan coastal sage scrub – Baccharis dominated and non-native grassland. This impact would be mitigated to below a level of significance through on-site preservation, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager at a 1:1 ratio for the Diegan coastal sage scrub and Diegan coastal sage scrub – Baccharis dominated habitats and at a 0.5:1 ratio for non-native grassland. Proof of onsite preservation, off-site acquisition, payment of in lieu fees, purchase of credits from an approved mitigation bank or a combination thereof shall be provided to the Planning Manager prior to issuance of a grading permit.

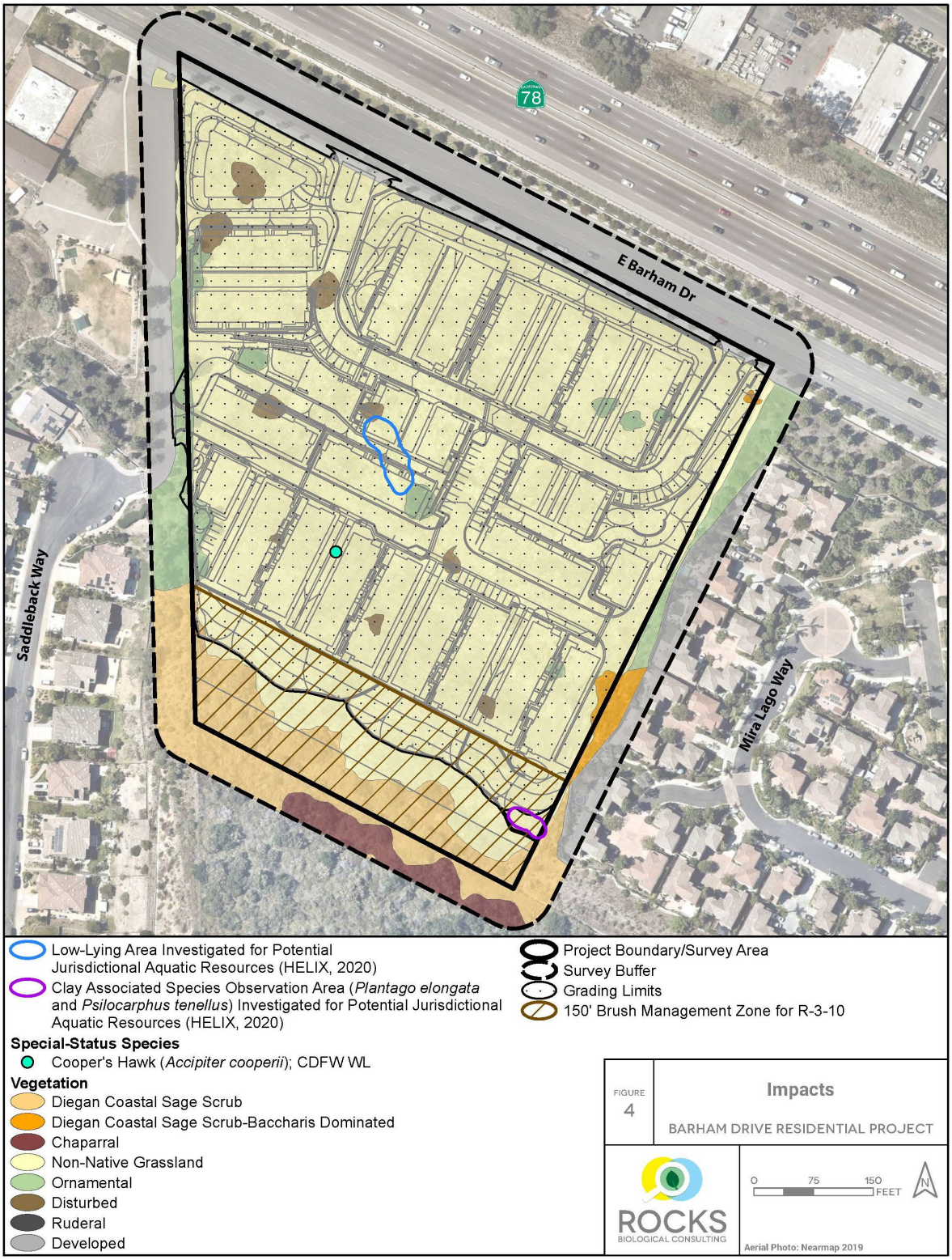
The project could indirectly impact sensitive species during project construction and could introduce non-native invasive species through landscape plans. Implementation of mitigation measures MM-BIO-3 and BIO-4 would ensure impacts on adjacent habitats are avoided through construction monitoring and review and approval of landscape plans to ensure the exclusion of non-native, invasive plant materials.

Figure 3.3-1. Existing Biological Resources



Source: RBC 2020a

Figure 3.3-2. Impacts to Biological Resources



Source: RBC 2020a

3.4 Cultural Resources

Introduction

This section identifies the cultural resources on the project site and analyzes the potential impacts of the proposed project on cultural resources. Cultural resources considered in this analysis include archaeological (prehistoric) resources and historical resources. Tribal Cultural Resources are analyzed in Section 3.16 of the Environmental Impact Report (EIR) [4].

The analysis in this section is based upon the following reports prepared by ASM Affiliates (ASM):

- Cultural Resources Inventory for the Barham Residential Project, San Marcos, California, November 3, 2020 (ASM 2020)
- Archaeological Significance Evaluation for the Barham Residential Project, San Marcos, San Diego County, California, April 2021 (ASM 2021).

The cultural resources report included a record search, literature review, correspondence with Native American contacts, and field survey. The archaeological significance evaluation analyzed the potential significance of a historic site discovered during the cultural resources study. The analysis also considers the California Environmental Quality Act (CEQA) Guidelines Appendix G and applicable State and Local regulations, including the City of San Marcos General Plan. The cultural resources study and significance evaluation are included as **Appendix F.1 and F.2** of the EIR and the General Plan is available on the City's web site.[5]

Table 3.4-1 summarizes the project- and cumulative-level cultural resources impacts, by threshold.

Table 3.4-1. Cultural Resources Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#1 – Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Potentially Significant	Less than Significant	Mitigated to Less Than Significant
#2 – Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Potentially Significant	Less than Significant	Mitigated to Less Than Significant
#3 – Disturb any human remains, including those interred outside of dedicated cemeteries.	Potentially Significant	Less than Significant	Mitigated to Less Than Significant

4 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.
5 http://www.san-marcos.net/work/economic-development/general-plan

3.4.1 Existing Conditions

This section provides information on the archeological and historical context of the project site. It also provides information on the outreach and consultation efforts with local Tribes, as required by existing regulations.

Historical Context

The Archaeological Evaluation Report (Appendix F.2) provides a detailed summary of the cultural history including prehistoric archaeology, ethnohistory and history of San Marcos and specifically occupation of the project site. A brief summary is provided below.

Prehistoric Archaeology. Archaeological investigations in coastal southern California have documented a diverse range of human adaptations extending from the late Pleistocene up to the time of European contact. The prehistory of San Diego County is most frequently divided chronologically into three or four major periods. An Early Man stage, perhaps dating back tens of thousands of years, has been proposed. More generally accepted divisions include a Terminal Pleistocene/Early Holocene period (ca. 12,000-6000 B.C.) (Paleo-Indian stage; Clovis and San Dieguito patterns), a Middle/Late Holocene period (ca. 6000 B.C.-A.D. 800) (Archaic stage; La Jolla, Millingstone, or Encinitas pattern), and a Late Prehistoric period (ca. A.D. 800-1769) (Archaic stage; San Luis Rey pattern, Palomar tradition).

Ethnohistory. Native Americans have occupied San Diego County for the past 10,000 years. The Archaic Period extends back at least 7,200 years, possibly to as early as 9,000 years ago. Early Archaic occupations in San Diego County are most apparent along the coast and major drainage systems extending inland from the coastal plains. Coastal Archaic sites are generally characterized by cobble tools, basin metates, manos, discoidals, dart points, and flexed burials. Together, these elements typify the La Jolla complex, which appears as the early coastal manifestation of a more diversified way of life.

Around 2,000 years ago, people from the Colorado River region began migrating into southern California in what is known as the Late Prehistoric period. Late Prehistoric sites are generally characterized by small, pressure-flaked projectile points, ceramics, an emphasis on collecting, processing, and storing plant food, and cremations. Villages became increasingly permanent, providing opportunity for the creation of stationary milling stations and the use of mortars for acorn processing.

In more recent times, two main cultural groups occupied San Diego County: the Luiseño in the north and the Kumeyaay (or Diegueño) in the south.

History. European exploration of the San Diego area began in 1542 with the arrival of a maritime expedition under Juan Rodriguez Cabrillo, followed by a similar reconnaissance in 1602 by Sebastián Vizcaíno. The historic period proper did not begin until 1769, when multiple seaborne and overland expeditions under the leadership of the soldier Gaspar de Portolá and the Franciscan missionary Junípero Serra reached the region from Baja California and passed northward along the coastal plain to seek Monterey. To the south, a royal presidio and a mission were established that year in San Diego. Additional missions were founded among the Luiseño/Juaneño at San Juan Capistrano in 1776 and San Luis Rey de Francia in 1798.

As Spanish attention was consumed by the Napoleonic wars in Europe, California and its government and missions were increasingly left to their own devices. In 1821, Mexico consummated its

independence from Spain, and the region became more open to outside visitors and influences. The missions were secularized by act of the Mexican Congress in 1833. Native Americans released from the missions at San Diego, San Luis Rey, and San Juan Capistrano returned to their native villages, moved east to areas lying beyond Mexican control, or sought work on ranchos or in the towns of San Diego and Los Angeles. Numerous large land grants were issued to private owners during the Mexican period, including Agua Hedionda, Los Vallecitos de San Marcos, Buena Vista, and Santa Margarita y Las Flores in northern coastal San Diego County.

The region experienced cycles of economic and demographic booms and busts, with notable periods of growth in the mid-1880s, during World Wars I and II, and on a more sustained basis throughout the postwar decades. Aspects of development included the creation of transportation networks based on port facilities, railroads, highways, and airports; more elaborate systems of water supply and flood control; grazing livestock and growing a changing array of crops; supporting military facilities, including the extensive Camp Pendleton facility established in 1942; limited amounts of manufacturing; and accommodating visitors and retirees. After some false starts, San Diego converted itself to a substantial city, and then into a metropolis. Other cities were incorporated in the north coastal region, including Oceanside (1888), Carlsbad (1952), San Marcos (1963), and Vista (1963).

Rancho Los Vallecitos de San Marcos. The project area is within the original boundaries of Rancho Los Vallecitos de San Marcos. Before secularization of the missions, this land was one of the cattle-grazing tracts claimed by Mission San Luis Rey.

City of San Marcos. San Marcos was typical of the small agricultural communities that grew up in the hinterland of San Diego, characterized generally by widely dispersed settlements that were united by a common school district, post office, church, and general store. San Marcos remained a quiet rural town through the first half of the twentieth century. While agriculture had dominated in the late 1800s and early 1900s, by the mid-1900s, dairies and poultry production became a big part of the business in the town. San Marcos was chosen as the site of the future Palomar College in 1946. Classes initially took place in Vista, but Quonset huts were moved onto the San Marcos site in 1950, and the first permanent buildings were constructed in 1956. Population growth in San Marcos had been constrained by the lack of water resources in the region. The arrival of Colorado River water at San Marcos in 1956, supplementing the existing local water supply, was a boon to the city. After the arrival of water, several small businesses started, and the population rapidly increased to 2,500. San Marcos, with a population of 3,200 residents, became incorporated on January 28, 1963. Through the 1960s, the city grew by a few thousand new residents, but in the 1970s, San Marcos was flourishing as the third fastest growing city in the state with a population of 17,479 by 1980. During the 1980s, San Marcos almost doubled its population to 33,800. Growth has continued to boom in San Marcos, and the 2019 population of the city is estimated at 96,664 (USCB 2019).

Occupational History of 943 Barham Drive. According to the chain of title, the original owner of the parcel at 943 Barham Drive was Thomas J. Biggs. Biggs was born in Illinois in 1826 and came to California in 1850. He was issued the land in 1889 under the Homestead Act of 1862. The land was later sold to Horace G. Parsons in 1896. The 1901 topographic map of the Barham property indicates a building near the location of the house that appears on the first available aerial photograph in 1928. After Horace died, his wife Hattie took over the property and made some improvements, including moving the house to face the street. The property was sold in 1910 to Emilia Lau and later to Nellie J. Whitehead in 1916. The Whiteheads were the owners of the property at the time of the earliest available aerial photo in 1928. There are multiple structures on the parcel, but the image is not clear enough to determine the exact number. Jim Ferrero and his wife Margarita purchased the ranch from the Whiteheads in 1932. The 1938 aerial photo shows several buildings and active fields with an

orchard at the front of the property. From 1946 to 1947 the home was owned by Walter Lesley Williford and his wife Lenore. The next owners, Donald and Lillian James, lived in the home for 30 years, from 1947 to 1977. The aerial photo from 1953 shows a drive leading west to the adjacent parcel which was being developed. The 1964 aerial photos, when the James were still the owners, illustrates that the drive to the west was gone and the adjacent parcel was used for farming. There was a larger road leading to the west of 943 Barham and more outbuildings had been added. By 2005 the house on the adjacent parcel had been demolished, and by 2009 a development was located on the adjacent site. The buildings at 943 Barham Drive were demolished sometime between 2005 and 2009 (ASM 2021).

Records Search

A records search was undertaken at the South Coastal Information Center (SCIC) of the California Historical Resources Information System (CHRIS) on September 16, 2020 by ASM. The records search encompassed a search radius of one mile around the project site. A total of 55 previous cultural resources reports have been conducted within a mile radius of the project area. Six of these reports address areas that intersect or overlap with the project area. CHRIS records indicate the presence of 24 previously recorded cultural resources within a one-mile radius of the project site. No cultural resources have been previously recorded within the project area.

In general, the sites that were previously recorded within a one-mile radius of the project site consist predominantly of prehistoric resources. Most of these prehistoric sites are lithic scatters and bedrock milling features. Two prehistoric sites were noted to contain habitation debris, and one site was noted to contain burials, indicating a more intensive use of those locations during the prehistoric period. Several remnants of historic period features associated with single family properties, including foundations, privies, trash scatters, walls, fences, and associated historic debris scatters, have been recorded within one mile of the project site. Many of these sites were previously disturbed or destroyed by modern construction and development activities and are now characterized by sparse surficial, as well as sparse or relatively shallow subsurface deposits.

Tribal Coordination

A Sacred Lands File (SLF) search at the Native American Heritage Commission (NAHC) by ASM on September 25, 2020. ASM received a response letter from the NAHC on October 5, 2020 stating that a search of the SLF was negative.

A consultation list of 31 Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project was also provided by the NAHC. A project notification letter was sent by ASM to each of the Native American contacts provided by the NAHC on October 7, 2020. Three responses were received, including from the Viejas Band of Kumeyaay Indians (Viejas Band) on October 9, 2020, the Rincon Band of Luiseño Indians (Rincon Band) on October 13, 2020, and the Jamul Indian Village of California on October 19, 2020.

The Viejas Band letter indicated that the site does have cultural significance or ties to the Kumeyaay Nation. They recommended contacting the San Pasqual Band of Mission Indians (San Pasqual Band) and also requested that the City follow all National Environmental Policy Act, CEQA, and Native American Grave Protection and Repatriation Act laws. They also requested that the City immediately contact San Pasqual of any changes or inadvertent discoveries. The San Pasqual Band was contacted as part of ASM's project notification letter process.

The Rincon Band letter indicated that they do not have knowledge of cultural resources within the proposed project area but that does not mean that none exist. They also requested that a cultural

resources report be prepared and a Sacred Lands File search be conducted. The cultural resources report prepared for the project (ASM 2020) included a Sacred Lands File search and the results of the search and report have been provided to the Rincon Band.

The Jamul Indian Village of California letter defers to the wishes of a closer tribe for the proposed project. They defer to the Iipay Nation of Santa Ysabel or the Mesa Grande Band of Mission Indians. The City has included the Iipay Nation of Santa Ysabel or the Mesa Grande Band of Mission Indians on its distribution list for all project notices.

The City sent out notices to Tribes consistent with the requirements of AB 52. The Rincon Band and the San Luis Rey band requested consultation.:

The City consulted with the Rincon Band and the Tribe requested the City's standard cultural resources mitigation measures be applied to the project. These measures are included for the project (MM-CR-1a through MM-CR-1c). On May 19, 2021 the Rincon Band submitted a letter saying they had no further comments and requested to conclude consultation.

The City provided the San Luis Rey Band the proposed mitigation measures for cultural resources. On June 8, 2021, the San Luis Rey Band submitted a letter to the City stating they had reviewed the measures and indicated that they adequately address the Tribe's concerns. The Tribe also requested to conclude consultation.

Archaeological (Prehistoric) Resources

The project site was surveyed by ASM Associate Archaeologist Holly Drake and Mario Herrera, a qualified Native American monitor from Saving Sacred Sites on October 6, 2020.

Soils on the project site are sandy silt and appear to have been previously disturbed. Small, angular gravels and concrete fragments are distributed throughout the project site. The presence of these materials and the disturbed nature of the ground surface suggest that the majority of the project site has been mechanically graded at some point in the past.

No prehistoric cultural material was identified on the ground surface of the project site. All rodent burrows and back dirt, and other portions of exposed ground were carefully examined but provided no evidence for the presence of prehistoric cultural resources in those areas. However, the majority of the project site is covered with vegetation, and the vegetation density effectively limited ground surface visibility in the majority of the project site during the pedestrian survey. Therefore, it is possible that prehistoric cultural materials are present on the ground surface within the project site that were not visible during the survey.

Historical Resources

Several historic features were identified on a slightly elevated knoll in the northeastern portion of the project site, including several concrete and rock foundation remains, concrete rubble, historic debris scatters, and metal t-post and wire fencing remnants. ASM Associate Archaeologist Holly Drake and Archaeological Technician Joakim Lamoy returned to the project site on October 13, 2020 to record and document these features as a historic site on the appropriate Department of Parks and Recreation (DPR) forms. A total of six historic features were identified at the site, including the remains of what appear to be a formed concrete retaining wall (Feature 1), a cinder block house foundation and associated septic tank and concrete stairs (Feature 2), a cinder block garage foundation (Feature 3),

a concrete and cinder block water storage cistern (Feature 4), a concrete shed foundation (Feature 5), and a small concrete pad (Feature 6).

One of the features (Feature 1) is comprised of formed concrete with a large amount of angular cobbles mixed in as aggregate. Two of the features, the house foundation and associated septic enclosure (Feature 2) and the garage foundation (Feature 3) are constructed of concrete mortared cinderblock and iron rebar. A four-step concrete staircase located directly adjacent to Feature 2 is also comprised of poured concrete mixed with angular cobble aggregate. Feature 4, the possible water storage or cistern remains is comprised of both poured concrete with angular cobble aggregate and concrete mortared cinder block. Fragmented concrete and historic debris comprised of potentially diagnostic glass and ceramic fragments is distributed on the ground surface between the site features. The remains of what appear to be chicken or rabbit cages were also identified. Two segments of steel T-post and wire fencing are located to the north and west of the site features and concrete debris scatters. A DPR Primary Record (DPR 523A) and Archaeological Site Record (DPR 523C) were prepared for the historic site and are included in Appendix D of the cultural resources report (Appendix F.1 of this EIR).

The cultural materials identified in association with the historic site appears to represent the remains of an early twentieth-century agricultural homestead. Although limited, the historic debris includes material that appears to be associated with domestic kitchen use, including fragments of plates, bottle fragments, and ceramic fragments. In addition to typical residential housing foundation remains, including what appears to be a septic system, the surrounding property appears to have been graded and tiered for the purposes of agricultural cultivation. The remains of what appear to be animal cages also suggest that animals were raised either for personal use or for sale during the time that the site was occupied. The intentional demolition and grading of the historic site location and surrounding area have severely damaged the features and redeposited much of the historic material, but additional historic cultural material may be present below the ground surface of the site.

A review of historic aerial photos indicates that the homestead and what appears to be an orchard surrounding it were in existence as early as 1947. Based on this information, the features comprising the historic site are well over 50 years old and are therefore potentially eligible for listing in the California Register of Historical Resources (CRHR). In accordance with CEQA and the cultural resource management requirements of the City of San Marcos, the historic site required evaluation for eligibility for listing in the CRHR prior to any further demolition that may be associated with the implementation project. This evaluation was conducted by ASM as described further below.

Archaeological Evaluation of Barham-2020-ASM-HD-01

ASM prepared an archaeological significance evaluation (ASM April 2021) for a historic site, Barham-2020-ASM-HD-01, discovered during the cultural resources inventory for the proposed project. This cultural resource consisted of a historic site with the ruins of a residential building, various foundations for outbuildings, and a scatter of historic artifacts. The testing program included excavation of ten shovel test pits, surface mapping, subsurface testing to determine the presence or absence, horizontal and vertical extent and structure of subsurface cultural deposits within Barham-2020-ASM-HD-01. Laboratory work included standard processing, cataloging of the materials recovered in the field, and analysis.

Excavations revealed that the subsurface component of the site was comprised of fragmented nondiagnostic artifacts in a highly disturbed context, likely as a result of demolition activities at the site and bioturbation. The testing program within Barham-2020-ASM-HD-01 resulted in the recovery

of 483g of historic artifacts/ecofacts. Artifacts included 47.3g of ceramic fragments, 202.1g of glass fragments, 163.8g of metal fragments, 2.5g of leather, 0.4g of rubber, and 7.6g of miscellaneous artifacts. Ecofacts recovered from the site include 0.8g of faunal bone and 0.2g of Oyster (*Ostrea sp.)* shell fragment. The recovered assemblage is dominated by metal and glass items that are intermixed with a small number of ceramic fragments and various other materials.

Historic artifacts were identified to their most-specific diagnostic level based on their morphological characteristics. Ceramic artifacts included building tile fragments and dishware including plate and mug fragments. Glass artifacts included window glass fragments, safety glass, and highly fragmented glass from bottles or other household items. Metal artifacts were comprised of nails of varying sizes, likely associated with construction at the site, mechanical-related artifacts such as bolts and washers, and agricultural-related artifacts such as barbed-wire fencing fragments. Miscellaneous artifacts included a small section of twine and a broken wooden stake.

Barham-2020-ASM-HD-01 was evaluated for eligibility for listing in the CRHR. ASM determined that the site is not eligible for listing on the CRHR under Criterion 1, 2, 3, or 4 (ASM 2021). More information is provided below in Section 3.4.4 under Threshold #2.

3.4.2 Regulatory Setting

The following section provides a general description of the applicable regulatory requirements pertaining to cultural resources, including federal, state and local guidelines.

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) established the National Register of Historic Places (NRHP) program under the Secretary of the Interior. The NHPA authorized funding for state programs with provision for pass-through funding and participation by local governments, created an Advisory Council on Historic Preservation, and established the Section 106 review process for protecting historic resources. The goal of the Section 106 review process is to offer protection to sites that are determined eligible for listing in the NRHP. The NHPA provides the legal framework for most state and local preservation laws.

Traditional Cultural Properties (Native American Heritage Values)

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project. Also, potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices.

State

California Points of Historic Interest

California Points of Historical Interest are buildings, structures, site or features of local (city and county) significance and have anthropological, cultural, military, political, architectural, economic, scientific/technical, religious, experimental, or other value. Points of Historical Interest designated after December 1997 are recommended by the State Historical Resources Commission are also listed in the California Register of Historical Resources. The criteria for designation of Points of Historical Interest are the same as those that govern the California Historic Landmarks program.

Health and Safety Code 7050.5

This code establishes that any person who knowingly mutilates, disinters, wantonly disturbs, or willfully removes any human remain in or from any location without authority of the law is guilty of a misdemeanor. It further defines procedures for the discovery and treatment of Native American remains.

Health and Safety Code 8010-8011

This code is intended to provide consistent state policy to ensure that all California Indian human remains and cultural material are treated with dignity and respect. The code extends policy coverage to non-federally recognized tribes and federally recognized groups.

Assembly Bill 2461

The section provides procedures for private land owners to follow upon discovering Native American human remains. Land owners are encouraged to consider culturally appropriate measures if they discover Native American human remains as set forth in California PRC 5097.98.

Senate Bill 18

SB 18, approved in 2004, amends the California Civil Code and the California Government Code, requiring cities and counties to contact and consult with California Native American tribes prior to adopting or amending any general plan or specific plan, or designating land as open space in order to preserve or mitigate impacts to specified Native American places, features and objects that are located within a city's or county's jurisdiction. SB 18 also requires cities and counties to hold in strict confidence any information about the specific identity, location, character or use of these resources. In 2005, OPR published Tribal Consultation Guidelines to guide cities and counties on the process of engaging in consultation in accordance with SB 18. The Native American Heritage Commission (NAHC) maintains a list of California Native American Tribes with whom cities and counties must consult pursuant to SB 18.

Assembly Bill 52

AB 52 was approved in 2014 and adds new requirements regarding consultation with California Native American Tribes and consideration of tribal cultural resources. The law went into effect on July 1, 2015, and after that date, if requested by a California Native American Tribe, lead agencies must consult prior to the release of a Negative Declaration, Mitigated Negative Declaration or Draft EIR. Tribal Cultural Resources are discussed in Section 3.16 of the EIR.

Local

San Marcos General Plan Conservation and Open Space Element

The Conservation and Open Space Element of the City's General Plan contains several policies pertaining to the protection of archaeological, and historic resources. The following goals and policies apply to the project:

- Policy COS-2.5: Continue to review future development proposals to ensure that cultural resources (including prehistoric, historic, paleontological, and SB 18 Tribal resources) are analyzed and conserved in compliance with CEQA requirements.
- Goal COS-11: Continue to identify and evaluate cultural, historic, archaeological, paleontological and architectural resources for protection from demolition and inappropriate actions.
    - Policy COS-11.1: Identify and protect historic and cultural resources including individual properties, districts and sites (e.g., archaeological sites) in compliance with CEQA.
    - Policy COS-11.2: Prohibit the demolition or removal of a historic structure without evaluation of the condition of the structure, the cost of rehabilitation, and the feasibility of alternatives to preservation in place including but not limited to relocation, or reconstruction offsite, and/or photo-preservation.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-1, the project is consistent with the applicable General Plan goals and policies pertaining to cultural resources.

3.4.3 Thresholds of Significance

The determination of significance for cultural resources is based on *CEQA Guidelines Appendix G*. Impacts to cultural resources would be significant if the proposed project would:

- **Threshold #1:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- **Threshold #2:** Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5,[6]
- **Threshold #3:** Disturb any human remains, including those interred outside of dedicated cemeteries.

6 Section 15064.5 of the CEQA Guidelines defines a historical resource as one that meets one or more of the following criteria: 1) Is listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; or 2) Is included in a local register of historical resources or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or 3) Is determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California.

3.4.4 Project Impact Analysis

The project site is vacant but covered in vegetation. Ground disturbing activities can result in impacts to archeological and historical resources if they are present on the project site. The following analysis discusses the potential for the project to have cultural resources.

Threshold #1: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

No cultural resources were observed during the archaeological survey of the project site. All rodent burrows and back dirt, and other portions of exposed ground were carefully examined but provided no evidence for the presence of prehistoric cultural resources in those areas. The majority of the project site is covered with vegetation, and the vegetation density effectively limited ground surface visibility in the majority of the project site during the pedestrian survey. Therefore, it is possible that prehistoric cultural materials are present on the ground surface within the project site that were not visible during the survey. Therefore, there is a potential for grading activities to impact unidentified archaeological resources. This represents a **potentially significant impact** (**Impact CR-1a**) and mitigation is required.

- **Impact CR-1a** Due to grading and ground disturbing activities, the project has the potential to impact unidentified archeological resources on the project site.

Threshold #2: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Based upon the cultural resources study prepared for the project (ASM 2020), several historic features were identified on a slightly elevated knoll in the northeastern portion of the project site, including several concrete and rock foundation remains, concrete rubble, historic debris scatters, and metal t-post and wire fencing remnants. ASM recorded and documented these features as a historic site on the appropriate DPR forms. A total of six historic features were identified at the site, including the remains of what appear to be a formed concrete retaining wall (Feature 1), a cinder block house foundation and associated septic tank and concrete stairs (Feature 2), a cinder block garage foundation (Feature 3), a concrete and cinder block water storage cistern (Feature 4), a concrete shed foundation (Feature 5), and a small concrete pad (Feature 6). A DPR Primary Record (DPR 523A) and Archaeological Site Record (DPR 523C) were prepared for the historic site and are included in Appendix D of the cultural resources report (Appendix F.1 of this EIR).

The cultural materials identified in association with the historic site appears to represent the remains of an early twentieth-century agricultural homestead. Although limited, the historic debris includes material that appears to be associated with domestic kitchen use, including fragments of plates, bottle fragments, and ceramic fragments. In addition to typical residential housing foundation remains, including what appears to be a septic system, the surrounding property appears to have been graded and tiered for the purposes of agricultural cultivation. The remains of what appear to be animal cages also suggest that animals were raised either for personal use or for sale during the time that the site was occupied. The intentional demolition and grading of the historic site location and surrounding area have severely damaged the features and redeposited much of the historic material, but additional historic cultural material may be present below the ground surface of the site.

A review of historic aerial photos indicates that the homestead, and what appears to be an orchard surrounding it, were in existence as early as 1947. Based on this information, the features comprising the historic site are well over 50 years old, and are therefore potentially eligible for listing in the CRHR. ASM prepared an archaeological significance evaluation (ASM 2021) for a historic site, Barham-2020-

ASM-HD-01. Excavations revealed that the subsurface component of the site was comprised of fragmented nondiagnostic artifacts in a highly disturbed context, likely as a result of demolition activities at the site and bioturbation.

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. CEQA defines historical resources as "any object, building, structure, site, area, or place which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, PRC §5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the California Register criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

The California Register is used in the consideration of historic resources relative to significance for purposes of CEQA. A resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC §5024.1, Title 14 CCR, Section 4852) consisting of the following:

1) 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; or

2) It is associated with the lives of persons important to local, California, or national history; or

3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or

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

Barham-2020-ASM-HD-01 consists of the remains of a historical residence with modern and historic refuse. The historic building remains and historic refuse at Barham-2020-ASM-HD-01 is determined as not eligible for listing in the CRHR under Criterion 1, 2, 3, or 4. For Criterion 1, there are no indications of significant historical events that occurred in association with the resource. Under Criterion 2 there is no record of important contributions to local, California, or national history by any of the prior owners. For Criterion 3, the structures were previously demolished and nothing remains to examine distinctive characteristics, the work of a master, or artistic value. Under Criterion 4, the site does not have any substantial research potential as the resource contains a low-density artifact scatter that is situated within a highly disturbed context. Only building foundations remain of the structures, and no features such as privies, cisterns, and trash pits appear to remain at the site.

Although this investigation found Barham-2020-ASM-HD-01 to be ineligible for listing in the CRHR under any of the four criteria, the possibility remains that features or other intact deposits may be encountered during future earth moving activities. Such a discovery could potentially yield important

information about this site and the period of its occupation in San Marcos. Therefore, there is a potential for grading activities to impact unidentified historical resources. This represents a **potentially significant impact** (**Impact CR-1b**) and mitigation is required.

- **Impact CR-1b** Due to grading and ground disturbing activities, the project has the potential to impact unidentified historical resources underneath the project site.

Threshold #3: Disturb any human remains, including those interred outside of dedicated cemeteries.

The cultural resources field survey conducted for the project did not identify any human remains or find any indications that they would be expected to be found on the project site. If human remains are encountered during project construction, there is a potential for a **significant impact** (**Impact CR-2**).

- **Impact CR-2** There is a potential for project construction activities to disturb previously unidentified human remains on the project site.

State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Adherence to State Health and Safety Code Section 7050.5 is mandated and is reiterated as a mitigation measure in Section 3.4.6.

3.4.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to cultural resources, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts on cultural resources. All of the cumulative projects identified in Table 2-3 are considered in this cumulative analysis.

Historical Resources

As identified in Section 3.4.4, while historical resources were identified on the project site, the site was determined to be ineligible for listing in the CRHR under any of the four criteria. However, the possibility remains that features or other intact deposits may be encountered during future earth moving activities. Thus, the potential remains for the project site to impact historic resources. It is expected that cultural resources studies would be prepared for all cumulative projects to assess potential impacts and that these projects would avoid or mitigate impacts to historical resources, as required by local jurisdictions and state law. As such, cumulative impacts to historical resources would **be less than significant**.

Archaeological Resources

While no resources were identified on the project site during the cultural resources reconnaissance, it was determined that there could be a potential for unidentified resources to be encountered subsurface during project grading. Other cumulative projects would be required to assess the potential

for impact to archaeological resources and provide mitigation measures or avoidance measures to reduce significant impacts to cultural resources consistent with the requirements of CEQA and the City. Additionally, the lead agency is required to consult with tribes pursuant to the requirements of SB 18 and/or AB 52. The City requires standard conditions of approval related to construction monitoring by an archeologist to ensure there are no inadvertent impacts to archeological resources. Cumulative impacts would be **less than significant**.

3.4.6 Mitigation Measures

Archaeological Resources (Impact CR-1a) and Historical Resources (Impact CR-1b)

The following cultural resources mitigation measures shall apply for ground disturbing activities during the project construction phase.

MM-CR-1a Pre-Excavation Agreement. Prior to the issuance of a Grading Permit, or ground disturbing activities, the Applicant/Owner shall enter into a Tribal Cultural Resources Treatment and Repatriation Agreement (Pre-Excavation Agreement) with a Traditionally and Culturally Affiliated Native American Tribe (TCA Tribe), identified in consultation with the City. The purpose of the Pre-Excavation Agreement shall be to formalize protocols and procedures between the Applicant/Owner and the TCA Tribe for the protection, treatment, and repatriation of Native American human remains, funerary objects, cultural and/or religious landscapes, ceremonial items, traditional gathering areas, and other tribal cultural resources. Such resources may be located within and/or discovered during ground disturbing and/or construction activities for the proposed project, including any additional culturally appropriate archaeological studies, excavations, geotechnical investigations, grading, preparation for wet and dry infrastructure, and other ground disturbing activities. Any project-specific Monitoring Plans and/or excavation plans prepared by the project archaeologist shall include the TCA Tribe requirements for protocols and protection of tribal cultural resources that were agreed to during the tribal consultation.

The landowner shall relinquish ownership of all non-burial related tribal cultural resources collected during construction monitoring and from any previous archaeological studies or excavations on the project site to the TCA Tribe for proper treatment and disposition per the Pre-Excavation Agreement, unless ordered to do otherwise by responsible agency or court of competent jurisdiction. The requirement and timing of such release of ownership, and the recipient thereof, shall be reflected in the Pre-Excavation Agreement. If the TCA Tribe does not accept the return of the cultural resources, then the cultural resources will be subject to curation.

MM-CR-1b Construction Monitoring. Prior to the issuance of a Grading Permit or ground disturbing activities, the Applicant/Owner or Grading Contractor shall provide written documentation (either as signed letters, contracts, or emails) to the City's Planning Division stating that a Qualified Archaeologist and Traditionally and Culturally Affiliated Native American monitor (TCA Native American monitor) have been retained at the Applicant/Owner or Grading Contractor's expense to implement the construction monitoring program, as described in the Pre-Excavation Agreement.

The Qualified Archaeologist and TCA Native American monitor shall be invited to attend all applicable pre-construction meetings with the General Contractor and/or associated subcontractors to present the construction monitoring program. The Qualified Archaeologist and TCA Native American monitor shall be present on site during grubbing, grading, trenching, and/or other ground disturbing activities that occur in areas of native soil or other permeable natural surfaces that have the potential to unearth any evidence of potential archaeological resources or tribal cultural resources. In areas of artificial paving, the Qualified Archaeologist and TCA Native American monitor shall be present on the site during grubbing, grading, trenching, and/or other ground disturbing activities that have the potential to disturb more than six inches below the original pre-project ground surface to identify any evidence of potential archaeological or tribal cultural resources. No monitoring of fill material, existing or imported, will be required if the General Contractor or developer can provide documentation to the satisfaction of the City that all fill materials being utilized at the site are either: 1) from existing commercial (previously permitted) sources of materials; or 2) are from private or other non-commercial sources that have been determined to be absent of tribal cultural resources by the Qualified Archaeologist and TCA Native American monitor.

The Qualified Archaeologist and TCA Native American monitor shall maintain ongoing collaborative coordination with one another during all ground disturbing activities. The requirement for the construction monitoring program shall be noted on all applicable construction documents, including demolition plans, grading plans, etc. The Applicant/Owner or Grading Contractor shall provide written notice to the Planning Division and the TCA Tribe, preferably through e-mail, of the start and end of all ground disturbing activities.

Prior to the release of any grading bonds, or prior to the issuance of any project Certificate of Occupancy, an archaeological monitoring report, which describes the results, analysis, and conclusions of the construction monitoring shall be submitted by the Qualified Archaeologist, along with any TCA Native American monitor's notes and comments received by the Qualified Archaeologist, to the Planning Division Manager for approval. Once approved, a final copy of the archaeological monitoring report shall be retained in a confidential City project file and may be released, as a formal condition of Assembly Bill (AB) 52 consultation, to the Rincon Band, the San Luis Rey Band or any parties involved in the project specific monitoring or consultation process. A final copy of the report, with all confidential site records and appendices, will also be submitted to the South Coastal Information Center after approval by the City.

MM-CR-1c Unanticipated Discovery Procedures. Both the Qualified Archaeologist and the TCA Native American monitor may temporarily halt or divert ground disturbing activities if potential archaeological resources or tribal cultural resources are discovered during construction activities. Ground disturbing activities shall be temporarily directed away from the area of discovery for a reasonable amount of time to allow a determination of the resource's potential significance. Isolates and clearly non-significant archaeological resources (as determined by the Qualified Archaeologist, in consultation with the TCA Native American monitor) will be minimally documented in the field. All unearthed archaeological resources or tribal cultural resources will be collected, temporarily stored in a secure location (or as otherwise

agreed upon by the Qualified Archaeologist and the TCA Tribe), and repatriated according to the terms of the Pre-Excavation Agreement, unless ordered to do otherwise by responsible agency or court of competent jurisdiction.

If a determination is made that the archaeological resources or tribal cultural resources are considered potentially significant by the Qualified Archaeologist, the TCA Tribe, and the TCA Native American monitor, then the City and the TCA Tribe shall determine, in consultation with the Applicant/Owner and the Qualified Archaeologist, the culturally appropriate treatment of those resources.

If the Qualified Archaeologist, the TCA Tribe, and the TCA Native American monitor cannot agree on the significance or mitigation for such resources, these issues will be presented to the Planning Division Manager for decision. The Planning Division Manager shall make a determination based upon the provisions of CEQA and California Public Resources Code Section 21083.2(b) with respect to archaeological resources and California Public Resources Section 21704 and 21084.3 with respect to tribal cultural resources, and shall take into account the religious beliefs, cultural beliefs, customs, and practices of the TCA Tribe.

All sacred sites, significant tribal cultural resources, and/or unique archaeological resources encountered within the project area shall be avoided and preserved as the preferred mitigation. If avoidance of the resource is determined to be infeasible by the City as the Lead Agency, then the City shall require additional culturally appropriate mitigation to address the negative impact to the resource, such as, but not limited to, the funding of an ethnographic study and/or a data recovery plan, as determined by the City in consultation with the Qualified Archaeologist and the TCA Tribe. The TCA Tribe shall be notified and consulted regarding the determination and implementation of culturally appropriate mitigation and the drafting and finalization of any ethnographic study and/or data recovery plan, and/or other culturally appropriate mitigation. Any archaeological isolates or other cultural materials that cannot be avoided or preserved in place as the preferred mitigation shall be temporarily stored in a secure location on site (or as otherwise agreed upon by the Qualified Archaeologist and TCA Tribe), and repatriated according to the terms of the Pre-Excavation Agreement, unless ordered to do otherwise by responsible agency or court of competent jurisdiction. The removal of any artifacts from the project site will be inventoried with oversight by the TCA Native American monitor.

If a data recovery plan is authorized as indicated above and the TCA Tribe does not object, then an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. If the Qualified Archaeologist collects such resources, the TCA Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologist does not collect the cultural resources that are unearthed during the ground disturbing activities, the TCA Native American monitor may, at their discretion, collect said resources for later reburial or storage at a local curation facility, as described in the Pre-Excavation Agreement.

In the event that curation of archaeological resources or tribal cultural resources is required by a superseding regulatory agency, curation shall be conducted by an approved local facility within San Diego County and the curation shall be guided by California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections. The City shall provide the Applicant/Owner final curation language and guidance on the project grading plans prior to issuance of the grading permit, if applicable, during project construction. The Applicant/Owner shall be responsible for all repatriation and curation costs and provide to the City written documentation from the TCA Tribe or the curation facility, whichever is most applicable, that the repatriation and/or curation have been completed.

Human Remains (Impact CR-2)

MM-CR-2 Human Remains. As specified by California Health and Safety Code Section 7050.5, if human remains, or remains that are potentially human, are found on the project site during ground disturbing activities or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Medical Examiner's Office by telephone. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie adjacent remains (as determined by the Qualified Archaeologist and/or the TCA Native American monitor) shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98.

If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the Qualified Archaeologist and/or the TCA Native American monitor), and consultation and treatment could occur as prescribed by law. As further defined by State law, the Medical Examiner will determine within two working days of being notified if the remains are subject to his or her authority. If the Medical Examiner recognizes the remains to be Native American, and not under his or her jurisdiction, then he or she shall contact the Native American Heritage Commission by telephone within 24 hours. The Native American Heritage Commission will make a determination as to the Most Likely Descendent, who shall be afforded 48 hours from the time access is granted to the discovery site to make recommendations regarding culturally appropriate treatment.

If suspected Native American remains are discovered, the remains shall be kept in situ (in place) until after the Medical Examiner makes its determination and notifications, and until after the Most Likely Descendent is identified, at which time the archaeological examination of the remains shall only occur on site in the presence of the Most Likely Descendent. The specific locations of Native American burials and reburials will be proprietary and not disclosed to the general public. According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). In the event that the Applicant/Owner and the Most Likely Descendant are in disagreement regarding the disposition of the remains, State law will apply, and the mediation process will occur with the NAHC. In the event that mediation is not successful, the landowner shall rebury the

remains at a location free from future disturbance (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

3.4.7 Conclusion

Based upon the analysis presented in Section 3.4.4, the potential exists for impacts to previously unidentified cultural and historical resources during project grading. These potentially significant impacts to archaeological and historical resources would be mitigated to below a level of significance through implementation of MM-CR-1a through MM-CR-1c and MM-CR-2.

Specifically, implementation of these mitigation measures provide for the presence of archaeological and Native American monitors during ground disturbing activities that would be able to identify any previously unidentified cultural and/ or historical resources, to prevent inadvertent disturbance of any intact cultural deposits that may be present. Should any resources be identified, implementation of MM-CR-1a through MM-CR-1c would ensure proper handling and treatment of such resources by providing for a proper evaluation to determine whether additional archaeological work is necessary. To further ensure impacts to Native American archaeological resources are protected, implementation of MM-CR-1a through MM-CR-1c provides additional protections for significant resources, and describes the process for proper treatment and handling to ensure impacts are minimized.

Potential impacts to human remains would be mitigated through implementation of MM-CR-2, which specifies that remains shall not be further disturbed until the San Diego County Coroner has determined origins of the remains and final treatment has been agreed to with input of Native American Tribes as necessary. Therefore, with incorporation of these measures, potential impacts to cultural resources would be reduced to below a level of significance.

3.5 Energy

This section describes the existing setting of the project site with respect to energy use and conservation, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

Appendix G and Appendix F of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) discusses the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy to ensure that energy implications are considered in project-related decision-making processes. As such, this section analyzes the energy impacts of the proposed project. Specifically, this section summarizes the existing conditions in the project area, discusses the regulatory framework, and discloses estimated energy use during the construction and operational phases of the proposed project. This analysis considers the electricity, natural gas, and transportation fuel (petroleum) demand of the proposed project.

Information in this section is based on the proposed project's Greenhouse Gas Assessment (November 2021), prepared by LDN, which is included as **Appendix H.1** of this EIR.

Table 3.5-1 summarizes the project- and cumulative-level energy impacts, by threshold.

Table 3.5-1. Energy Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
Threshold #1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Less than Significant	Less than Significant	Less than Significant
Threshold #2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	Less than Significant	Less than Significant

3.5.1 Existing Conditions

The environmental setting for the proposed project related to electricity, natural gas, and petroleum, including associated service providers, supply sources, and estimated consumption, is discussed below.

Electricity

Electricity usage in California for different land uses varies by the types of uses in a building, types 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 electricity use per capita has remained stable for more than 30 years, and the national average has steadily increased (CEC 2014).

San Diego Gas & Electric (SDG&E) provides electric services to 3.6 million customers through 1.4 million electric meters located in a 4,100-square-mile service area that includes San Diego County (County) and southern Orange County (SDG&E 2021). SDG&E is a subsidiary of Sempra Energy and would provide electricity to the proposed project. According to the California Public Utilities Commission (CPUC), SDG&E customers consumed approximately 19,169 million kilowatt-hours (kWh) of electricity in 2015 (CPUC 2016). SDG&E is forecasted to reach 49% renewable energy in 2021, 98% of which will be from long-term contracts (SDG&E 2018).

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 890 megawatts per year for the next decade, or 1.4% annually, and consumption per capita is expected to remain relatively constant at 7,200– 7,800 kWh per person (CEC 2014).

In San Diego County, the California Energy Commission (CEC) reported an annual electrical consumption of approximately 19 billion kWh total with 6.6 billion kWh for residential use and 12.4 billion kWh for non-residential use in 2019 (CEC 2019).

Natural Gas

The CPUC regulates natural gas utility rates and services provided by Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCal Gas), San Diego Gas & Electric Company (SDG&E), Southwest Gas and several smaller natural gas utilities. SDG&E provides natural gas service to the Counties of San Diego and Orange and would provide natural gas to the proposed project. SDG&E is a wholesale customer of SoCalGas and currently receives all of its natural gas from the SoCalGas system (CPUC 2021).

California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4,740 million cubic feet per day (MMCFD) of gas to their customers, on average, under normal weather conditions (CPUC 2021).

The majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35% (CPUC 2021).

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2017, for example, California utility customers received 38% of their natural gas supply from basins located in the U.S. Southwest, 27% from Canada, 27% from the U.S. Rocky Mountain area, and 8% from production located in California. The state does not receive liquefied natural gas (LNG) supplies. Biogas (e.g. from wastewater treatment facilities or dairy farms) is just beginning to be delivered into the gas utility pipeline systems, and the State has been encouraging its development (CPUC 2021).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-

1980s and is determined by market forces. However, CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2021).

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border, and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the CPUC may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers (CPUC 2021).

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines (CPUC 2021).

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2021).

In order to properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California (CPUC 2021).

Petroleum

There are more than 35 million registered vehicles in California, and those vehicles consume an estimated 18 billion gallons of fuel each year (CEC 2017). Gasoline and other vehicle fuels are commercially provided commodities and would be available to the proposed project through commercial outlets.

Petroleum currently accounts for approximately 92% of California's transportation energy consumption. However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT). Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels/energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend may likely continue and accelerate. Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

Existing Infrastructure

The proposed project is within the SDG&E service area and would connect to the existing underground 69-kilovolt (kV) line at the project frontage with E. Barham Drive. SDG&E also maintains a gas distribution system within E. Barham Drive. If the project utilizes gas utilities, the gas line will be extended to the project site through the same joint trench alignment as electrical, cable and telephone facilities.

3.5.2 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, CPUC and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below. This information helps to place the impact analysis within its proper regulatory context.

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 CAFE 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)

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum. The U.S. Environmental Protection Agency (EPA) 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 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 is referred to as "RFS2" and 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

The discussion below focuses primarily on those policies, regulations, and laws that directly pertain to energy-related resources. Refer to Section 3.7, Greenhouse Gas Emissions, of this EIR, which addresses various policies, regulations, and laws targeted to the reduction of GHG emissions that are expected to achieve co-benefits in the form of reduced demand for energy-related resources and enhanced efficiencies in the consumption of energy-related resources.

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 that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided, and identified policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. In 2005, a second Energy Action Plan was adopted by the CEC and CPUC 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)

This bill 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)

Senate Bill (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% shall come from renewables; by December 31, 2016, 25% shall come from renewables; and by December 31, 2020, 33% shall 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) accelerated and expanded the standards set forth in SB 350 by 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 also 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 does 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 non-renewable 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 the other state, federal, and local agencies. The 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 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 and the use of 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 co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 3.7 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 non-residential 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 (CEC 2015).

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards became effective January 1, 2020. The standards require that all low-rise residential buildings shall have a photovoltaic system meeting the minimum qualification requirements such that annual electrical output is equal to or greater than the dwelling's annual electrical usage. Notably, net energy metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. Single-family homes built with the 2019 standards will use about 7% less energy due to energy efficiency measures versus those built under the 2016 standards, while new nonresidential buildings will use about 30% less energy mainly to lighting upgrades (CEC 2018).

The 2022 Building Energy Efficiency Standards (Energy Code) will improve upon the 2019 Energy Code for new construction of, and additions and alterations to, residential and nonresidential buildings. Workshops will be held to present revisions and obtain public comment. Proposed standards will be adopted in 2021 with an effective date of January 1, 2023. The California Energy Commission (CEC) updates the standards every three years.

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 CALGreen, and establishes minimum mandatory standards as well as 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 CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require mandatory reduction in indoor and outdoor water use, diversion of demolition waste, mandatory inspections of energy systems, inclusion of electric vehicle charging stations for designated parking spaces and use of low-pollutant-emitting exterior and interior finish materials. The CALGreen 2019 standards will continue to improve upon the 2016 CALGreen standards and will go into effect on January 1, 2020.

Integrated Energy Policy Report

Senate Bill 1389 (SB 1389, Bowen and Sher, Chapter 568, Statutes of 2002) requires the California Energy Commission to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. (Pub. Res. Code § 25301(a)).

The California Energy Commission adopts an Integrated Energy Policy Report (IEPR, pronounced eye'-per) every two years and an update every other year. The most current report is the *2021 Integrated Energy Policy Report Update*.

State Vehicle Standards

In a response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. 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 whose primary use is 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. The 2009–2012 standards resulted in a reduction in approximately 22% GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 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 and requirements for greater numbers of zero-emission 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 2012).

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 (San Diego Association of Governments) to include a Sustainable Communities Strategy in its 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 a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels.

Local

SDG&E Long-Term Procurement Plan

SDG&E's Conforming Portfolio identifies a need for approximately 700 gigawatt-hours of incremental renewable power in addition to the assumed increases in energy efficiency and behind-the-meter solar, to meet the 2030 planning target (approximately 4% of the total energy in the portfolio) (SDG&E 2018). SDG&E's Conforming Portfolio demonstrates that SDG&E has reduced its GHG emissions in the early years of the planning period, reflecting SDG&E's current position in relation to its RPS targets, with approximately 45% of its current energy mix coming from delivering renewable resources in 2018 as compared to an RPS requirement of 29%, its aggressive adoption of energy storage, and no coal resources. SDG&E is fully compliant with RPS and long-term contracting requirements. SDG&E continues to procure to meet resource-specific renewable procurement mandates, as required, but does not expect to procure additional resources for RPS compliance purposes until after 2030. SDG&E is forecasted to reach 49% renewable energy in 2021, 98% of which will be from long-term contracts (SDG&E 2018).

City of San Marcos General Plan

The City's General Plan (City of San Marcos 2012) includes various policies related to reducing GHG emissions and the co-benefit of reducing energy consumption. Applicable policies include the following:

Land Use and Community Design Element

- Policy LU-2.1: Promote compact development patterns that reduce air pollution and automobile dependence and facilitate walking, bicycling, and transit use.
- Policy LU-2.3: Promote landscaping (e.g., native, drought tolerant plants) that minimizes demands on water supply.
- Policy LU-2.7: Promote the instillation of trees to reduce the urban heat-island effect and green infrastructure to reduce storm water runoff.
- Policy LU-3.1: Require that new development and redevelopment incorporate connections and reduce barriers between neighborhoods, transit corridors, and activity centers within the City.

Conservation and Open Space Element

- Policy COS-4.5: Encourage energy conservation and the use of alternative energy sources within the community.

- Policy COS-4.6: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.

The project's consistency with applicable General Plan goals and policies is discussed in Table 3.10-5 of Section 3.10, Land Use. As detailed in Section 3.10.4, the project is consistent with the applicable General Plan goals and policies pertaining to energy.

City of San Marcos Climate Action Plan

Consistent with AB 32, the City adopted a CAP in September 2013 as a long-range plan to reduce GHG emissions and mitigate climate change impacts associated with City government operations and with implementation of the City's General Plan. An updated CAP was adopted on December 8, 2020. The 2020 CAP builds on the efforts and strategies identified in the City's 2013 CAP, and establishes GHG emission targets and identifies achievable, locally-based actions to reduce GHG emissions from municipal and community activities. Section 3.7, Greenhouse Gas Emissions provides more details on the CAP as it pertains to specific GHG reduction targets.

According to the CAP, energy use in the City includes electricity and natural gas consumption, which accounted for 39 percent of the City's total emissions in 2012. Two strategies would reduce emissions from electricity and natural gas consumption by increasing building energy efficiency and the use of renewable energy sources. Legislative reductions from State energy efficiency and renewable energy programs will contribute to reducing transportation emissions by increasing the amount of renewable energy available statewide and improving energy efficiency requirements for new developments. At the local level, GHG emissions reductions would be achieved by improving energy efficiency of new developments beyond State requirements, both increasing the amount of renewable energy generated locally, and reducing the amount of non-renewable energy consumed locally. The success of these strategies relies on coordination with local utilities, organizations, and agencies, participation from the community, and administration of new or revised local policies and programs.

The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. Strategies and measures related to energy include the following:

- Strategy 4: Increase Building Energy Efficiency Electricity and natural gas consumption in buildings accounts for a majority of GHG emissions from the energy sector. Although legislative reductions related to State actions will help reduce emissions associated with building energy, additional reductions are achievable by increasing building efficiency in the City. This strategy aims to reduce emissions by reducing energy used by residential consumers through increased energy efficiency. This strategy includes one measure that would reduce the City's emissions by approximately 1,280 MTCO2e in 2030.
    - Measure E-1: Require New Residential Developments to Install Alternatively-Fueled Water Heaters. Starting in 2022, require all new single-family and multi-family residential projects to install non-natural gas water heaters. Non-natural gas water heater options include electric HPWH, instantaneous electric, electric tank solar water heater with HPWH backup, or solar water heater with electric tank backup
- Strategy 5: Increase Renewable and Zero-Carbon Energy: Over a quarter of the City's GHG emissions in 2012 were generated through the consumption of fossil fuels for the purpose of electricity generation (i.e., natural gas—fired or coal power plants). Transitioning from fossil

fuels to renewable energy electricity generation will reduce emissions and provide a more sustainable source of electricity. The City would reduce emissions by increasing renewable energy generated locally and participating in a community choice aggregation (CCA) or similar program to increase the amount of grid supplied renewable energy. This strategy includes two measures that would reduce the City's emissions by approximately 35,100 MTCO2e in 2030. Additional activities that would support this strategy would occur through partnerships with local and regional agencies.

- Measure E-2: Require Installation of PV systems at New Non-Residential Developments. Starting in 2022, require all new non-residential developments to install PV systems with a minimum of two watts per square foot of gross floor area.
- Measure E-3: Increase Grid-Supply Renewable and Zero-Carbon Electricity. Join a program to increase grid-supply renewables and zero-carbon electricity to 95 percent by 2030 with a maximum customer opt-out rate of three percent.

3.5.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to energy if it would:

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

3.5.4 Project Impact Analysis

Threshold #1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers and heating, ventilation, and air conditioning) would be provided by SDG&E. The amount of electricity used during construction would be minimal because typical demand stems from the use of electronic equipment in addition to electrically powered hand tools. 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

At full build-out, the proposed project's operational phase would require electricity for operating the residences. The California Emissions Estimator Model (CalEEMod), version 2016.3.2, default values for electricity consumption for the residential land use were applied. Per the GHG report, electrical energy-intensity factors were updated to reflect SDG&E emissions rate variations from 2009 which are

default in CalEEMod. In 2009, SDG&E achieved 10.5 percent procurement of renewable energy and in 2020 will have at least a 33% portfolio by law. In accordance with SB 100, SDG&E will achieve an RPS of 60% in 2030. Emission factors used in the model are included in the GHG report in Appendix H.1 (LDN 2021b).

The proposed project is estimated to have a total electrical demand of approximately 767,483 kWh per year, which is based on CalEEMod. The proposed project includes various on-site features and measures to reduce the proposed project's energy consumption. Further, the proposed project would be required to be consistent with appropriate mandatory project design feature in the CAP Consistency Worksheet that would reduce operational electricity consumption (details are provided in Appendix H.1 of this EIR) and would-be built-in compliance with Title 24 requirements applicable at that time. Based on the 2019 standards, homes built under the 2019 Title 24 standards would use about 53% less energy than those under the 2016 Title 24 standards (CEC 2018) because the 2019 standards require solar photovoltaic systems for new homes. On the residential side, the standards also encourage demand responsive technologies including battery storage and heat pump water heaters and improve the building thermal envelope.

Homes built in 2020 and beyond will be highly efficient and include solar photovoltaic generation to meet the home's expected annual electric needs (CEC 2018). The project would install smart meters and programmable thermostats, cool roof materials, and efficient lighting in all buildings and light control systems, where practical, which would reduce lighting energy by 20%. Thus, environmental 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 proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection Petroleum. Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not have an adverse effect on the environment; therefore, impacts would be **less than significant.**

Operational Use

No hearths or woodstoves would be included in the project design. Any minor amounts of natural gas that may be consumed during operation would be negligible and would not have an adverse effect on the environment; therefore, impacts would be less than significant. Further, the proposed 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 applicant would ensure that the proposed project would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. The proposed project would implement energy efficiency design features and would not result in a wasteful use of energy. Therefore, environmental impacts from natural gas consumption 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, as well as haul trucks involved in moving dirt around the project site, would rely on 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 each phase of construction. CalEEMod was used to estimate construction equipment usage, and results are included in Appendix H.1. Based on that analysis, over all phases of construction, diesel-fueled construction equipment would operate for an estimated 24,365 hours, as summarized in **Table 3.5-2.**

Table 3.5-2 Hours of Operation for Construction Equipment

Phase	Hours of Equipment Use	Number of Days	Total
Rock Drilling	3	5	15
Site Preparation	56	10	560
Grading	72	30	2,160
Paving	48	20	960
Building Construction	68	300	20,400
Architectural Coating	6	45	270
Total		**410**	**24,365**

Source: LDN 2021, GHG Assessment, Attachment A- CalEEMod Emission Model (App H.1)

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. Construction is estimated to occur over an 18-month period (2022–2024) based on the construction phasing schedule. 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 3.5-3.**

Table 3.5-3 Construction Equipment Diesel Demand

Phase	Equipment CO_2 (MT)	Kg CO_2/ Gallon	Gallons
Rock Drilling	0.777	10.21	76.10
Site Preparation	16.7197	10.21	1,637.58
Grading	90.8452	10.21	8,897.67
Paving	20.0269	10.21	1,961.50
Building Construction	347.7245	10.21	34,057.25

Phase	Equipment CO_2 (MT)	Kg CO_2/ Gallon	Gallons
Architectural Coating	5.7448	10.21	562.66
Total			**47,192.76**

Source: LDN 2021, GHG Assessment, Attachment A- CalEEMod Emission Model (App H.1)
Notes: CO_2 = carbon dioxide;
kg = kilogram;
MT = metric ton
1 MT = 1,000 kg

Fuel consumption from worker and vendor trips is estimated by converting the total CO_2 emissions from each 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 **Tables 3.5-4, 3.5-5, and 3.5-6.**

Table 3.5-4 Construction Worker Vehicle Gasoline Demand

Phase	Vehicle CO_2 (MT)	Kg CO_2/ Gallon	Gallons
Rock Drilling	0.506	8.78	57.63
Site Preparation	0.6074	8.78	69.18
Grading	2.2749	8.78	259.10
Paving	0.9736	8.78	110.89
Building Construction	115.6359	8.78	13,170.38
Architectural Coating	3.3670	8.78	383.49
Total			**14,050.66**

Source: LDN 2021, GHG Assessment, Attachment A- CalEEMod Emission Model (App H.1)
Notes: CO_2 = carbon dioxide;
kg = kilogram;
MT = metric ton
1 MT = 1,000 kg

Table 3.5-5 Construction Vendor Truck Diesel Demand

Phase	Vehicle CO_2 (MT/YR)	Kg CO_2/ Gallon	Gallons
Building Construction	75.6084	10.21	7,405.33
Total			**7,405.33**

Source: LDN 2021, GHG Assessment, Attachment A- CalEEMod Emission Model (App H.1)
Notes: CO_2 = carbon dioxide;
kg = kilogram;
MT = metric ton
1 MT = 1,000 kg

Table 3.5-6 Construction Haul Truck Diesel Demand

Phase	Vehicle CO_2 (MT)	Kg CO_2/ Gallon	Gallons
Site Preparation	54.4180	10.21	5,329.87
Grading	159.9327	10.21	15,664.32
Total			**20,994.19**

Source: LDN 2021, GHG Assessment, Attachment A- CalEEMod Emission Model (App H.1)
Notes: CO_2 = carbon dioxide;
kg = kilogram;
MT = metric ton
1 MT = 1,000 kg

As shown in Tables 3.5-4 through 3.5-6, the proposed project is estimated to consume a total of 42,450.18 gallons of petroleum from worker vehicle, vendor truck, and haul truck trips per year during the construction phase. By comparison, California's estimated gasoline use was approximately 16 billion gallons of gasoline in 2016 (CARB 2018). The proposed project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Furthermore, the project's construction practices would be typical (i.e., not require specialized construction equipment or otherwise present unusual circumstances in which substantial amounts of fuels would be required). Therefore, because petroleum use during construction, including construction of the proposed project, would be temporary and minimal and would not be wasteful or inefficient, **impacts would be less than significant.**

Operational Use

The majority of fuel consumption resulting from the proposed project's operational phase would be attributable to the use of resident motor vehicles traveling to and from the project site, as well as fuels used for alternative modes of transportation that may be used by residents, visitors, and employees. Petroleum fuel consumption associated with motor vehicles traveling to and from the project site is a function of VMT as a result of project operation. As reported in the greenhouse gas study (Appendix H.1), the annual VMT attributable to the proposed project is expected to be approximately 2,108,639 VMT per year. Similar to construction worker and vendor trips, fuel consumption was estimated by converting the total CO_2 emissions from each land use type (687.2716 MT/yr) to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Based on the annual fleet mix provided in CalEEMod, 93% of the fleet range from light-duty to medium-duty vehicles and motorcycles were assumed to run on gasoline. The remaining 7% of vehicles represent medium-heavy duty to heavy-duty vehicles and buses/recreational vehicles, which were assumed to run on diesel.

Calculations for annual mobile-source fuel consumption are provided in Table 3.5-7.

Table 3.5-7 Mobile Source Fuel Consumption - Operation

Fuel	Vehicle CO2 (MT)	Kg CO2/ Gallon	Gallons
Gasoline	639.1626	8.78	72,797.56
Diesel	48.10901	10.21	4,711.95
Total	**687.2716**		**77,509.51**

Source: LDN 2021, GHG Assessment, Attachment A- CalEEMod Emission Model (App H.1)
Notes: CO_2 = carbon dioxide;
kg = kilogram;
MT = metric ton
1 MT = 1,000 kg

As shown in Table 3.5-7, mobile sources from the proposed project would result in approximately 72,798 gallons of gasoline per year and 4.712 gallons of diesel consumed per year. By comparison, California as a whole consumed approximately 16 billion gallons of petroleum in 2016 (CARB 2018) and the County is expected to use 2.0 billion gallons of petroleum per year for transportation in 2020 (Caltrans 2009).

Over the lifetime of the proposed project, the fuel efficiency of the vehicles being used by residents is expected to increase. 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 numbers of plug-in hybrids and zero-emissions vehicles in California (CARB 2013).

The California Air Pollution Control Officers Association (CAPCOA) has developed methodologies for quantifying the emission reductions associated with numerous mitigation measures (CAPCOA 2010). Several of the measures would also reduce air pollutant emissions that are related to land use and transportation planning. These measures would reduce vehicle trips and/or trip lengths, enhance walking and bicycles as alternative modes of transportation, enhance availability of transit, and incorporate other approaches. Regarding mobile source emission reduction features relating to land use, it was assumed that the project would involve an increase in access to transit. The project is located approximately 0.7 mile from the bus service and one mile from the SPRINTER station, which provides light rail access into the nearby cities of Escondido, Vista, and Oceanside. Additionally, the SPRINTER connects to the Pacific Surfliner and COASTER routes, which provide north–south access to Los Angeles County, Orange County, and the City of San Diego. The project will provide three Level 2 electric charging station in the guest parking area and each residential garage would be pre-wired for electric vehicle charging stations.

In summary, although the proposed project would increase petroleum use during operation, the use would be a small fraction of the statewide use and, due to efficiency increases, diminish over time. Additionally, the increased access to transit would help reduce petroleum-based fuels consumption. Given these considerations, petroleum consumption associated with the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant.

Threshold #2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would follow applicable energy standards and regulations during the construction phases. Furthermore, the proposed project would be built and operated in accordance with all existing, applicable building regulations at the time of construction. Furthermore, the proposed project would be consistent with all actions in the CAP Consistency Worksheet as discussed in detail in Appendix H.2 of this EIR. For the reasons stated, the proposed project would not obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be **less than significant.**

3.5.5 Cumulative Impact Analysis

Potential cumulative impacts on energy would result if the proposed project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation. The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis; this includes existing aging structures that are energy inefficient. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. Projects that would mostly include construction, such as transportation infrastructure, could also contribute to a cumulative impact; however, the impact of these projects would be limited because they would typically not involve substantial ongoing energy use.

As described previously, the proposed project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary use of energy due to various design features and adherence to applicable requirements. Similar to the proposed project, the cumulative projects would be subject to CALGreen, which provides energy efficiency standards for commercial and residential buildings. CALGreen would implement increasingly stringent energy efficiency standards that would require the proposed project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set in the AB 32 Scoping Plan. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects. In consideration of cumulative energy use, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Thus, the proposed project would not contribute to a cumulative impact to the wasteful or inefficient use of energy. As such, the proposed project would not result in a cumulatively considerable contribution to a potential cumulative impact. **Impacts are less than significant.**

3.5.6 Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

3.5.7 Conclusion

The proposed project would comply with regulatory requirements and building standards. As such, the proposed 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. As a result, impacts would be **less than significant.**

3.6 Geology and Soils

This section analyzes the potential for impacts related to geology and soils for the proposed project, including seismic activity, liquefaction, landslides, loss of topsoil, soil erosion, soil stability and soil expansion.

The following report has been prepared to analyze the geological and geotechnical impacts of the proposed project and is included in its entirety in **Appendix G** of this Draft Environmental Impact Report (EIR):

- *Geotechnical Investigation – 943 Barham Drive San Marcos, California.* Prepared by GEOCON. Dated June 17, 2020

During the Initial Study checklist prepared for the proposed project, it was also determined that there would be no impact associated with the ability of soils to support the use of septic or alternative wastewater systems as no septic or alternative wastewater systems are included as part of the project. Since the proposed project would be served by Vallecitos Water District for sewer service, no septic or alternative wastewater systems are proposed. Section 5.2, Environmental Effects Found Not to be Significant – Geology and Soils, of this EIR provides additional information on these topics. The Initial Study is included as Appendix B.1 of this document.

A summary of the project- and cumulative-level geology and soils analysis, by threshold, is provided in **Table 3.6-1.**

Table 3.6-1. Geology and Soils Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#1 - Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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?	Less than Significant	Less than Significant	Less than Significant
#2 - Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?	Less than Significant	Less than Significant	Less than Significant
#3 - Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?	Less than Significant	Less than Significant	Less than Significant
#4 - Directly or indirectly cause potential substantial adverse effects, including the	Less than Significant	Less than Significant	Less than Significant

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
risk of loss, injury, or death involving landslides?			
#5 - Result in substantial soil erosion or the loss of topsoil?	Less than Significant	Less than Significant	Less than Significant
#6 - Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Less than Significant	Less than Significant	Less than Significant
#7 - Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Less than Significant	Less than Significant	Less than Significant
#8 - Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	Less than Significant	Mitigated to Less than Significant

3.6.1 Existing Conditions

This section details the existing conditions on the project site including topography, soils, groundwater and the project site's location to major faults.

Topography

The site consists of a northwest trending drainage with moderate to steep slopes along the flanks. Elevations range from 710 feet Above Mean Sea Level (AMSL) in the southeast portion of the site to 650 feet AMSL in the northwest portion.

Soils

Regionally, the subject property lies within the Peninsular Ranges Geomorphic Province of southern California. This province consists of a series of ranges separated by northwest trending valleys; sub parallel to branches of the San Andreas Fault (CGS 2002). The Peninsular Ranges geomorphic province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks (CGS 2002). Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction.

Four surficial soil types and one geologic formation were encountered during our field investigation. The surficial soil types consist of undocumented fill, topsoil, alluvium and colluvium. The formational unit is the Cretaceous-age granitic rock.

As part of the geotechnical investigation, GEOCON used the following methods:

- Review of aerial photographs, readily available published and unpublished geologic literature, and project plans;
- Excavation of 14 exploratory trenches using a rubber tire backhoe to evaluate the general extent and condition of surficial deposits;
- Performance of laboratory tests on selected soil samples to evaluate the physical characteristics for engineering analysis;
- Performance of Eight (8) seismic traverses by Southwest Geophysics to evaluate the rippability characteristics in areas of granitic rock; and
- Performance of one infiltration test in the proposed basin location to be utilized during storm water management design and providing storm water management guidelines in accordance with the City of San Marcos Storm Water Standards.

Undocumented Fill

Undocumented fill was observed in one exploratory trench (T-4), and is estimated to be approximately one-foot thick. The Qudf consists of loose, moist, silty sand, with some minor trash debris. This material is unsuitable for support of settlement-sensitive structures and/or improvements, and will require complete removal and compaction. It is estimated that the undocumented fill is confined to a relatively small area in the north-central portion of the property.

Topsoil (Unmapped)

Topsoil was encountered in five exploratory trenches (Trench Nos. T-1, T-2, T-12, T-13 and T-14). This deposit is estimated to blanket the property beyond the main northwest-trending drainage and varies in thickness from approximately one to five feet. This surficial soil is characterized as loose, damp to moist, silty fine- to medium-grained sand. Topsoil is unsuitable in its present condition and will require removal and compaction for support of structural fill and settlement-sensitive structures.

Alluvium/ Colluvium (Qal/Qcol)

Alluvial and colluvial soils were encountered in eight exploratory trenches (Trench Nos. T-3 and T-5 through T-11). These deposits are present along the entire length of the northwest-trending drainage and adjacent hillsides, and vary in thickness from approximately 3 to 11-feet-thick. These deposits generally consisted of loose to dense, damp to moist, silty to clayey fine- to coarse-grained sand. A firm, silty clay deposit was encountered in T-3 and T-4. The upper portions of the alluvial/colluvial deposits are poorly consolidated and compressible, and will require removal and compaction during grading. Based on laboratory testing, the lower portion of these deposits are generally suitable in their present condition for support of structural fill and settlement-sensitive structures.

Granitic Rock (Kgr)

Cretaceous-age granitic rock underlies the surficial deposits throughout the property. The soils derived from excavations within the decomposed portion of this unit typically consist of low-expansive, silty,

fine- to coarse-grained sands and provide suitable foundation support in either a natural or properly compacted condition. Deeper excavations than what we encountered in the trenches may generate boulders and oversize material (rocks greater than 12 inches in dimension) that will require special handling and placement.

Groundwater

No groundwater or seepage was observed in the excavations performed during the geologic investigation.

Seismicity

The project site is located in tectonically active southern California, and will likely experience some effects from future earthquakes even though no Alquist-Priolo Fault Hazard Zones are located within the site. The type of severity of seismic hazards affecting the project site is chiefly dependent upon the distance to the causative faults, the intensity and duration of the seismic events, and the onsite soil characteristics. The seismic hazard may be primary, such as surface rupture and/or ground shaking, or secondary, such as liquefaction or land sliding.

Surface fault rupture is a break in the ground surface during, or as a consequence of, seismic activity. Fault rupture occurs most often along pre-existing fault traces. According to the geotechnical investigation, the United States Geological Survey maps (2016) indicates that there are no mapped Quaternary faults crossing or trending toward the property. In addition, the site is not located within a currently established Alquist-Priolo Earthquake Fault Zone. The nearest known active-fault zones are the Rose Canyon and Newport Inglewood Faults, located approximately 14 miles west of the subject site. The risk associated with ground rupture hazard is low (GEOCON 2020).

Liquefaction

Liquefaction occurs when loose, saturated, generally fine sands and silts are subjected to strong ground shaking. The soils lose shear strength and become liquid; potentially resulting in large total and differential ground surface settlements as well as possible lateral spreading during an earthquake. Seismically induced settlement can occur in response to liquefaction of saturated loose granular soils, as well as the reorientation of soil particles during strong shaking of loose, unsaturated sands.

The project site is identified as having Zero Susceptibility to Low Susceptibility for liquefaction per Figure 6-1 of the Safety Element of the City's General Plan. The risk associated with liquefaction and seismically induced settlement hazard is low due to the dense nature and age of the underlying formational materials and lack of shallow groundwater (GEOCON 2020).

Paleontological Resources

The proposed project site lies within the Peninsular Ranges Geomorphic Province of southern California. This province consists of a series of ranges separated by northwest trending valleys; subparallel to branches of the San Andreas Fault (CGS 2002). The Peninsular Ranges geomorphic province is one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province. Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks (CGS

2002). Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction.

According to the Preliminary Geotechnical Evaluation prepared for the project (Geocon), the geologic conditions underlying the site consist of undocumented artificial soils (Qudf), and Quaternary-aged colluvial and alluvium deposits (Qcol and Qal)). Cretaceous-age granitic rock underlies the surficial deposits throughout the property. Colluvial deposits were encountered along the entire length of the northwest trending drainage and adjacent hillsides, and vary in thickness from approximately 3 to 11 feet thick. The Quaternary Period is divided into two epochs: the Pleistocene (2.588 million years ago to 11.7 thousand years ago) and the Holocene (11.7 thousand years ago to today).

According to the San Marcos General Plan EIR (page 3.12-1), older Pleistocene-age alluvial deposits have the potential to yield "Ice-age" fossils. In composition, these deposits consist of "moderately well consolidated, poorly sorted, permeable, commonly slightly desiccated gravel, sand, silt, and clay-bearing alluvium." These Pleistocene alluvial deposits are locally capped by Holocene alluvium and artificial fill, and at depth, are underlain by Cretaceous and older igneous rocks. Pleistocene old alluvial flood plain deposits are found in northern San Diego County and include recorded fossil collecting localities in Vista, Carlsbad, and Oceanside. These localities have yielded fossils of terrestrial plants, freshwater and terrestrial invertebrates such as clams and snails, and terrestrial mammals such as ground sloth, rodents, horse, tapir, camel, llama, deer, mastodon, and mammoth. Given that no fossils have been recovered from the sediments mapped as old alluvial flood plain deposits in the City, it is suggested that these deposits have an unproven and/or undetermined paleontological sensitivity. Due to the fact that the Pleistocene old alluvial floodplain deposits have an unproven/undetermined sensitivity there is a potential that the site could contain paleontological resources.

3.6.2 Regulatory Setting

This section describes the federal, state and local regulations related to geology and soils.

Federal

Federal Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 provides a set of mitigation plan requirements that emphasize State and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a "Standard" or an "Enhanced" Natural Mitigation Plan. "Enhanced" plans demonstrate increased coordination of mitigation activities at the State level, and if completed and approved, will increase the amount of funding through the Hazard Mitigation Grant Program. California's updated State Hazard Mitigation Plan was adopted and approved by the Federal Emergency Management Agency (FEMA) Region IX in 2007. The City of San Marcos is one of the communities covered by the 2004 County of San Diego Multi-Jurisdictional Hazard Mitigation Plan, which is a countywide plan that identifies risks posed by natural and manmade disasters.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response

Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

USGS Landslide Hazard Identification Program

The United States Geological Survey (USGS), in fulfillment of the requirements of Public Law 106-113, created the National Landslide Hazards Program to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies. FEMA is the responsible agency for the long-term management of natural hazards.

International Building Code

The International Building Code (IBC) is a model building code developed by the International Code Council that provides the basis for the CBC. The purpose of the IBC is to provide minimum standards for building construction to ensure public safety, health, and welfare. Prior to the creation of the IBC, several different building codes were used; however, by the year 2000, the IBC had replaced these previous codes. The IBC is updated every 3 years.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act is the State law that focuses on hazards from earthquake fault zones. The purpose of this law is to mitigate the hazard of surface fault rupture by regulating structures designated for human occupancy near active faults. As required by the act, the California Geological Survey has delineated Earthquake Fault Zones along known active faults in California.

California Geologic Survey

The California Geologic Survey provides guidance with regard to seismic hazards. The California Geologic Survey's Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (2008), provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigation.

California Surface Mining and Reclamation Act

Enacted to promote conservation and protection of significant mineral deposits, the California Surface Mining and Reclamation Act requires that all cities address in their General Plans the significant aggregate resources classified by the State Geologist and designated by the State Mining and Geology Board. The law also ensures that significant aggregate resources are recognized and considered before land use decisions are made that may compromise the availability of these resources.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was enacted in 1997 to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to map areas subject to seismic hazards. A geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design before development permits will be granted. Additionally, the Act requires a Standardized Natural Hazards Disclosure Statement form be completed by real estate sellers if a property is within one of the designated natural hazards areas.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act (effective June 1, 1998), requires "that sellers of real property and their agents provide prospective buyers with a 'Natural Hazard Disclosure Statement' when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone." SHMA specifies two ways in which this disclosure can be made:

- The Local Option Real Estate Transfer Disclosure Statement as provided in Section 1102.6a of the Civil Code; or
- The Natural Hazard Disclosure Statement as provided in Section 1103.2 of the Civil Code.

The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement if it contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement. Both the Alquist-Priolo Act and the SHMA require that real estate agents, or sellers of real estate acting without an agent, disclose to prospective buyers that the property is located in an Alquist-Priolo Earthquake Fault Zone or Seismic Hazard Mapping Zone.

California Uniform Building Code

The California Code of Regulations (CCR), also known as Title 24, California Building Standards Codes contain the laws regarding the construction of buildings. Title 24, Part 2 of the California Uniform Building Code (UBC) specifies standards for geologic and seismic hazards, other than surface faulting. Chapter 23 of the California UBC addresses seismic safety, and includes regulations for earthquake-resistant design and construction. The 2019 Triennial Edition of the California Building Standards Code went into effect January 1, 2020.

Local

County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

To comply with the Disaster Mitigation Act of 2000, the County of San Diego prepared the Multi-Jurisdictional Hazard Mitigation Plan in 2010. The plan serves as both a county-wide plan and a plan for local jurisdictions that identifies risks posed by natural and human-made disasters before a hazard event occurs. The plan includes overall goals and objectives shared by many jurisdictions, as well as specific goals, objectives, and mitigation action items for each of the participating jurisdictions, including the City of San Marcos, developed to help minimize the effects of the specified hazards that potentially affect their jurisdiction.

San Marcos General Plan Safety Element

The Safety Element of the San Marcos General Plan contains several policies pertaining to natural geologic hazards. The following goal and policies apply to the project:

- Goal S-1: Reduce risks to the community from earthquakes by regulating new development and redevelopment to prevent the creation of new geologic and seismic hazards.
    - Policy S-1.1: Reduce the risk of impacts from geologic and seismic hazards by applying current and proper land use planning, development engineering, building construction, and retrofitting requirements.

- Policy S-1.2: Investigate specific groundwater levels and geologic conditions underlying all new development or redevelopment proposals in areas where potential fault rupture, liquefaction, or other geologic hazards are suspected.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use. As detailed in Table 3.10-1 in Section 3.10, the project is consistent with the applicable goals and policies.

3.6.3 Thresholds of Significance

As defined in Appendix G of the *CEQA Guidelines*, project impacts to geological resources are considered significant if the project would:

- **Threshold #1:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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;
- **Threshold #2:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking;
- **Threshold #3:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction;
- **Threshold #4:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides;
- **Threshold #5:** Result in substantial soil erosion or the loss of topsoil;
- **Threshold #6:** 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;
- **Threshold #7:** Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- **Threshold #8:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As noted above, it was determined that there would be no impact associated the ability of soils to support the use of septic or alternative wastewater systems. Section 5.0, Environmental Effects Found Not to Be Significant, provides additional information on this topic. The Initial Study is included in Appendix B.1.

3.6.4 Project Impact Analysis

This section provides a project-level impact analysis for the eight thresholds related to geology and soils. The proposed project will be graded to create multi-family residential building pads and associated infrastructure. Retaining walls up to approximately 11-feet-high are planned along the perimeter of the property. Grading for the project will consist of approximately 39,711 cubic yards (cy) of cut material and 86,052 cy of fill material requiring an import of approximately 46,341 cy of material.

The import and export of earth material is guided by Section 17.32.080 of the City's Municipal Code and prior to any import of soils, a haul route will be submitted for review and approval by the City Engineer. Additionally, grading and other earth moving activities are restricted to the hours of 7:00 AM and 4:30 PM, Monday through Friday, per Section 17.32.180 of the City's Municipal Code.

A grading variance is requested for the project as it including slopes that exceed 20 feet in height without benching. Areas where slopes and/or retaining walls are proposed to be greater than 20 feet include the southern extent of development (31.6-foot maximum slope height), a small area on the western edge of the project site (25.8-foot maximum slope height) and a portion of the project frontage with E. Barham Drive (22.8-foot maximum slope height with 6-foot retaining wall). Figure 2-11 depicts the areas that are proposed to have manufactured slopes without benching in excess of 20 feet in height.

Threshold #1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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?

The project site is located within a seismically active region, as is all of southern California; however, the project site not located on or adjacent to any known active faults. According to the California Earthquake Hazard Zone Application, the City of San Marcos is not identified as a jurisdiction affected by Alquist-Priolo Earthquake Fault Zones (California Department of Conservation 2020).

According to the geotechnical investigation, the United States Geological Survey maps (2016) indicates that there are no mapped Quaternary faults crossing or trending toward the property. In addition, the site is not located within a currently established Alquist-Priolo Earthquake Fault Zone. The nearest known active-fault zones are the Rose Canyon and Newport Inglewood Faults, located approximately 14 miles west of the subject site. The risk associated with ground rupture hazard is low (GEOCON 2020).

Project structures will be designed in accordance with the California Building Code (CBC) (2019 or most current version at time of building) for resistance to seismic shaking. The project would be constructed in accordance with other CBC criteria, current seismic design specifications of the Structural Engineers Association of California, other applicable regulations, and all applicable requirements of the State of California Occupational Safety and Health Administration (Cal/OSHA).

Additionally, the project would implement all recommendations from the preliminary geotechnical investigation (GEOCON 2020). These recommendations include general provisions related to the site as well as specific recommendations related to soil and excavation characteristics, corrosion, subdrains, toe drains, grading, slope stability, seismic design criteria, foundation and concrete slab-on-grade, retaining walls and lateral loads, slope maintenance, and site drainage and maintenance. The detailed recommendations are included in Chapter 7 of the geotechnical report, which is included as Appendix G of this document.

With adherence to all regulations and recommendations, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. Impacts would be **less than significant**.

Threshold #2: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The proposed project is located in tectonically-active southern California. The type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity and the magnitude of the seismic event. Per the geotechnical engineering report (GEOCON 2020), the site is not located within a currently established Alquist-Priolo Earthquake Fault Zone. The nearest known active-fault zones are the Rose Canyon and Newport Inglewood Faults, located approximately 14 miles west of the subject site. The risk associated with ground rupture hazard is low.

As described in Threshold #1, the project would be designed in accordance with the latest CBC, current design specification of the Structural Engineers Association of California, other applicable regulations, all applicable requirements of the State of California Occupational Safety and Health Administration (Cal/OSHA), and recommendations from the preliminary geotechnical investigation (GEOCON 2020). With adherence to all regulations and recommendations, impacts related seismic ground shaking would be **less than significant**.

Threshold #3: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction?

Seismic-related Ground Failure

The Preliminary Geotechnical Evaluation indicated that there are no active faults mapped on the project site and the site is not located within a mapped Alquist-Priolo Earthquake Fault Zone.

Liquefaction

Liquefaction occurs when loose, saturated, generally fine sands and silts are subjected to strong ground shaking. The soils lose shear strength and become liquid; potentially resulting in large total and differential ground surface settlements as well as possible lateral spreading during an earthquake. Seismically induced settlement can occur in response to liquefaction of saturated loose granular soils, as well as the reorientation of soil particles during strong shaking of loose, unsaturated sands.

The project site is identified as having Zero Susceptibility to Low Susceptibility for liquefaction per Figure 6-1 of the Safety Element of the City's General Plan (San Marcos 2012). The risk associated with liquefaction and seismically induced settlement hazard is low due to the dense nature and age of the underlying formational materials and lack of shallow groundwater (GEOCON 2020). Accordingly, the potential for liquefaction induced lateral spreading and seismic induced settlement is also considered to be very low. Furthermore, the project will implement all remedial grading and drainage recommendations contained within Chapters 7 and 9 of the geotechnical report (Appendix G of EIR). Therefore, the project would not result in seismic-related ground failure, including liquefaction. Impacts would be **less than significant**.

Threshold #4: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The project site consists of a northwest trending drainage with moderate to steep slopes along the flanks. Elevations range from 710 feet AMSL in the southeast portion of the site to 650 feet AMSL in the northwest portion. The project site is identified as having Low Susceptibility for soil slip, surficial landslides, or debris flow per Figure 6-1 of the Safety Element of the City's General Plan (City of San Marcos 2012).

According to the geotechnical investigation, the risk associated with landslide hazards at the site is low. In addition, the California Department of Conservation – California Geological Survey, Geologic Map of the Oceanside 30'x 60' Quadrangle (Kennedy & Tan 2007) does not indicate previously mapped landslide deposits on or near the property (See Figure 2 of Preliminary Geotechnical Report GEOCON 2020). Therefore, the potential of seismically-induced landsliding or slope instability is considered to be low at the project site. Therefore, the project would not directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury or death involving landslides. Impacts would be **less than significant.**

Threshold #5: Result in substantial soil erosion or the loss of topsoil?

Proposed site improvements require grading and soil import of approximately 46,400 cy of import material. The project would be under the State Water Resources Control Board (SWRCB) General Construction Permit, which prohibits sediment or pollutant release from the project site and requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of best management practices (BMPs) that would incorporate erosion and sediment control measures during and after grading operations to stabilize these areas. Furthermore, the project will implement all landscape maintenance and drainage recommendations contained within Chapter 7 of the geotechnical report (Appendix G of EIR).

Therefore, the proposed project would incorporate BMPs and recommendations that would minimize erosion and loss of topsoil. The proposed project would not result in substantial soil erosion of the loss of topsoil. Impacts would be **less than significant**.

Threshold #6: 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?

According to the geotechnical investigation prepared by GEOCON (2020), the surficial soil types consist of undocumented fill, topsoil, alluvium and colluvium overlain atop of Cretaceous-age granitic rock. In general, these soil types are unsuitable for support of settlement - sensitive structures and improvements and will require removal and compaction. Specifically, the undocumented fill consists of loose, moist, silty sand, with some minor trash debris and will require complete removal and compaction. It is estimated that the undocumented fill is confined to a relatively small area in the north-central portion of the project site. The topsoil is characterized as loose, damp to moist, silty fine- to medium-grained sand and will require removal and compaction. The upper portion of the alluvial/colluvial deposits are poorly consolidated and compressible, and will require removal and compaction during grading. Based on laboratory testing, the lower portion of these deposits are generally suitable in their present condition for support of structural fill and settlement-sensitive structures. Excavations into the granitic rock will require special handling and placement.

Site preparation and fill material replacement will be completed consistent with Chapter 7 of the geotechnical investigation (GEOCON 2020). Specifically, grading will be accomplished under the observation and testing of the project geotechnical engineer and engineering geologist or their authorized representative in accordance with the recommendations and earthwork specifications of the geotechnical investigation and the current grading ordinance of the City of San Marcos.

In summary, the proposed project would incorporate techniques and recommendations that would minimize the potential for unstable conditions that could result in on- or off-site, lateral spread, subsidence, liquefaction or collapse. Impacts would be **less than significant**.

Threshold #7: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

According to the geotechnical investigation prepared by GEOCON (2020), the soils encountered are considered to be both non-expansive and expansive (expansion index greater than 20 as defined by 2019 CBC Section 1803.5.3). The predominant material encountered was silty sand, with some clayey sands, and exhibit a low expansion potential. As such, these materials are susceptible to volume changes with variations in their moisture content, expanding with the introduction of water and shrinking as the soil dries. However, the expansion potential of these materials is not considered to pose a hazard for the proposed project. With adherence to the geotechnical report recommendations, which include removal and compaction during grading, impacts related to expansive soils would be **less than significant**.

Threshold #8: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed project site lies within the Peninsular Ranges Geomorphic Province of southern California. This province consists of a series of ranges separated by northwest trending valleys; subparallel to branches of the San Andreas Fault (CGS 2002). The Peninsular Ranges geomorphic province is one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. It is bound on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province. Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks (CGS 2002). Major fault zones and subordinate fault zones found in the Peninsular Ranges Province typically trend in a northwest-southeast direction.

According to the Preliminary Geotechnical Evaluation prepared for the project (GEOCON 2020), the geologic conditions underlying the site consist of undocumented artificial soils (Qudf), and Quaternary-aged colluvial and alluvium deposits (Qcol and Qal)). Cretaceous-age granitic rock underlies the surficial deposits throughout the property. Colluvial deposits were encountered along the entire length of the northwest trending drainage and adjacent hillsides, and vary in thickness from approximately 3 to 11 feet thick. The Quaternary Period is divided into two epochs: the Pleistocene (2.588 million years ago to 11.7 thousand years ago) and the Holocene (11.7 thousand years ago to today).

According to the San Marcos General Plan EIR (page 3.12-1), older Pleistocene-age alluvial deposits have the potential to yield "Ice-age" fossils. In composition, these deposits consist of "moderately well consolidated, poorly sorted, permeable, commonly slightly desiccated gravel, sand, silt, and clay-bearing alluvium." These Pleistocene alluvial deposits are locally capped by Holocene alluvium and artificial fill, and at depth, are underlain by Cretaceous and older igneous rocks. Pleistocene old alluvial flood plain deposits are found in northern San Diego County and include recorded fossil collecting localities in Vista, Carlsbad, and Oceanside. These localities have yielded fossils of terrestrial plants, freshwater and terrestrial invertebrates such as clams and snails, and terrestrial mammals such as ground sloth, rodents, horse, tapir, camel, llama, deer, mastodon, and mammoth. Given that no fossils have been recovered from the sediments mapped as old alluvial flood plain deposits in the City, it is suggested that these deposits have an unproven and/or undetermined paleontological sensitivity. Due to the fact that the Pleistocene old alluvial floodplain deposits have an unproven/undetermined sensitivity there is a potential that the site could contain paleontological resources that could be disturbed during grading activities for the project. This represents a potentially **significant impact** (**Impact GEO-1**) and mitigation is required.

- **Impact GEO-1:** Project grading may result in disturbance of previously unknown paleontological resources.

3.6.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to geology and soils, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts on related to geology and soils. All of the cumulative projects identified in Table 2-3 are considered in this cumulative analysis.

Due to the localized nature of geology and soils, cumulative projects would address potential impacts to geology and soils on a project-by-project basis, as potential geologic hazards and soil composition varies by site. Each cumulative project would be required to assess individual and site-specific geologic conditions, which would inform construction and development of each site. All cumulative development would be subject to similar requirements to those imposed and implemented for the proposed project and would be required to adhere to applicable regulations, standards, and procedures.

Further, as discussed in Section 3.6.4, the project site has the potential to yield paleontological resources. Thus, impacts to paleontological resources from implementation of the project would be potentially significant. Some of the projects on the cumulative list are located in areas that support alluvial soils. Certain types of alluvial soils have the potential to contain paleontological resources. Similar to the project, the presence of these resources is typically unknown until earthwork activities commence for project construction. It is expected that cultural resources studies would be prepared for all cumulative projects to assess potential impacts. For the cumulative projects that are within sensitive areas for paleontological resources, the expectation is that mitigation measures would be included to require consultation with a paleontologist or a construction monitor to ensure that impacts to this resource to do not occur. As such, the proposed project would not result in significant cumulative impacts for geology and soils. Impacts would be **less than significant.**

3.6.6 Mitigation Measures

Due to the fact that the Pleistocene old alluvial floodplain deposits have an unproven/undetermined sensitivity there is a potential that the site could contain paleontological resources that could be disturbed during grading activities for the project. The following mitigation is required.

Unknown Paleontological Resources (Impact GEO-1)

MM-GEO-1 Prior to project grading the project applicant shall retain a qualified paleontologist to review the proposed project area to determine the potential for paleontological resources to be encountered. If there is a potential for paleontological resources to occur, the paleontologist shall identify the area(s) where these resources are expected to be present, and a qualified paleontological monitor shall be retained

to monitor the initial cut in any areas that have the potential to contain paleontological resources.

3.6.7 Conclusion

Based upon the analysis presented in Sections 3.6.3 and 3.6.4, impacts associated with seismicity, liquefaction, landslides, erosion/loss of topsoil, compressible soils, and expansive soils, were determined to be less than significant. The project will adhere to all recommendations in the preliminary geotechnical investigation prepared for the project (GEOCON 2020). Due to the fact that Pleistocene old alluvial floodplain deposits have an unproven/undetermined sensitivity, there is a potential that the site could contain paleontological resources that could be disturbed during grading activities for the project. Incorporation of MM- GEO-1 would require a paleontologist to identify areas where paleontological resources may be present and to monitor the initial cut in any areas that may have the potential to contain paleontological resources.

3.7 Greenhouse Gas

Introduction

This section analyzes the potential for the proposed project to have impacts related to greenhouse gas (GHG) emissions. This section analyzes short-term construction impacts and long-term operational impacts and determines whether the proposed project would conform to the City of San Marcos Climate Action Plan (CAP). This section is based upon the following report, which is included as **Appendix H.1** of this document[7]:

- *Greenhouse Gas Assessment, East Barham Residential Development Project*, prepared by Ldn Consulting, November 16, 2021 (LDN 2021)

The project's Climate Action Plan Consistency Review Checklist (CAP Checklist) is included as **Appendix H.2**. A discussion of the project's consistency with the requirements of the CAP Checklist is provided later in this section. The CAP is available on the City's web site.[8] **Table 3.7-1** summarizes the project- and cumulative-level GHG impacts, by threshold.

Table 3.7-1. Greenhouse Gas Emissions Summary of Impacts

Threshold of Significance	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
#1 - Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	Less than Significant	Less than Significant	Less than Significant
#2 - Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than Significant	Less than Significant	Less than Significant

3.7.1 Existing Conditions

Global Climate Change

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.

[7] Full references for documents cited in this section are included in Chapter 7, References, of this EIR.
[8] http://www.san-marcos.net/departments/development-services/planning/climate-action-plan

The greenhouse effect is the trapping and build-up of heat in the atmosphere near the Earth's surface. This natural process contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs into 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.

GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere and contribute to the greenhouse effect. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N^2O), ozone (O_3), water vapor, hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. To simplify greenhouse gas calculations, both CH_4 and N_2O are converted to an equivalent amount of carbon dioxide, or CO_2e. CO_2e is calculated by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP). GWPs for both CH_4 and N_2 are presented within the 2007 Intergovernmental Panel on Climate Change (IPCC) report as being 25 and 298, respectively (IPCC 2007).

A brief description of each GHG follows:

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities. It is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include, but are not limited to, respiration of bacteria, plants, animals, and fungi; 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. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. CH_4 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. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O 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 N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

3.7.2 Regulatory Setting

The following section provides a general description of the applicable regulatory requirements pertaining to GHGs, including federal, state and local guidelines.

Federal

The United States Environmental Protection Agency (USEPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA). The Supreme Court of the United States ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that USEPA has the authority to regulate emissions of GHGs.

Proposed Endangerment and Cause or Contribute Findings for GHG under the CAA

On December 7, 2009, USEPA signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations; and

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These findings do not themselves impose any requirements on industry or other entities; however, this action is a prerequisite to finalizing USEPA's proposed GHG emission standards for light-duty vehicles, which USEPA proposed in a joint proposal including the Department of Transportation's (DOT) proposed CAFE standards on September 15, 2009.

Energy Independence and Security Act. 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:

1. 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.

2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct 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.

3. 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.

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, mobile sources, renewable energy procurement, water, solid waste, and water.

State Climate Change Targets

Executive Order S-3-05. Executive Order (EO) S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050.

Assembly Bill 32. In furtherance of the goals established in EO S-3-05, the legislature enacted AB 32 (Núñez and Pavley). 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.

California Air Resources Board's Climate Change Scoping Plan. Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and regulations necessary to achieve the GHG emissions reduction mandate of AB 32. Therefore, in furtherance of AB 32, CARB adopted regulations requiring the reporting and verification of GHG emissions from specified sources, such as industrial facilities, fuel suppliers and electricity importers (see Health & Safety Code Section 35830; Cal. Code Regs., tit. 17, §§95100 et seq.). CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (2008 Scoping Plan) in accordance with Health and Safety Code Section 38561. The 2008 Scoping Plan established an overall framework for the measures to be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The 2008 Scoping Plan evaluated opportunities for sector-specific reductions, integrated all CARB and Climate Action Team9 early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program.

In the 2008 Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the 2008 Scoping Plan's Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

[9] The Climate Action Team is comprised of state agency secretaries and heads of state agencies, boards and departments; these members work to coordinate statewide efforts to implement GHG emissions reduction programs and adaptation programs.

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 EO S-3-05 and EO B-16-2012. The First Update found that California was on track to meet the 2020 emissions reduction mandate established by AB 32, noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

Executive Order B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide 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 statewide GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's *Scoping Plan* to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016.

Senate Bill 32 and Assembly Bill 197. SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target; make changes to CARB's membership and increase legislative oversight of CARB's climate change-based activities; and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, 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, in order 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 toxic air contaminants (TACs) from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the scoping plan.

2017 Climate Change Scoping Plan (November 2017). In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* for public review and comment (CARB, 2017). This update includes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030,[10] inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health. When discussing project-level GHG emissions reduction actions and thresholds, the *2017 Scoping Plan* states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *2017 Scoping Plan* also recognizes that such an achievement "may not be feasible or appropriate for every project and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results

10 In July 2017, AB 398 was enacted into law, thereby extending the legislatively-authorized lifetime of the Cap-and-Trade Program to December 31, 2030.

in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *2017 Scoping Plan* in December 2017.

Executive Order B-55-18. EO B-55-18 (September 2018) establishes a statewide policy for the state to achieve carbon neutrality as soon as possible, and 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.

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 non-residential 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 (CEC 2015). The current version of CalEEMod used in this analysis employs, as a default parameter, the 2016 Title 24 standards to estimate GHG emissions.

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards became effective January 1, 2020. The standards require that all low-rise residential buildings shall have a photovoltaic system meeting the minimum qualification requirements such that annual electrical output is equal to or greater than the dwelling's annual electrical usage. Notably, net energy metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. Single-family homes built with the 2019 standards will use about 7% less energy due to energy efficiency measures versus those built under the 2016 standards, while new nonresidential buildings will use about 30% less energy mainly to lighting upgrades (CEC 2018).

The 2022 Building Energy Efficiency Standards (Energy Code) will improve upon the 2019 Energy Code for new construction of, and additions and alterations to, residential and nonresidential buildings. Workshops will be held to present revisions and obtain public comment. Proposed standards will be adopted in 2021 with an effective date of January 1, 2023. The California Energy Commission (CEC) updates the standards every three years.

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 CALGreen and establishes minimum mandatory standards as well as 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 CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require mandatory reduction in indoor and outdoor water use, diversion of demolition waste, mandatory inspections of energy systems, inclusion of electric vehicle charging stations for designated parking spaces and use of low-pollutant-emitting exterior and interior finish materials. At the time this GHG analysis was conducted, the 2019 standards were applicable

and went into effect on January 1, 2020. The 2019 standards include mandatory measures for planning and design, energy efficiency, water and conservation efficiency, material and resource conservation as well as environmental quality. One of the most notable changes in the 2019 standards is the requirement for the installation of rooftop solar on residential buildings (California Energy Commission, 2017). It should be noted that the State updates these regulations every three years. Thus, throughout Project construction, buildings will need comply with the most recently adopted standards.

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 CEC to demonstrate compliance with 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; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. 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 and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Mobile Sources

State Vehicle Standards. AB 1493 requires CARB to set GHG emission standards for passenger vehicles and EO S-1-07 sets a declining Low Carbon Fuel Standard to reduce the carbon intensity of California passenger vehicle fuels. The Advanced Clean Cars Program is an emissions control program to reduce smog-forming pollution, GHG emissions, promote clean cars, and provide fuels for clean cars. EO B-16-12 supports and facilitates development and distribution of Zero Emissions Vehicles. As explained under the "Federal Vehicle Standards" description above, USEPA and NHTSA approved the SAFE Vehicles Rule Part One, which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. As the USEPA rule is the subject of pending legal challenges, and no GHG adjustment factors have been issued for EMFAC by CARB, this analysis continues to utilize the best available information at this time, as set forth in EMFAC.

Senate Bill 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization 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 California Government Code Section 65080(b)(2)(K), a sustainable communities strategy does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) 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 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets adopted for SANDAG in 2010 are a 7% reduction in per capita passenger vehicle GHG emissions by 2020 and a 13% reduction by 2035, measured relative to 2005 GHG emissions. In 2018, CARB adopted the second round of SB 375 reduction targets, and increased SANDAG's 2020 target to a 15% reduction in per capita passenger vehicle GHG emissions and the 2035 target to a 19% reduction, using the same 2005 baseline (CARB 2021b).

In October 2015, SANDAG adopted San Diego Forward: The Regional Plan, which contains the region's current SCS. In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region. More specifically, as set forth in CARB Executive Order G-15-075, CARB determined that SANDAG's SCS would achieve a 15 percent per capita reduction by 2020 and a 21 percent per capita reduction by 2035.

In 2018, CARB updated the SB 375 targets. For purposes of SANDAG, the updated targets include a 15 percent reduction in emissions per capita by 2020 and a 19 percent reduction by 2035. SANDAG is in the process of preparing its next SCS, which will consider whether and how the region could attain these reduction targets.

Currently SANDAG is working on the 2021 Regional Plan. The current Draft Plan provides a big picture vision for how the San Diego region will grow through 2050 and beyond with an implementation program to help make the plan a reality. Within the Draft Plan, SANDAG introduced a transformative vision for transportation in San Diego County that completely reimagines how people and goods could move throughout the region in the 21st century. The plan outlines the "5 Big Moves" which are: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and the Next OS. The SANDAG Board of Directors will be asked to adopt the 2021 Regional Plan in late 2021. Once adopted, it will become the region's long-term plan to be implemented incrementally through the Regional Transportation Improvement Program (RTIP) (SANDAG, 2021).

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025 (CARB 2012). 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. To improve air quality, CARB also has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that, in 2025, cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the USEPA and the NHTSA, also has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 (CARB 2021a).

EO B-16-12 (March 2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million zero-emission vehicles on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an

Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

Senate Bill 350. In 2015, SB 350 – the Clean Energy and Pollution Reduction Act – was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code, Section 740.12).

Renewable Energy Procurement

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010.

SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. 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 of 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. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030 be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

SB 100 (2018) has further accelerated and expanded the RPS, requiring achievement of a 50 percent RPS by December 31, 2026 and a 60 percent RPS by December 31, 2030. SB 100 also established a new statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales within the State of California by December 31, 2045.

Water

EO B-29-15. In response to drought-related concerns, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since 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. AB 939 (1989), known as the Integrated Waste Management Act (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 percent by 1995 and 50 percent by the year 2000.

AB 341 (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 percent 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 has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products. Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (CO_2 and CH_4) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

Local

City of San Marcos Climate Action Plan

Consistent with AB 32, the City adopted a CAP in September 2013 as a long-range plan to reduce GHG emissions and mitigate climate change impacts associated with City government operations and with implementation of the City's General Plan. An updated CAP was adopted on December 8, 2020.

The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. The CAP is a plan for the reduction of GHG emissions in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP (City of San Marcos 2020).

The City has also developed a Climate Action Plan Consistency Review Checklist (CAP Checklist), in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. The CAP Consistency Guidance Memo dated July 15, 2020 summarizes the methodology and application of a GHG screening threshold which is set at 500 metric tons carbon dioxide equivalent [$MTCO_2e$] per year as outlined int the CAP (Ascent 2020). Projects that are projected to emit fewer than 500 $MTCO_2e$ annually would not make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. This screening threshold is for new development projects consistent with the City's General Plan.

When such a project exceeds the screening threshold, the project would be required to demonstrate consistency with the CAP through the CAP Checklist.

In most cases, compliance with the CAP Checklist would provide the CEQA streamlining path to allow project specific environmental documents, if eligible, to tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts. Projects that are consistent with the General Plan and implement CAP Checklist GHG reduction measures may incorporate by reference the CAP's cumulative GHG analysis. The City's CAP meets the requirements under Section 15183.5 of the CEQA Guidelines as a qualified plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects.

If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the CAP Checklist.

For projects seeking a General Plan Amendment, such as the proposed project, the CAP Checklist requires a comparative analysis to determine if the General Plan Amendment results in an equivalent or less GHG-intensive project when compared to the existing designations. In addition to providing evidence to support the conclusion that the project would generate fewer emissions than existing designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the CAP Checklist.

If a General Plan Amendment results in a more GHG-intensive project, the project is required to prepare a quantitative GHG analysis based on applicable sections of the CEQA Guidelines.

City of San Marcos General Plan

Land Use and Community Design Element

- Goal LU-2: Promote development standards and land use patterns that encourage long-term environmental sustainability.
    - Policy LU-2.1: Promote compact development patterns that reduce air pollution and automobile dependence and facilitate walking, bicycling, and transit use.
    - Policy LU-2.3: Require the incorporation of green building practices, technologies, and strategies into development projects per code standards.
    - Policy LU-2.7: Promote the instillation of trees to reduce the urban heat-island effect and green infrastructure to reduce storm water runoff.

The Conservation and Open Space Element of the City of San Marcos General Plan identifies one goal and two policies regarding GHGs that are applicable to the proposed project:

- Goal COS-4: Improve regional air quality and reduce GHG emissions that contribute to climate change.
    - Policy COS-4.3: Participate in regional efforts to reduce GHG emissions.
    - Policy COS-4.4: Quantify community-wide and municipal GHG emissions, set a reduction goal, identify and implement measures to reduce GHG emissions as required by governing legislation.

- Policy COS-4.5: Encourage energy conservation and the use of alternative energy sources within the community.
- Policy COS-4.6: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.

Additionally, the Mobility Element of the City of San Marcos General Plan identifies one goal and associated policy that addresses GHG emission reductions through minimized vehicle miles traveled and reduced fuel consumption:

- Goal M-3: Promote and encourage use of alternative transportation modes, including transit, bicycles, neighborhood electric vehicles (NEVs), and walking, within the City.
  - Policy M-3.1: Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and GHG emissions; and reinforces the role of the street as a public space that unites the City.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies pertaining to greenhouse gas emissions.

3.7.3 Thresholds of Significance

Appendix G of the State CEQA Guidelines identifies two evaluation criteria to determine the significance of GHG emissions. A significant impact would be identified if the project would:

- **Threshold #1:** Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- **Threshold #2:** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gases.

The City developed a CAP Checklist, in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

The CAP Consistency Guidance Memo summarizes the methodology and application of a GHG screening threshold which is set at 500$MTCO_2e$ per year (Ascent 2020). Projects that are projected to emit fewer than 500 $MTCO_2e$ annually would not make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. This screening threshold is for new development projects consistent with the City's General Plan. When such a project exceeds the screening threshold, the project would be required to demonstrate consistency with the CAP through the CAP Checklist.

In most cases, compliance with the CAP Checklist would provide a streamlined CEQA review path to allow project specific environmental documents, if eligible, to tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts. Projects that are consistent with the General Plan and implement CAP GHG reduction measures may incorporate by reference the CAP's cumulative GHG analysis. The City's CAP meets the requirements under Section 15183.5 of the CEQA Guidelines as a

qualified plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects.

If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the CAP Checklist.

For projects seeking a General Plan Amendment, such as the proposed project, the CAP Checklist requires a comparative analysis to determine if the amendment results in an equivalent or less GHG-intensive project when compared to the existing designations. In addition to providing evidence to support the conclusion that the project would generate fewer emissions than existing designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the CAP Checklist.

If a land use designation amendment results in a more GHG-intensive project, the project is required to prepare a quantitative GHG analysis based on applicable sections of the CEQA Guidelines.

3.7.4 Project Impact Analysis

GHGs related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 GHG model. The purpose of this analysis is to complete a comparison between the proposed Project and the MU3 General Plan Buildout scenario. The construction module in CalEEMod was used to calculate the emissions associated with the construction of the project. The CalEEMod input/output model is shown in Attachments A and B of the GHG report in Appendix H1 of this document.

The project would start grading late 2022 with residential construction to start shortly thereafter. Grading will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of fill material. Emissions generated by earthwork activities associated with grading were analyzed within CalEEMod using a "Grading Equipment Passes" methodology which has been approved by the South Coast Air Quality Management District (SCAQMD) As noted in the CalEEMod documentation, this methodology was approved by CAPCOA (CAPCOA 2021). Since CalEEMod was used for GHG emissions estimation from construction, this methodology was assumed.

Per the Project Engineer, during grading operations, a standalone rock crusher similar to a Terex 4242SR 310 horsepower (HP)+/- would be onsite for ancillary crushing needs if necessary. An example of the crusher modeled within CalEEMod is shown in Attachment C of Appendix H1. Construction of all residential units would be expected sometime in 2024. As previously discussed, the project's blasting-related activities would not generate GHG emissions.

Threshold #1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

The following analysis presents the anticipated emissions for the proposed project and for a development project that would be consistent with the existing General Plan designation of Mixed Use 3 (MU3).

Proposed Project Construction Emissions

Construction-related GHG emissions include emissions from heavy construction equipment, blasting, rock crushing, truck traffic, soils import activities, and worker trips. Emissions for construction of the proposed project were calculated based on emission factors from the latest CalEEMod 2020.4.0 GHG

model. The project would start grading late 2022 with residential construction to start shortly thereafter. Earthwork activities for the project include an import of 46,341 CY of soil and would include a rock crusher during the grading operations. The project also may require some blasting-related activities; as such, the project's air quality study estimated the criteria air pollutants associated with blasting. Blasting-related activities would utilize ammonium nitrate with fuel oil (ANFO) based explosives. When ANFO detonates, the blast would produce both CO and NOx which are not considered GHGs (USEPA 1995).

After all the earthwork activities are complete, paving would occur and then home construction. Construction of all residential units would be expected sometime in 2024. **Table 3.7-2** presents the anticipated construction emissions for the proposed project. As shown in Table 3.7-2, anticipated construction-related GHG emissions for the proposed project are estimated at 881.55 MT of CO_2e over the construction life of the project. Per guidance from SCAQMD, the construction-related emissions are amortized over a 30-year period because impacts from construction activities occur over a relatively short-term period of time and they contribute a relatively small portion of the overall lifetime project GHG emissions (SCAQMD 2008). SDAPCD does not have guidance on this topic and SCAQMD's recommended methodology has been widely accepted throughout the State. This amortized figure estimates project construction would contribute 29.38 MT per year of CO_2e.

Table 3.7-2. Expected Annual Construction CO_2e Emissions Summary (Proposed Project)

Year	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	Total CO_2e (metric tons/year)
2022	0.00	164.80	164.80	0.02	0.02	170.08
2023	0.00	570.74	570.74	0.09	0.02	579.61
2024	0.00	130.56	130.56	0.02	0.00	131.86
Total Construction Emissions						**881.55**
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						**29.38**

Source: Ldn Consulting 2021b.

Note: Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1 of the GHG Report (Ldn 2021b).

Operational Emissions

Proposed Project Operational Emissions

Once construction is completed the proposed project would generate GHG emissions from daily operations which would include sources such as area, energy, mobile, solid waste and water uses, which are calculated within CalEEMod. Area sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from electricity and natural gas use. Mobile sources are from vehicular traffic. Solid waste generated in the form of trash is also considered as decomposition of organic material breaks down to form GHGs. Water sources include standard residential uses including landscaping activities. GHGs from water are also indirectly generated through the conveyance of the resource via pumping throughout the state and as necessary

for wastewater treatment. For consistency with the CAP, the project was analyzed under the 2030 year scenario. Also, no hearth (fireplace) options were included in the modeling. A design feature has been included in the project description to indicate exclusion of fireplaces from the project.

Electrical energy-intensity factors were updated in CalEEMod 2020.4.0 to reflect San Diego Gas and Electric's (SDG&E) latest emissions rates which SDG&E provided to CAPCOA for the model update. CalEEMod 2016.3.2 (the model prior to 2020.4.0) was based on default emissions from 2009 which included a 10.5 percent RPS factor as indicated by the California Public Utilities Commissions (CPUC) (CPUC 2016). The default CalEEMod 2020.4.0 emissions are now 540 pounds per megawatt hour (lbs/MWh) which when compared with the defaults is 2016.2 represents a 33 percent achievement for RPS in 2020 which is consistent with SBX1-2. In accordance with SB 100, SDG&E will achieve an RPS of 60 percent in 2030. **Table 3.7-3** identifies the what the emissions in 2030 will be assuming a 60 percent RPS is achieved as required by current law.

Table 3.7-3. SDG&E Energy Intensity Factors

GHG	2009 Factors (lbs/MWh) w/10.5% RPS	Current RPS Factors 2020 33% Achieved (lbs/MWh)	Current RPS Factors 2030 60% Achieved (lbs/MWh)
Carbon Dioxide (CO_2)	720.49	539.98	322.38
Methane (CH_4)	0.029	0.033	0.0197
Nitrous Oxide (N_2O)	0.006	0.004	0.0024

The project traffic engineer estimated that the project would generate 1,208 daily trips (LLG 2021). These traffic numbers were utilized within the CalEEMod analysis. In addition, the project traffic study estimated that the MU3 General Plan Buildout scenario would generate 5,410 trips (LLG 2021). This GHG analysis uses a 5.4 mile trip distance which is consistent with the project's air quality assessment which uses methodologies looking at EMFAC total vehicle miles traveled (VMT) divided by the total number of trips within San Diego County (Ldn Consulting, 2021a). It should be noted that the air quality assessment used a 2025 scenario and the VMT per trip may be slightly different in 2030. Since the project comparison would utilize the same year regardless, any changes in VMT per trip would be inconsequential. This trip distance was used for the illustrative comparative analysis only.

Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. The operational modeling results for the proposed project and the MU3 General Plan Buildout scenario can also be seen in Attachments A and B to the GHG Report in Appendix H.1 (LDN 2021b).

since the proposed project seeks a General Plan amendment, the proposed project's analysis is based on a comparison between estimated emissions from the proposed use(s) and what would otherwise be approved under the existing General Plan. If a project's proposed amendment to the General Plan would result in lower GHG emissions than development under the General Plan, the project would be required to implement the applicable CAP measures identified in Step 2 of the CAP Consistency Review Checklist. Table 3.7-4 describes the CAP measures that are applicable to a multi-family residential project and how the proposed project will comply.

Table 3.7-4. Project Consistency with Applicable CAP Checklist Measures

CAP Consistency Review Checklist Measures	Project Compliance
Electric Vehicle Charging Stations (Measure T-2) Will the project install electric vehicle charging stations (Level 2 or better) in at least five percent of the total parking space provided on-site?	The project has 56 guest parking spaces and would include three Level 2 electric vehicle charging stations. The project has been designed to meet the requirements of Measure T-2.
Transportation Demand Management (Measure T-9) Will the project develop and implement a TDM plan that includes, at minimum, all of the TDM strategies listed below? Provide discounted monthly transit pass or provide at least 25 percent transit fare subsidy to residents/employees. Provide designated car-share, carpool, vanpool, and/or park-and-ride parking spaces. Provide pedestrian connections between all internal uses and to all existing or planned external streets around the project site(s). Provide secure bicycle parking spaces or bicycle racks, showers, and clothes lockers. Encourage telecommuting for employees (allow one telecommute day per week or compressed work weeks) or provide a telecommute work center with common office space and equipment available to residents.	**Transit Discount:** The HOA manager will provide transit information to the owners and make a good faith effort in offering discounted transit fares. The HOA will provide a newsletter to inform the residents there are options for reduced transit passes. **Designated Parking**: The project will provide designated car-share, carpool, vanpool, EV and/or park-and-ride spaces on site. **Pedestrian Connections:** The project design includes pedestrian connections within the project and to connect to the sidewalk on Barham. **Bicycle Spaces:** The project will provide bicycle racks and additional secure bicycle storage is available within each of the garages attached to the homes. Residents will have access to showers in their homes. **Telecommuting**: The project will have space available in the community room for residents to telecommute. Each residence will also have a suitable area for telecommuting. The project has been designed to meet the requirements of Measure T-9.
Water Heaters (Measure E-1) Will the project install one of, or a combination of, the following water heater types in place of natural gas heaters?	The project will install electric tank water heaters within all units. Natural gas water heaters will not be used. The project has been designed to meet Measure E-1.
Landscaping Water Use (Measure W-1) Will the project comply with the City's Water Efficient Landscape Ordinance?	The project will comply with the City's Water Efficient Landscape Ordinance. The project has been designed to meet Measure W-1.
Urban Tree Canopy (Measure C-2)	The project proposes 66 parking spaces of which 10 are reserved for residents. Per the

CAP Consistency Review Checklist Measures	Project Compliance
For multi-family residential, if the project is provided more than 10 parking spaces, will the project plant at least one tree per five parking spaces provided?	landscape concept plan, the project will plant 243 trees. The project exceeds the requirements of Measure C-2.

Table 3.7-5 presents the proposed project's operational emissions summary. As shown in Table 3.7-5, the project would generate 954.74 MT CO_2e per year without incorporating any CAP measures. The project would be required to implement all of the applicable CAP measures identified in Table 3.7-4 and these measures would further reduce GHG emissions. Since the intent of this analysis is to compare the proposed project with the MU3 General Plan Buildout scenario, not all CAP measures were calculated as a GHG reduction. Including the GHG reduction associated with CAP Measure T-2, the provision of three Level 2 electric vehicle charging stations, the project would generate 949.79 MT CO_2e/Year.

Table 3.7-5. Proposed Project Operational Emissions Summary (MT/Year)

Source	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e (MT/Yr)
Area	0.00	1.83	1.83	0.00	0.00	1.88
Energy	0.00	216.47	216.47	0.01	0.00	217.48
Mobile	0.00	618.74	618.74	0.05	0.03	628.77
Waste	14.10	0.00	14.10	0.83	0.00	34.93
Water	3.12	28.81	31.93	0.32	0.01	42.30
					Operations Total	**925.36**
					Construction Emissions (See Table 3.7-2 above)	**29.38**
					Construction and Operations	**954.74**
					CAP Measure T-2: EV Charger Reduction	**-4.95**
					Project GHG Emissions	**949.79**

Source: Ldn Consulting 2021b.
Note: The data is presented in decimal format and may have rounding errors.

MU3 General Plan Buildout Emissions

The MU3 General Plan Buildout scenario is assumed to have a similar construction footprint as the proposed project. A similar construction model was prepared based on default settings though did include manual updates similar to the project to reflect identical cut/fill/import as well as rock breaking activities. The equipment list and durations are identical for the MU3 General Plan Buildout scenario as shown in Table 4.1 of the GHG report (Appendix H1). **Table 3.7-6** presents the construction emissions from the MU3 General Plan Buildout scenario.

Table 3.7-6. MU3 General Plan Buildout Scenario - Annual Construction CO2e Emissions Summary

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2022	0.00	166.10	166.10	0.02	0.02	171.39
2023	0.00	874.39	874.39	0.10	0.06	893.28
2024	0.00	205.28	205.28	0.03	0.01	208.95
Total Construction Emissions						1,273.62
Yearly Average Construction Emissions (Metric Tons/year over 30 years)						42.45

Source: Ldn Consulting 2021b.

Once construction is completed the MU3 General Plan Buildout scenario would generate GHG emissions from daily operations which would include sources such as area, energy, mobile, solid waste and water uses which are calculated in CalEEMod. The traffic study estimated that buildout of the MU3 General Plan Buildout scenario would generate 5,410 trips (LLG 2021). Under this scenario, different CAP Checklist measures would apply since it would be a non-residential project. The CAP measures required for the non-residential development would include:

- Electric Vehicle Charging Stations (Measure T-2) – The MU3 General Plan Buildout scenario would have 879 parking locations and would include 44 Electric Vehicle Charging Stations.
- Transportation Demand Management (Measure T-9) – The MU3 General Plan Buildout scenario would implement all of the TDM strategies identified in Measures T-9.
- Photovoltaic Installation (Measure E-2) – The MU3 General Plan Buildout scenario would install photovoltaic systems with a minimum capacity of two watts per square foot of gross floor area.
- Urban Tree Canopy (Measure C-2) – The MU3 General Plan Buildout scenario would plant at least one tree per five parking spaces provided for a minimum of 176 trees.

Table 3.7-7 presents the operational emissions summary for the MU3 General Plan Buildout scenario. As shown in Table 3.7-7, the MU3 General Plan Buildout scenario would generate 3,964.92 MT CO_2e per year without incorporating any CAP measures. This scenario would be required to implement all of the applicable CAP measures identified above and these measures would further reduce GHG emissions. When reduction for CAP Measures T-2 and E-2 are considered, the MU3 General Plan Buildout scenario would generate 3,269.10 MT CO_2e per year.

Table 3.7-7. MU3 General Plan Buildout Scenario Operational Emissions Summary (MT/Year)

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.02	0.02	0.00	0.00	0.02
Energy	0.00	1069.60	1069.60	0.05	0.01	1074.25
Mobile	0.00	2453.97	2453.97	0.20	0.12	2495.21
Waste	55.84	0.00	55.84	3.30	0.00	138.34

Source	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Water	15.94	145.71	161.65	1.65	0.04	214.65
					Operations Total	**3,922.47**
					Construction Emissions (See Table 3.7-5)	**42.45**
					Construction and Operations	**3,964.92**
					CAP Measure T-2: EV Charger Reduction	**-400.40**
					CAP Measures E-2: Solar PV Installation	**-295.42**
					MU3 General Plan Buildout Scenario Project GHG Emissions	**3,269.10**

Source: Ldn Consulting 2021b.

Comparison of the Proposed Project and the MU3 General Plan Buildout Scenario

When the proposed project's GHG emissions are compared to the GHG emissions under the MU3 General Plan Buildout scenario, it is estimated that the proposed project would result in 70% lower GHG emissions (949.79 MT CO_2e per year compared to 3,269.10 MT CO_2e per year) compared to a General Plan (MU3 General Plan Buildout scenario. This is driven largely by the reduced number of vehicle trips that would occur under the proposed project compared to buildout under the General Plan. The project will also implement all of the CAP Checklist measures that are applicable to multi-family housing. Projects that propose a General Plan Amendment and have GHG emissions that are less than would be anticipated for a project that would be consistent with the General Plan and implement CAP GHG reduction measures may incorporate by reference the CAP's cumulative GHG analysis. The City's CAP meets the requirements under Section 15183.5 of the CEQA Guidelines as a qualified plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. The CAP Checklist provides a streamlined review process for the GHG emissions analysis of proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. As such, the proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be **less than significant**.

Threshold #2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHGs

The proposed project will emit GHGs directly through the burning of carbon-based fuels such as gasoline as well as indirectly through usage of electricity, natural gas, water, and from wastewater treatment as well as the anaerobic bacterial breakdown of organic solid waste. The analysis above considered the GHG emissions of the proposed project in comparison to the emissions that would be anticipated from a project that was consistent with the existing General Plan (MU3 General Plan Buildout scenario). When the proposed project's GHG emissions are compared to the GHG emissions under the MU3 General Plan Buildout scenario, the project results in a 70% reduction in GHG emissions (949.79 MT CO_2e per year compared to 3,269.10 MT CO_2e per year) compared to an MU3 General Plan Buildout scenario. This is driven largely by the reduced number of vehicle trips that would occur under the proposed project compared to buildout under the General Plan. The project will also implement all of the CAP Checklist measures that are applicable to multi-family housing. The proposed project would be consistent with the City's CAP.

In addition to the City's CAP, the General Plan include goals and policies related to GHG emission, as detailed in Section 3.7.2. The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies pertaining to greenhouse gas emissions. In summary, the project will not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing GHGs and impacts will be **less than significant**.

3.7.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future projects producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect.

The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. The CAP is a plan for the reduction of GHG emissions in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP (City of San Marcos 2020). As presented in Section 3.7.4, the project complies with the City's CAP. Therefore, the project's incremental contribution to a cumulative GHG emissions effect is determined not to be cumulatively considerable and impacts would be **less than significant**.

3.7.6 Mitigation Measures

Based upon the analysis presented in Sections 3.7.4 and 3.7.5, project and cumulative greenhouse gas impacts would be less than significant. Therefore, no mitigation measures are necessary.

3.7.7 Conclusion

The analysis above considered the GHG emissions of the proposed project in comparison to the emission that would be anticipated from a project that was consistent with the existing General Plan (MU3 General Plan Buildout scenario). When the proposed project's GHG emissions are compared to the GHG emissions under the MU3 General Plan Buildout scenario, the project results in a 70% reduction in GHG emissions (949.79 MT CO_2e per year compared to 3,269.10 MT CO_2e per year) compared to an MU3 General Plan Buildout scenario. This is driven largely by the reduced number of vehicle trips that would occur under the proposed project compared to buildout under the General Plan. The project will also implement all of the CAP Checklist measures that are applicable to multi-family housing. The proposed project would be consistent with the City's CAP. In addition to the City's CAP, the General Plan include goals and policies related to GHG emission, as detailed in Section 3.7.2. The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies pertaining to greenhouse gas emissions.

In summary, the project will not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing GHGs and impacts would be **less than significant**.

3.8 Hazards and Hazardous Materials

This section analyzes the potential for the proposed project to have impacts related to hazards and hazardous materials. The following documents was used in the preparation of this section and are included in their entirety as **Appendix I** of this Environmental Impact Report (EIR):

- Phase I and Phase II Environmental Site Assessment (ESA Report), 943 Barham Drive San Marcos, California. Prepared by GEOCON Incorporated. March 9, 2020.

The Phase I Environmental Site Assessment (Phase 1 ESA) was undertaken to assess the likelihood of any recognized environmental conditions (RECs) that might be present on-site as a result of current or historical land uses or adjacent uses. The Phase 1 ESA included site reconnaissance of the project site, reconnaissance of adjoining properties, a review of the historical usage of the project site, and a review of relevant documentation provided by various public and private sources. Regulatory information was also reviewed from federal, state, and local agencies through various electronic databases listing possible hazardous waste-generating facilities on and within the vicinity of the project site. A Phase II ESA was also undertaken to assess the potential presence of contaminants of concern at the project site due to historical agricultural use at the site.

The American Society for Testing and Materials (ASTM) Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process defines a REC as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions" (ASTM 2013). De minimis conditions are those that generally do not present a threat to human health or the environment and that generally would not be the subject of enforcement action if brought to the attention of appropriate governmental agencies.

ASTM Designation E 1527-13 also defines Historical RECs. They define a 'Historical REC' (HREC) as "A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)" (ASTM 2013).

Table 3.8-1 summarizes the hazards/hazardous materials and cumulative-level impact analysis, by threshold, for the proposed project.

Table 3.8-1. Hazards and Hazardous Materials Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact after Mitigation
#1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Less than Significant	Less than Significant	Less than Significant

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact after Mitigation
#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	Less than Significant	Less than Significant	Less than Significant
#3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact	No Impact	No Impact
#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 a result, would it create a significant hazard to the public or the environment	Less than Significant	Less than Significant	Less than Significant
#5: For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area	Less than Significant	Less than Significant	Less than Significant
#6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Less than Significant	Less than Significant	Less than Significant
#7: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	Less than Significant	Less than Significant	Less than Significant

3.8.1 Existing Conditions

This section describes the existing conditions on the project site and vicinity related to hazards and hazardous materials.

Historical Land Uses

Aerial photographs, topographic maps, and previous reports of the project site were reviewed for evidence of past land uses that had the potential to have impacted the project site through the use, storage or disposal of hazardous substances and/or petroleum products. Per the Phase I ESA, the project site had been used for agricultural uses, as row crops appear to have been present across the

majority of the site back in 1939. An orchard and a rural residence also appear to have been in the northeastern portion of the site in 1939. By 1970, historical photographs indicate that the agricultural use of the land had ceased. By 1985 residential and farming buildings were no longer visible on site. The project site has remained vacant since approximately 1985. The past agricultural use of the site from sometime prior to 1939 up until approximately 1970 suggests that pesticides may have been used on the site. If so, persistent pesticides and associated metals (arsenic) may be present in soil. Given the proposed project is a residential development, the site the former agricultural use of the site is considered a REC. This is further detailed in the Phase II ESA discussion below.

Database Review

An environmental regulatory database review of local, state, and federal regulatory databases was conducted for the project site and facilities within one mile of the project site. The databases track the presence of underground storage tanks (USTs), hazardous waste generation, and hazardous material releases. The complete database search is included as part of Appendix I of this EIR. The project site was not listed on any of the regulatory databases reviewed. There are 19 properties identified in the database search within 1/8-mile (or 1/4 mile of the project site that were identified as having leaking underground storage tank (LUST) facilities). Per the Phase I ESA, none of these facilities are likely to have caused a REC at the project site. (GEOCON 2020).

Additionally, the database review identified one orphan site, or properties whose incomplete information made plotting difficult. Because the orphan property is greater than 1/4 mile from the project site, it is not suspected of having caused a REC at the project site.

Site Reconnaissance

As presented in the Phase 1 ESA prepared for the proposed project, the project site and surrounding properties were systematically traversed on foot in February 2020 by GEOCON. The offsite survey was performed by observing adjacent properties from the project site and adjacent public streets.

The project site was observed to be undeveloped with hilly terrain. The topography is dominated by two hills; one that peaks to the south and the other that gently slopes to the west and northwest. GEOCON observed three former building foundations located in the northeastern portion of the site that included crushed concrete and what appeared to be cages used for raising chickens. An abandoned irrigation line was also observed in the central northern portion of the site. No odors, pools of liquid, stained soil or distressed vegetation on site was observed. No evidence of RECs was observed at the project site or surrounding properties.

No hazardous wastes were observed at the project site. No hazardous materials and/or petroleum products were observed to be used or stored at the project site. No indications of releases of hazardous materials/wastes or petroleum products were noted, no electrical transformers were observed to be located at the site, and no obvious indications of wells, cisterns, pits, sumps, dry wells, or bulk storage tanks were observed at the site. Similarly, no obvious indications of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed adjacent to the project site. No California Division of Oil, Gas, and Geothermal Resources-related features were located within one mile of the project site.

Phase II ESA

GEOCON performed a Phase II ESA to assess the potential presence of organochlorine pesticides (OCPs) and arsenic in soil related to the former agricultural use of the project site. The nature and

extent of OCPs and arsenic in soil can be used to determine if a potential health risk for future site residents exists and if further action to mitigate that risk is warranted.

In February 2020, 20 surface samples were collected for analytical testing. Surface soil at the project site was predominately moist, dark brown, silty sand. No obvious indications of contamination such as odors or soil discoloration were observed during sampling for the Phase II ESA. OCPs and arsenic were not detected at concentrations exceeding the laboratory detection limits in the soil samples. GEOCON concluded that further investigation of impacts to the site from the historical agricultural use of the site does not appear warranted at this time (GEOCON 2020).

Wildland Fire

The project site is located in a Local Responsibility Area with a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) designation per CalFire's San Marcos Fire Hazards Severity Zones Map (2009) and is surrounded by areas identified as a Non-VHFHSZ. Further, per Figure 6-4 of the City's General Plan, the project site and surrounding area are not identified as a SMFPD Community Hazard Zone. The project includes a 150-foot onsite fuel modification buffer along the southern portion of the project site to further minimize fire risk to the proposed development. Per the Fire Marshal, offsite fuel modification is not required for the project. A discussion of fire protection services for the proposed project is discussed in Section 3.13, Public Services, and additional analysis related to wildfire is presented in Section 3.18, Wildfire, of the EIR.

3.8.2 Regulatory Setting

This section details the federal, state and local regulations governing hazards and hazardous materials.

Federal

Chemical Accident Prevention Provision

The provisions listed under Part 68 of the Code of Federal Regulations (CFR) set forth the list of regulated substances and thresholds, the petition process for adding or deleting substances to the list of regulated substances, the requirements for owners or operators of stationary sources concerning the prevention of accident releases, and the state accidental release prevention programs approved under Section 112(r) of the Clean Air Act.

Federal Aviation Regulations, Notice of Proposed Construction or Alteration

The Federal Aviation Administration (FAA), which has primary responsibility for the safety of civil aviation, imposes height restrictions in order to prevent obstructions to navigable airspace to protect flights and surrounding structures. In certain cases, the FAA should be notified of proposed development pursuant to Section 77.11 of Federal Aviation Regulations (FAR). The notification of proposed development enables the FAA to provide a basis for:

- Evaluating the effect of the construction or alteration on operational procedures and proposed operational procedures;
- Determinations of the possible hazardous effect of the proposed construction or alteration of air navigation;

- Recommendations for identifying the construction or alteration in accordance with current FAA Advisory Circular AC 70/7460-1K dated August 1, 2000, Obstruction Marking and Lighting;
- Determining other appropriate measures to be applied for continued safety of air navigation; and
- Charting and other notification to airmen of the construction or alteration.

Certain jurisdictions can request an FAA evaluation of proposed development when certain features appear to be potentially hazardous.

Federal Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 provided a new set of mitigation plan requirements for state and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a "Standard" or an "Enhanced" Natural Mitigation Plan. "Enhanced" plans demonstrate increased coordination of mitigation activities at the state level, and, if completed and approved, increase the amount of funding through the Hazard Mitigation Grant Program. California's updated State Hazard Mitigation Plan was adopted in October 2010, and approved by the Federal Emergency Management Agency (FEMA) Region IX. The City of San Marcos is one of the communities covered by the County of San Diego Multi-Jurisdictional Hazard Mitigation Plan, described below, which is a countywide plan that identifies risks posed by natural and human-made disasters.

Hazardous Materials Transport

The U.S. Department of Transportation (USDOT) regulates transportation of hazardous materials between states. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers for transportation of hazardous waste on public roads, including explosives that may be used for blasting.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code (IBC) use a hazard classification system to determine what protective measures are required for fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) gives the United States Environmental Protection Agency (USEPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Hazardous and Solid Waste Amendments of 1984

The Hazardous and Solid Waste Amendments of 1984 amended the Solid Waste Disposal Act of 1965 (SWDA), as amended by the RCRA of 1976. In general, both the scope and requirements of the SWDA, as amended by RCRA, were significantly expanded and reinforced.

State

The state regulations that govern hazardous materials are equal to or more stringent than federal regulations. California has been granted primary oversight responsibility by EPA to administer and enforce hazardous waste management programs. State regulations have detailed planning and management requirements to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human health and the environment. Several key state laws pertaining to hazardous wastes are discussed below. In addition, the Department of Toxic Substance Control (DTSC), the State Water Resources Control Board (SWRCB), and the Integrated Waste Management Act also regulate the generation of hazardous materials, also described below.

California Emergency Services Act

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor and/or appropriate local authorities. Local government and district emergency plans are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of CCR Title 24. It is created by the California Building Standards Commission and is based on the IFC created by the International Code Council, described above. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the CBC use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years. The CFC is adopted by reference as Chapter 17.64–California Fire Code for the San Marcos Fire Department.

California Health and Safety Code, Hazardous Materials Release Response Plans and Inventory

Two programs found in the California Health and Safety Code (H&SC) Chapter 6.95 are directly applicable to the CEQA issue of risk due to hazardous substance release. In San Diego County, these two programs are referred to as the Hazardous Materials Business Plan (HMBP) program and the California Accidental Release Program (CalARP), which is the state adaptation of CFR Part 68, described above. The Department of Environmental Health (DEH) is responsible for the implementation of the HMBP program and CalARP in San Diego County. The HMBP and CalARP programs provide threshold quantities for regulated hazardous substances. When the indicated quantities are exceeded, an HMBP or Risk Management Plan (RMP) is required pursuant to the regulation. Congress requires USEPA Region 9 to make RMP information available to the public through the USEPA's Envirofacts Data Warehouse.

California Integrated Waste Management Act

This act requires the development and implementation of household hazardous waste disposal plans. The Department of Resources Recycling and Recovery (CalRecycle), formerly the California Integrated Waste Management Board, oversees compliance with this act and enforces operational plans for solid waste facilities.

Emergency Response to Hazardous Materials Incidents

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including the California Environmental Protection Agency (Cal/EPA), CHP, the California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB).

Emergency Services Act

Under the Emergency Services Act (California Government Code Section 8850 et seq.), the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Quick response to incidents involving hazardous materials or hazardous waste is a key element of this plan. The Governor's Office of Emergency Services administers the plan, coordinating the responses of other agencies, including EPA, CHP, RWQCBs, air quality management districts, and county disaster response offices.

Government Code Section 65962.5 (Cortese List)

The provisions of Government Code Section 65962.5 are commonly referred to as the Cortese List. The Cortese List is a planning document used by the state and local agencies to provide information about hazardous materials release sites. Government Code Section 65962.5 requires Cal/EPA to develop an updated Cortese List annually, at minimum. DTSC is responsible for a portion of the information contained in the Cortese List. Other California state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Hazardous Waste Control Act

The Hazardous Waste Control Act is implemented by regulations contained in California Code of Regulations (CCR) Title 26 that describe requirements for the proper management of hazardous wastes. The act created the state hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The Hazardous Waste Control Act and Title 26 regulations list more than 800 potentially hazardous materials and establish criteria for identifying, packaging, transporting, and disposing of such wastes. Under these regulations, the generator of hazardous waste material must complete a manifest that accompanies the material from the point of generation to transportation to the ultimate disposal location, with copies of the manifest filed with the DTSC.

Unified Program

Cal/EPA delegates to qualifying local agencies oversight and permitting responsibility for certain state programs pertaining to hazardous waste and hazardous materials. This is achieved through the Unified Program, created by state legislation in 1993 to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following emergency and management programs:

- Hazardous materials release response plans and inventories (business plans);
- California Accidental Release Prevention Program (CalARP);
- Underground Storage Tank Program;
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure plans;
- Hazardous Waste Generator and On-site Hazardous Waste Treatment (tiered permitting) Programs; and
- California Uniform Fire Code: Hazardous material management plans and hazardous material inventory statements.

The County of San Diego is the designated certified unified program agency for all local jurisdictions within the San Diego region, including San Marcos.

State Responsibility Area Fire Safe Regulations (Title 14 Natural Resources, Department of Forestry Fire Protection)

These regulations constitute the basic wildland fire protection standards of the California Board of Forestry. 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 (SRAs). Title 14 regulates that the future design and construction of structures, subdivisions, and developments in an SRA shall provide for basic emergency access and perimeter wildfire protection measures.

Local

Airport Land Use Commission and Airport Land Use Compatibility Plans

Airport Land Use Commissions assist local agencies in ensuring compatible land uses in the vicinity of existing or proposed airport; coordinate planning at state, regional and local levels; prepare and adopt airport land use policies; review plans or regulations submitted by local agencies; and review and makes recommendation regarding the land use, building heights, and other issues related to air navigation safety and the promotion of air commerce. The San Diego County Regional Airport Authority is the ALUC for the San Diego region.

The closest public airport to the project site is the McClellan-Palomar Airport located in the City of Carlsbad, approximately 7.5 miles west of the project site. The McClellan-Palomar Airport Land Use Compatibility Plan (ALUCP) contains policies to promote land use compatibility between the McClellan-Palomar Airport and the adjacent and proximate land uses, to the extent these areas are not already developed with existing uses, and protect the public health, safety, and welfare (San Diego County Regional Airport Authority 2011). Using airport-related forecasts and background data approved by the California Department of Transportation, Division of Aeronautics, the plan reflects anticipated growth of the airport over a 20-year horizon. The plan includes land use compatibility criteria and identifies policies applicable to the airport and surrounding land uses.

According to the McClellan-Palomar ALUCP and Figure 6-5 of the Safety Element of the City's General Plan, the project site lies within Review Area 2 of the airport influence area. The influence area is regulated by the ALUC, which regulates land uses in the area to be compatible with airport-related noise, safety, airspace protection, and over-flight factors through review of development proposals

within the airport influence area. Review Area 2 consists of limits on heights of structures in areas of high terrain. Residential development in Review Area 2 may be subject to annoyances commonly associated with proximity to airports, such as noise, vibration, and overflights.

County of San Diego Multi-Jurisdictional Hazard Mitigation Plan

To comply with the Disaster Mitigation Act of 2000, the County of San Diego prepared the Multi-Jurisdictional Hazard Mitigation Plan. The plan serves as both a county-wide plan and a plan for local jurisdictions that identifies risks posed by natural and human-made disasters before a hazard event occurs. The plan includes overall goals and objectives shared by many jurisdictions, as well as specific goals, objectives, and mitigation action items for each of the participating jurisdictions to help minimize the effects of the specified hazards that could potentially affect their jurisdiction. Goals, objectives, and action items for the City of San Marcos are included in this plan.

San Marcos Fire Department Hazard Risk Analysis and Wildland Urban Interface Community Wildfire Protection Plan

The CWPP, adopted in December 2007, was developed by the San Marcos Fire Department (SMFD) with guidance from the County of San Diego, California Department of Forestry and Fire Protection and the United States Forest Service. The CWPP supplements San Diego County, Department of Planning and Land use documents. Supplemental to the CWPP, the SMFD published the Hazard Risk Analysis (HRA) for internal City use, incorporating new and existing information relating to wildfire risk within the City to better quantify true risk and management needs. The HRA quantifies, clarifies, and manages the wildland urban interface (WUI) responsibility and meets the requirements of the federal Healthy Forests Restoration Act (HFRA) of 2003 for community fire planning.

City of San Marcos, Ordinance 2003-1216

The City Ordinance 2003-1216 amends Chapter 17.64 of the Municipal Code to adopt the most recent version of the California Fire Code. Concurrently, this ordinance requires all buildings or structures to provide and maintain an effective fuel modification zone of 150 feet.

City of San Marcos General Plan Safety Element

The Safety Element of the San Marcos General Plan contains several goals and policies pertaining to hazards and hazardous materials. The following goals and policies apply to the proposed project:

- Goal S-3: Minimize injury, loss of life, and damage to property results from structure or wildland fire hazards.
    - Policy S-3.1: Require development to be located, designed and constructed to provide adequate defensibility and reduce the risk of structural loss and life resulting from wildland fires. Development will consider hazards relative to terrain, topography, accessibility and proximity to vegetation. One such provision for development to minimize the risk of structural loss and life shall be the inclusion of overhead fire sprinklers.
    - Policy S-3.2: Provide sufficient level of fire protection service to reduce risk from urban and wildland fire. Advocate and support regional coordination among fire protection and emergency service providers.
    - Policy S-3.3: Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.

  - Policy S-3.4: Coordinate with fire protection and emergency service providers to assess fire hazards before and after wildfire events to adjust fire prevention and suppression needs, as necessary, commensurate with both short- and long-term fire prevention needs.

- Goal S-4: Protect life, structures, and the environment from the harmful effects of hazardous materials and waste.
  - Policy S-4.1: Promote and support the proper disposal, handling, transport, delivery, treatment, recovery, recycling, and storage of hazardous materials in accordance with applicable federal, State, and local regulations.
  - Policy S-4.2: Require areas of known or suspected contamination to be assessed prior to reuse or redevelopment. Plan for reuse of contaminated areas in a manner that is compatible with the nature of the contamination and subsequent remediation efforts.
  - Policy S-4.3: Require that land uses using hazardous materials be located and designed to ensure sensitive uses, such as schools, hospitals, day care centers, and residential neighborhoods, are protected.
  - Policy S-4.4: Avoid locating sensitive uses near established hazardous materials users or industrial areas where incompatibilities would result, except in cases where appropriate safeguards have been developed and implemented.
- Goal S-5: Establish and maintain an effective emergency response program to respond to disasters and maintain continuity-of-life support functions during an emergency.
  - Policy S-5.3: Develop, implement, and maintain an effective evacuation program for areas of risk in the event of a disaster.
- Goal S-7: Comply with the McClellan-Palomar Airport Land Use Compatibility Plan.
  - Policy S-7.1: Record an overflight notification document in association with the approval of any new residential land use within the AIA overflight notification area consistent with the ALUCP.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. The Safety Element also identifies goals and policies related to seismic, flood, and fire hazards. As detailed in Table 3.10-5 of Section 3.10, the project is consistent with all the applicable goals and policies.

3.8.3 Thresholds of Significance

Based on the *California Environmental Quality Act (CEQA) Guidelines* Appendix G (VII), the following significance criteria have been developed for hazardous materials compliance. A significant impact to or resulting from hazards and hazardous materials would be identified if the project was determined to result in any of the following:

- **Threshold #1:** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- **Threshold #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;

- **Threshold #3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- **Threshold #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 a result, would it create a significant hazard to the public or the environment;
- **Threshold #5:** For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- **Threshold #6:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- **Threshold #7:** Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.8.4 Project Impact Analysis

The following analysis discusses impacts associated with the thresholds of significance identified in Section 3.8.3, Thresholds of Significance, above.

Hazardous materials include solids, liquids, or gaseous materials that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, could pose a threat to human health or the environment. Hazards with all existing development include the risks associated with potential explosions, fires, or release of hazardous substances in the event of an accident or natural disaster, which may cause or contribute to an increase in mortality or serious illness, or pose substantial harm to human health or the environment.

Threshold #1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

During construction of the proposed project, there is a potential for accidental upset of fuels, lubricants, or various other liquids needed to operate heavy equipment on the project site. These materials include diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. Direct impacts to human health and biological resources from accidental spills of small amounts of hazardous materials from construction equipment during construction of the buildings could occur in case of accidental spill or upset; however, existing federal and state standards are in place for the handling, storage, and transport of these materials. These include, but are not limited to, the Federal Chemical Accident Prevention Provisions (Part 68 of the Code of Federal Regulations), California Highway Patrol and California Department of Transportation container and licensing requirements for transportation of hazardous waste on public roads, the International Fire Code, The Resource Conservation and Recovery Act of 1976 as amended by the Hazardous and Solid Waste Amendments of 1984, California's Hazardous Waste Control Law, the California Fire Code, California Health and Safety Code Hazardous Materials Release Response Plans and Inventory, the California Integrated Waste Management Act, regulations developed by California Occupations Safety and Health Administration, and the state Hazardous Waste Control Act.

Further, per the Phase II ESA performed for the project, contaminated soils, OCPs and arsenic were not detected at concentrations exceeding the laboratory detection limits in the soil samples. GEOCON

concluded that further investigation of impacts to the site from the historical agricultural use of the site is not warranted at this time (GEOCON 2020).

Operationally, the only hazardous materials anticipated for transport, use, or disposal associated with the proposed residential project would be routinely used household products such as cleaners, paint, solvents, motor oil/automotive products, batteries, and garden maintenance products. The use, handling, and disposal of these products is addressed by household hazardous waste programs that are part of the Integrated Waste Management Plan (IWMP) of the County of San Diego. The Household Hazardous Waste Element of the IWMP specifies the means by which hazardous wastes generated by households shall be collected, recycled, treated, and disposed of safely.

Because compliance with all standards is required through federal, state, county, and municipal regulations, no significant impacts to the public or the environment are expected due to the routine transport, use, or disposal of hazardous materials during project construction or operation. Therefore, proposed project impacts would be **less than significant**.

Threshold #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.

As discussed under Threshold 1, above, construction of the proposed project would entail transport, use, or disposal of potentially hazardous materials including, but not limited to diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. Further, as discussed above, no contaminated soils, OCPs or arsenic were detected in select soil samples during the Phase II ESA. As such, although the use, transport, and disposal of hazardous materials during construction could result in accidental spill or upset, the proposed project would be required to comply with existing environmental regulations that would ensure that the public and environment are protected.

Future uses proposed within the project area are limited to multi- family residences and recreation/open space uses. These types of land uses are not typically characteristic of generating, releasing, or using large amounts of hazardous materials. Industrial uses are not proposed as part of the proposed project. The only hazardous materials anticipated for transport, use, or disposal associated with the completed project are routinely used household products such as cleaners, paint, solvents, motor oil/automotive products, batteries and garden maintenance products. As stated above, the use, handling, and disposal of these products are addressed by household hazardous waste programs that are part of the IWMP of the County of San Diego.

Because compliance with all standards is required through federal, state, county, and municipal regulations, no significant impacts to the public or the environment are expected due to the release of hazardous materials. Therefore, the proposed project is not anticipated to 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. Impacts are **less than significant**.

Threshold #3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The project site is not located within a one-quarter mile of an existing or proposed school. The closest school to the project site is Mission Hills High School, which is located 0.35 mile north of the project site, with SR-78 and additional development between the project site and the school. Additionally, the uses proposed by the project would not be characterized as those that would emit hazardous

emissions or handle hazardous or acutely hazardous materials or substances. No schools are located within 0.25 miles of the project site. **No impact** is identified for this issue area.

Threshold #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 a result, would it create a significant hazard to the public or the environment.

As part of the Phase 1 ESA prepared for the proposed project, a database search report was obtained from Environmental Data Resources, Inc., which documents various federal, state, and local regulatory database searches regarding properties with known or suspected releases of hazardous materials, chemical handlers, and/or polluters. The findings of the Phase I ESA concluded that the proposed project site is not located on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5.

There are 19 properties identified in the database search within 1/8-mile (or ¼-mile for LUST facilities) of the project site. All 19 listings are related to handling and disposal of hazardous waste. Per the Phase I ESA," release" refers to an unauthorized release of a petroleum product or hazardous substance to the environment - i.e., the ground surface, soil, soil vapor, groundwater, or surface water on a property. "Release-related database" refers to those which provide information regarding an unauthorized release. "Non-release-related database" refers to those that may report use, storage, or disposal of hazardous substances and/or petroleum products or other environmental conditions, but do not report releases of such. None of the facilities were included in release-related databases and are located down or cross gradient to the project stie. Therefore, GEOCON concluded that the facilities are unlikely to have caused a REC at the project site (GEOCON 2020).

Aerial photographs, topographic maps, and previous reports of the project site were reviewed for evidence of past land uses that had the potential to have impacted the project site through the use, storage or disposal of hazardous substances and/or petroleum products. Per the Phase I ESA, the project site had been used for agricultural use between 1939 up until approximately 1970 suggesting that pesticides may have been used on the site. If so, persistent pesticides and associated metals (arsenic) may be present in soil. Given the planned residential redevelopment of the site, GEOCON performed a Phase II ESA to assess the potential presence of organochlorine pesticides (OCPs) and arsenic in soil related to the former agricultural use of the project site. Per the Phase II ESA, contaminated soils, OCPs and arsenic were not detected at concentrations exceeding the laboratory detection limits in the soil samples. GEOCON concluded that further investigation of impacts to the site from the historical agricultural use of the site is not warranted at this time (GEOCON 2020).

The site reconnaissance confirmed that no obvious indications of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed on or adjacent to the project site.

The Phase I and Phase II ESA prepared for the proposed project concluded there is a low likelihood that recognized environmental conditions are present at the project site as a result of the current or historical land uses or from a known and reported off-site source. Therefore, the proposed project is not located on a site that is included on a list of hazardous materials sites. Impacts are **less than significant**.

Threshold #5: For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.

The public airport closest to the project site is the McClellan-Palomar Airport, located approximately 7.5 miles to the west. According to Figure 6-5 of the Safety Element of the City's General Plan, the project site is located within of Review Area 2 of the airport influence area. Review Area 2 limits the heights of structures in areas of high terrain. The project site would not be characterized as an area of high terrain, defined as a maximum height of 795 feet amsl or as in an area of Terrain Penetration to Airspace Surfaces. Area of higher elevation on the site are located to the north and west of the site. Site elevations range from approximately 650 to 750 feet above mean sea level. Proposed building would be a maximum of 40 feet high (three stories). The project site is outside of the 60 dBA noise contour generated by airport noise as illustrated in the ALUCP. Nevertheless, Nevertheless, all residential development within Review Area 2 is required to record overflight notification documents as outlined in the McClellan-Palomar ALUCP and per Chapter 20.265 of the City's Municipal Code, notifying residents of potential annoyances commonly associated with proximity to airports, such as noise, vibration, and overflights. This would be required as a condition of project approval. As such, with recording of overflight notification, impacts would be **less than significant**.

Threshold #6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

According to the General Plan Safety Element, the San Marcos Emergency Operations Plan governs the operations of the City during a disaster. This plan addresses response to moderate evacuation scenarios, including the identification of evacuation points and general routes. While specific evacuation routes have not been established, several main thoroughfares would serve as primary evacuation corridors in an emergency. Additionally, San Marcos is included in the San Diego County Multi-Jurisdictional Hazard Mitigation Plan, which was developed to serve as both a county-wide plan and a plan for local jurisdictions to identify risks posed by natural and human-caused disasters before a hazardous event occurs.

Access to the project site will be via two unsignalized driveways on E. Barham Drive. The western driveway will be 40-feet wide and serve as the primary entry to the project site and provide full access. The eastern driveway will be 26-feet wide and will also provide full access. Based upon mitigation measures identified in Section 3.10, Land Use (MM-LU-2 and MM-LU-3), the project will be required to limit left turns out of both driveways between the PM Peak Hour (4:00 PM to 6:00 PM).

A secondary emergency-only access is provided through the western boundary of the project site at the western terminus of Street "C". This access will connect to an existing emergency access driveway on the adjacent property which connects to Saddleback Way and then to E. Barham Drive. This access point is for emergency vehicles only and bollards would be put in place

The proposed project would not impact any roadway or staging areas that are identified in any emergency planning documents. In summary, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant**.

Threshold #7: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Implementation of the proposed project would result in a developed area with roads, structures, and landscape vegetation as well as maintained parks and open spaces. The project site is located in a Local Responsibility Area with a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) designation per CalFire's San Marcos Fire Hazards Severity Zones Map (2009) and is surrounded by areas identified as a Non-VHFHSZ. Further, per Figure 6-4 of the City's General Plan, the project site and surrounding area are not identified as a SMFPD Community Hazard Zone. The project includes a 150-foot onsite fuel modification buffer along the southern portion of the project site to further minimize fire risk to the proposed development. Per the Fire Marshal, offsite fire fuel modification is not required for the project. Impacts would be **less than significant.**

3.8.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to hazards, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts related to hazards. All of the cumulative projects identified in Table 2-3 are considered in this cumulative analysis.

Hazards impacts are generally site specific and thus handled on a site-by-site basis. All projects identified in Table 2-3 would require the identification of existing hazardous materials on site, and would be required to comply with existing regulations related to use, transport, and disposal of hazardous materials. Similarly, all related projects would be required to analyze and properly mitigate any impacts to the existing evacuation plan, if impacts are identified.

With regard to wildfire hazards, all of the projects proposed within the urban/wildland interface are required to meet minimum fire fuel modification and/or clearing requirements in addition to meeting the applicable standards of the various fire codes in effect at the time of building permit issuance. Currently that is the 2019 Consolidated Fire Code, 2019 California Building Code, San Diego County requirements for Enhanced Building Construction and California State Fire Marshal requirements for fire resistive construction. For projects within the City, these requirements are implemented through preparation of and compliance with a Fire Protection Plan, other project-specific design features, which are reviewed and approved by the Fire Marshal. As such, through compliance with existing regulations, cumulative impacts to hazards and hazardous materials would be **less than significant.**

3.8.6 Mitigation Measures

Based upon the analysis presented in Section 3.8.4 and 3.8.5, no impacts were identified and no mitigation measures are required.

3.8.7 Conclusion

As discussed in Section 3.8.4, above, the project site is currently vacant and is not listed on any hazardous materials sites. Furthermore, construction and operation of the proposed project is not expected to result in the release of any significant hazardous materials or the routine transport, use, or disposal of such materials. Development of the proposed project would not result in any safety hazards resulting from proximity to the McClellan-Palomar Airport, however, the project site is located within Review Area 2 of the McClellan-Palomar airport influence area and, although not significant, future residents on the project site may be subject to periodic nuisance from aviation activity including noise, vibration, and overflights. Recordation of overflight notification documents that detail the potential disturbances that may be experienced for future homeowners would be required pursuant to the City's Municipal Code. Further the project would not impair implementation of or physically interfere with emergency response or evacuation plans. Lastly, the project site is not designated as a high fire severity zone, and the project would be constructed in accordance with all applicable fire codes. As such, project- level and cumulative-level impacts due to hazards and hazardous materials would be **less than significant.**

3.9 Hydrology and Water Quality

Introduction

This section identifies the existing hydrologic and water quality conditions on the project site and analyzes the potential impacts of the proposed project on hydrology and water quality. The analysis in this section is based upon the following reports which are included as **Appendix J.1 and J.2** of this document:[11]:

- *Preliminary Drainage Report 943 Barham Drive*, prepared by SB&O, June 15, 2020 (SB&O 2020a)
- *Priority Development Project Stormwater Quality Management Plan (SWQMP)* prepared by SB&O, June 19, 2020 (SB&O 2020b).

The preliminary drainage report and SWQMP discusses applicable hydrologic volume and storm water requirements and analyzes peak flow anticipated for preliminary design of the on-site storm drain system. The analysis in this section also considers the California Environmental Quality Act (CEQA) Guidelines Appendix G and applicable State and Local regulations, including the City of San Marcos General Plan.

In the Initial Study prepared for the proposed project (**Appendix B.1**), the proposed project was determined to have no impact on the following hydrology/water quality-related issue area: risk release of pollutants due to project inundation in flood hazard, tsunami or seiche zones. Therefore, this issue is not discussed further in this EIR section.

Table 3.9-1 summarizes the project- and cumulative-level hydrology and water quality impact analysis by threshold.

Table 3.9-1. Hydrology/Water Quality Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#1: Violate any water quality standards or waste discharge requirements or other substantially degrade surface or groundwater quality?	Less than Significant	Less than Significant	Less than Significant
#2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant	Less than Significant	Less than Significant

11 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#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: result in substantial erosion or siltation on- or off-site?	Less than Significant	Less than Significant	Less than Significant
#4: 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than Significant	Less than Significant	Less than Significant
#5: 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: create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Less than Significant	Less than Significant	Less than Significant
#6: 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: impede or redirect flood flows?	Less than Significant	Less than Significant	Less than Significant
#7: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than Significant	Less than Significant	Less than Significant
#8: Result in significant alteration of receiving water quality during or following construction?	Less than Significant	Less than Significant	Less than Significant
#9: Result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity, and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).	Less than Significant	Less than Significant	Less than Significant

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#10: Be tributary to an already impaired water body as listed on the Clean Water Act Section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?	Less than Significant	Less than Significant	Less than Significant
#11: Be tributary to environmentally sensitive areas (e.g., MSCP, RARE, Areas of Special Biological Significance, etc.)? If so, can it exacerbate already existing sensitive conditions?	Less than Significant	Less than Significant	Less than Significant
#12: Have a potentially significant environmental impact on surface water quality, to either marine, fresh or wetland waters?	Less than Significant	Less than Significant	Less than Significant

3.9.1 Existing Conditions

This section details the existing hydrology, water quality and groundwater conditions on the project site.

Site Hydrology

The project site is currently vacant and includes a hillside along the southern limits. Per the drainage report, existing drainage is "natural" and generally overland toward the E. Barham Drive frontage (SB&O 2020a). Drainage patterns are generally southeast to northwest and includes run-on from the hillside above the site. The majority of site runoff is directed overland to the Barham gutter. A small depression is near the northwest corner of the the site. A storm drain riser is located near the northeast corner of the site and is connected to the public storm drain in Barham Drive.

Water Quality

The proposed project is located within the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). The San Diego Region is divided into eleven hydrologic units. The project site is located in the Batiquitos Subarea (904.51) within the San Marcos Hydrologic Area (904.5) of the Carlsbad Watershed (Hydrologic Unit (904). The project site discharges to the Barham Drive Storm Drain (MS-4), which discharges to San Marcos Creek (passing through Lake San Marcos) to Batiquitos Lagoon (inner), which discharges to the Pacific Ocean.

The Carlsbad Watershed Management Area (WMA) is approximately 211 square miles and is formed by a group of six individual watersheds in northern San Diego County. The WMA is bordered by the San Luis Rey River WMA to the north and by the San Dieguito River WMA to the south. It reaches inland nearly 24 miles to just northeast of Lake Wohlford. The maximum elevation of the WMA is approximately 2,400 feet and it extends to sea level at the Pacific Ocean. The Carlsbad WMA is made up of six distinct Hydrologic Areas (HA)s: Loma Alta, Buena Vista Creek, Agua Hedionda, Encinas, San Marcos Creek, and Escondido Creek. The WMA includes the entire Cities of Carlsbad, San Marcos and

Encinitas and portions of the cities of Oceanside, Vista, Escondido, Solana Beach, and San Diego County unincorporated areas.

The San Marcos Hydrologic Area is the second largest within the WMA. It is about 36,000 acres in area and comprises approximately 28% of the Carlsbad WMA. The major receiving waters within the Hydrologic Area are San Marcos Creek, Encinitas Creek, Batiquitos Lagoon, and the Pacific Ocean. San Marcos Creek originates on the western slopes of the Merriam Mountains in west central San Diego County and discharges in to the Pacific Ocean, 14.6 miles away, via Batiquitos Lagoon. Encinitas Creek is another one of the major tributaries in the HA, originating in the hills southwest of Questhaven Road and paralleling El Camino Real before it converges with San Marcos Creek at the southeastern corner of Batiquitos Lagoon. The highest elevation within the HA is approximately 1,540 feet above mean sea level (amsl). Lake San Marcos is the largest impoundment within the HA. The San Marcos HA is primarily located in the cities of San Marcos, Carlsbad, Encinitas, and the County of San Diego, with a small portion in Escondido.

The San Marcos HA has two distinctive areas separated by the Lake San Marcos impoundment – the Upper and Lower San Marcos HA areas. The Upper Hydrologic Area includes drainage areas in the County of San Diego, and the cities of San Marcos and Escondido, that runoff through Upper San Marcos Creek to Lake San Marcos. The Lower Hydrologic Area consists of portions of the cities of Carlsbad, Encinitas, San Marcos and Vista (Carlsbad Watershed Management Area 2018).

Within the Water Quality Control Plan for the San Diego Basin (San Diego Basin Plan), San Marcos Creek and Batiquitos Lagoon, located downstream of the project site, are identified as having numerous beneficial uses. For San Marcos Creek, these beneficial uses are: Agricultural Supply (AGR), Contact Water Recreation (REC1), Non-Contact Water Recreation (REC2), Warm Freshwater Habitat (WARM) and Wildlife Habitat (WILD). For Batiquitos Lagoon, these uses are: REC1, REC2, Preservation of Biological Habitats of Special Significance (BIOL), Estuarine Habitat (EST), WILD, Rare, Threatened, or Endangered Species (RARE), Marine Habitat (MAR), Migration of Aquatic Organisms (MIGR), and Spawning, Reproduction, and/or Early Development (SPWN). The Basin Plan includes numerical and qualitative water quality objectives to protect the listed beneficial uses for each water body.

The San Marcos Creek system consists of a number of water bodies that are listed as impaired under Section 303(d) of the Clean Water Act. In accordance with Section 303(d) of the 1972 Federal Clean Water Act (CWA), the State Water Resources Control Board (SWRCB) has established a list of "impaired water bodies." San Marcos Creek is listed on the 2014-2016 CWA Section 303(d) List of Impaired Water Segments as being impaired for dichlorodiphenyldichloroethylene (DDE), phosphorus, sediment, toxicity and selenium. Further downstream, Batiquitos Lagoon is also listed as impaired. Batiquitos Lagoon is listed as being impaired for eutrophic, indicator bacteria, sediment, siltation, and toxicity. Furthermore, San Marcos Lake was identified under Section 303(d) of the Clean Water Act as impaired due to high concentrations of nitrogen and nutrients.

3.9.2 Regulatory Setting

This section details the applicable federal, state, and local regulations pertaining to hydrology and water quality.

Federal

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The standard for flood protection is established by FEMA, with the minimum level of flood protection for new development determined to be the one percent-annual exceedance probability (i.e., the 100-year flood event). Per FEMA's Flood Insurance Rate Map Number 06073C0794G, the project site is not located within a 100-year flood hazard area (FEMA 2012)

Federal Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1977.

Under the CWA, the U.S. Environmental Protection Agency (USEPA) has implemented pollution control programs such as setting wastewater discharge standards for industry. The USEPA has also set water quality standards for contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained.

Section 303(d) of the Clean Water Act

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. The TMDL prepared by the state must include an allocation of allowable loadings to point and non-point sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows the linkage between loading reductions and the attainment of water quality objectives. The federal Environmental Protection Agency (EPA) must either approve a TMDL prepared by the state or, if it disapproves the state's TMDL, issue its own. National Pollutant Discharge Elimination System (NPDES) permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal CWA to regulate municipal and industrial discharges to surface waters of the U.S. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the federal EPA must consider in setting effluent limits for priority pollutants.

Non-point sources are diffuse and originate from a wide area rather than from a definable point. Non-point pollution often enters receiving waters in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such non-point sources are generally exempt from federal NPDES permit program requirements. However, three types of non-point source discharges are controlled by the NPDES program: non-point source discharge caused by general construction activities, the general quality of stormwater in municipal stormwater systems, and discharges associated with industrial operations. The 1987 amendments to the CWA directed the federal EPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by the EPA that are not included in Phase I.

In accordance with NPDES regulations, in order to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity that disturbs one acre or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a stormwater pollution prevention plan (SWPPP) and implement Best Management Practices (BMPs), such as erosion and sediment control and non-stormwater management measures, to reduce construction effects on receiving water quality.

Examples of typical BMPs implemented in SWPPPs include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

State

California Water Code Division 7 (Porter-Cologne Act)

The California Water Code contains provisions regulating water and its use. Division 7 establishes a program to protect water quality and beneficial uses of the state water resources including groundwater and surface water. The SWRCB and RWQCB administer the program and are responsible for control and water quality. They establish waste discharge requirements, oversee water quality control planning and monitoring, enforce discharge permits, and establish ground and surface water quality objectives.

State Water Resources Control Board

In California, the SWRCB has broad authority over water-quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the Federal government under the CWA. Other State agencies with jurisdiction over water quality regulation in California include California Department of Public Health (for drinking water regulations), the California Department of Pesticide Regulation, the California Department of Fish and Wildlife (CDFW), and the Office of Environmental Health and Hazard Assessment.

In accordance with Section 303(d) of the CWA, the State Water Resources Control Board (SWRCB) has established a list of "impaired water bodies." Impaired water bodies in this watershed, as listed in the SWRCB 303(d) impaired waters list, include San Marcos Creek. San Marcos Creek is listed on the

2014-2016 CWA Section 303(d) List of Impaired Water Segments as being impaired for DDE, phosphorus, sediment, toxicity and selenium.

Regional Water Quality Control Board

The project site is situated within the jurisdiction of the San Diego RWQCB (Region 9). The San Diego RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction.

The project site is located within the Batiquitos Subarea (904.51) of the San Marcos Hydrologic Area (904.5) of the Carlsbad Watershed Hydrologic Unit (904). Water quality objectives for San Marcos Creek and Batiquitos Lagoon are specified in the Water Quality Control Plan for the San Diego Basin (Basin Plan) prepared by the RWQCB in compliance with the federal CWA and the Porter-Cologne Act. The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the lagoon and creek. Because the City of San Marcos is located within the RWQCB's jurisdiction, all discharges to surface water or groundwater are subject to the Basin Plan requirements (RWQCB 1994).

In May 2013, the San Diego RWQCB adopted Order R9-2013-0001, the new municipal NPDES permit for 39 municipal, county government, and special district entities located in southern Orange County, southwestern Riverside County, and San Diego County who own and operate large municipal separate storm sewer systems (MS4s) which discharge storm water runoff and non-storm water runoff to surface waters throughout the San Diego Region. This permit has requirements for development projects to minimize or eliminate the impacts of such development on water quality. The proposed project is subject to the requirements of the municipal permit as it is implemented via the Carlsbad Watershed Jurisdictional Urban Runoff Management Program. The specific requirements include the selection of appropriate BMPs to avoid, prevent, or reduce the pollutant loads entering the storm drain system and receiving waters. The permit was amended in February 2015 by Order R9-2015-0001 and in November 2015 by Order R9-2015-0100.

Provision D.1.a of Order R9-2013-0001 requires the San Diego Stormwater Co-permittees to continue water monitoring programs established within previous Orders and pursuant to the approved Hydromodification Management Plan (HMP) (January 2011). The City of San Marcos is one of the co-permittees.

To comply with Order R9-2013-0001, as amended, the updated September 2020 County of San Diego BMP Design Manual was developed to provide County-specific project design and post-construction storm water requirements for development projects and replace the prior San Diego Regional Model Standard Urban Stormwater Mitigation Plan (SUSMP). The City of San Marcos has adopted its own BMP Design Manual as of February 2016. The BMP Design Manual was used to recommend BMPs and low impact development (LID) features for the proposed project. LID is an approach to land development that uses multiple small-scale natural detention and filtration features to manage stormwater as close to its source as possible. LID employs principles such as preserving and re-creating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product.

Local

Carlsbad Watershed Management Area Water Quality Improvement Plan

The Carlsbad Watershed Management Area (WMA) Water Quality Improvement Plan (WQIP) is a requirement of stormwater regulations adopted by the RWQCB according to Order No. R9-2013-0001, as amended by Order Nos. R9 2015-0001 and R9-2015-0100. The goal of the WQIP is to protect, preserve, enhance, and restore water quality of receiving water bodies. These improvements in water quality will be accomplished through an adaptive planning and management process that identifies the highest priority water quality conditions within the watershed and implements strategies to address them. Agencies involved in the development of the WQIP include the County of San Diego and the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The purpose of the Carlsbad WMA WQIP is to guide the Responsible Agencies' Jurisdictional Runoff Management Programs (JRMP)s toward achieving improved water quality in MS4 discharges and receiving waters. Through the WQIP, priorities and goals are established and strategies selected for implementation through the Responsible Agencies' JRMPs to progress toward improvements in water quality. This approach establishes the WQIP as the overarching plan that each Responsible Agency will use to develop and implement their jurisdictional programs. Responsible Parties' JRMPs contain the strategies, standards and protocols by which each Responsible Agency will implement their individual program in response to the priorities and goals established in the WQIP. The WMA collective watershed strategy identifies nutrients as high priority water quality pollutants in the San Marcos Creek Hydrologic Area (Carlsbad Watershed Management Area Responsible Agencies 2018).

The Carlsbad WMA WQIP includes several major components:

- Priority Water Quality Conditions: after assessing available data sets, the water quality conditions in the watershed were prioritized and several were identified as those on which Responsible Agencies would focus their program efforts. These are identified as highest and priority water quality conditions. This does not mean that other water quality conditions or pollutants are to be ignored. To the contrary, many water quality conditions are related to one another in terms of the strategies selected to address them. Selected strategies to address priority water quality conditions are also effective at addressing many other pollutants and water quality conditions. The highest priority water quality condition for Escondido Creek and San Elijo Lagoon are indicator bacteria.

- Numeric Goals and Schedules: the WQIP establishes goals related to the highest priority water quality conditions. Furthermore, schedules for achieving these goals are included in the WQIP. Together, the goals and schedules establish the targets that the Responsible Agencies use for both establishing their programs as well as measuring progress and achievement. Each highest priority water quality condition has established interim and final goals and schedules.

- Strategies and Schedules: the WQIP identifies the strategies, or activities/BMPs, that the Responsible Agencies will implement to address the priority water quality conditions to progress towards achieving the numeric goals within the schedules identified. In addition to identifying the strategies, the WQIP identifies schedules for development (in some cases) and implementation of the strategies.

The Carlsbad WQIP was originally submitted to the RWQCB in June 2015 and after revisions based on RWQCB comments, an acceptance letter from the Regional Board was issued on November 22, 2016. A 2021 update has been initiated, primarily to incorporate an assessment of bacteria data for Agua Hedionda Lagoon and revisions noted in prior Annual Reports. The 2021 WQIP was submitted to the

Regional Board in January 2021 and the Responsible Agencies are awaiting acceptance of the document.

City of San Marcos Jurisdictional Runoff Management Plan

The Order (NPDES Permit CAS0109266) requires the City of San Marcos to develop and implement a Jurisdictional Runoff Management Plan (JRMP) that identifies and describes the methods that the City will use to eliminate significant pollutants from the City's Storm Water Conveyance System. The purpose of the City's JRMP is to implement strategies that effectively prohibit non-stormwater discharges to the MS4 and reduce the discharge of pollutants in stormwater to the maximum extent practicable (MEP). Improving the quality of the discharge from the MS4 should have beneficial effects on the local receiving water bodies (City of San Marcos 2017).

San Marcos Storm Water Standards

The City has adopted its own BMP Design Manual as of February 2016 and the proposed project must comply with the standards and regulations contained therein.

San Marcos General Plan

Conservation and Open Space Element

The following are applicable goals and policies from the City of San Marcos General, Conservation and Open Space Element related to hydrology and water quality:

- Goal COS-6: Protect and restore appropriate surface water and groundwater beneficial uses through prioritizing the improvement of locally impaired water bodies within the City of San Marcos subwatersheds.
    - Policy COS-6.2: Promote watershed stewardship as the community norm.
- Goal COS-7: Achieve sustainable watershed protection for surface and ground water quality that balances social, economical, and environmental needs.
- Goal COS-8: Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, BMPs, LID, hydromodification strategies consistent with the Current San Diego RWQCB Municipal Stormwater NPDES Permit, and all future municipal stormwater permits.
    - Policy COS-8.4: Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, BMPs, LID, hydromodification strategies consistent with the Current San Diego RWQCB Municipal Stormwater NPDES Permit, and all future municipal stormwater permits.

Safety Element

The following goal and policy in the City of San Marcos General Plan, Safety Element are applicable to flooding and flood control:

- Goal S-2: Minimize the risk to people, property, and the environment due to flooding hazards.

- Policy S-2.2: Require existing private development to take responsibility for maintenance and repair of structures to resist flood damage.

Land Use and Community Design Element

The following goal and policies in the City of San Marcos General Plan, Land Use and Community Design Element are applicable to storm water drainage facilities:

- Goal LU-15: Flood control and storm water drainage facilities: ensure adequate flood control and storm water drainage is provided by the community.
  - Policy LU-15.1: Implement activities, practices, procedures, or facilities that avoid, prevent, or reduce pollution of the San Marcos Storm Water Conveyance System and receiving waters.
  - Policy LU-15.2: Improve inadequate or undersized drainage/flood control facilities to solve both small neighborhood and large regional drainage and flood control problems.
  - Policy LU-15.3: Avoid, to the extent possible, development in floodplain and flood prone areas.
  - Policy LU-15.4: Retain drainage courses in their natural condition, to the extent possible. Consider smaller-scale drainage improvements to protect the environment and avoid disturbing natural drainage courses; consider detention areas and raised building pads.

The proposed project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-1 in Section 3.10, the project is consistent with the applicable goals and policies.

City of San Marcos Ordinances

The Storm Water Management and Discharge Control Ordinance (San Marcos Municipal Code Chapter 14.15) requires that all new development and redevelopment activities comply with the stormwater pollution prevention requirements. These stormwater pollution prevention requirements, which are described in detail in Section 14.15.050 of the Municipal Code "Reduction of Pollutants in Storm Water," include construction, development and redevelopment, and residential BMPs.

3.9.3 Thresholds of Significance

Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* provides thresholds for determining significant environmental impacts related to hydrology and water quality. A project may be deemed to have a significant impact on hydrology/water quality if the project would:

- **Threshold #1:** Violate any water quality standards or waste discharge requirements or other substantially degrade surface or groundwater quality.
- **Threshold #2**: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- **Threshold #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: result in substantial erosion or siltation on- or off-site.

- **Threshold #4:** 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- **Threshold #5:** 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: create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- **Threshold #6:** 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: impede or redirect flood flows.
- **Threshold #7:** Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
- **Threshold #8:** Result in significant alteration of receiving water quality during or following construction.
- **Threshold #9:** Result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity, and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).
- **Threshold #10:** Be tributary to an already impaired water body as listed on the Clean Water Act Section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?
- **Threshold #11:** Be tributary to environmentally sensitive areas (e.g., MSCP, RARE, Areas of Special Biological Significance, etc.)? If so, can it exacerbate already existing sensitive conditions?
- **Threshold #12:** Have a potentially significant environmental impact on surface water quality, to either marine, fresh or wetland waters?

As identified earlier in this section, impacts related issue area: risk release of pollutants due to project inundation in flood hazard, tsunami or seiche zones are not discussed in this section. Chapter 5.0, Environmental Issues Found Not to be Significant, provides additional information on this topic.

3.9.4 Project Impact Analysis

The following analysis discusses the potential for the proposed project to result in impacts to hydrology and water quality. A preliminary Drainage Study and Priority Development Project (PDP) Storm Water Quality Management Plan were prepared for the project by SB&O (2020a and 2020b) and are included in Appendix J.1 and J.2.

Post-Development Drainage Pattern

According to the drainage report, due to the hillside nature of the development, runoff from the steep driveway entries and frontage slopes will discharge to the Barham Drive gutter. These flows will be

intercepted by a proposed inlet on Barham Drive near the northwest corner of the site. The uphill section of the project will include manufactured cut slopes at the existing hillside. Runoff from the existing and proposed slopes will be intercepted in the bypass drainage ditches and storm drain, then directed to the westerly limits and then conveyed to a proposed inlet near the northwest corner of the property, which is connected to the existing Barham Drive storm drain (MS-4) (SB&O 2020a).

Detention and Biofiltration

The project proposes a surface biofiltration basin with enhanced below grade storage to provide water quality treatment and flow control for post development runoff. The surface basin has additional storage depth and an overflow structure with both a weir opening and grated top to provide attenuation of larger storm events. A concrete lined ramp provides an emergency overflow path to the driveway and then Barham Drive. In order to ensure that post development flows do not exceed existing peak flows, detention routing analyses were prepared to determine peak outflows, and to provide adjusted discharge estimate for comparison to the existing condition (SB&O 2020a). Nutrient sensitive media will be used in the biofiltration basin to provide treatment as San Marcos Creek is a 303(d) listed water body impaired by nutrient pollutant sources (SB&O 2020b).

The City of San Marcos does not allow treatment facilities in the public right-of-way. Runoff from the driveways, frontage slopes and the existing Barham Drive improvements will continue westerly to the existing curb inlet at the church driveway. Street trees will be used at the driveway to intercept and provide treatment to the flows from onsite driveways which cannot be captured and routed to the biofiltration basins. (SB&O 2020b). Runoff from the existing improvements on Barham Drive is not being routed to a treatment facility. Instead, the basin is being upsized appropriately to treat additional flows to compensate. Frontage slopes along Barham Drive are considered self-treating.

The biofiltration basin would be subject to regular inspection and maintenance. The property owner is required, pursuant to the City's Municipal Code Section 14.15 and the BMP Design Manual, to enter into a stormwater management and discharge control maintenance agreement for the installation and maintenance of permanent BMPs prior to issuance of permits. A maintenance agreement shall be recorded with the City of San Marcos, clarifying maintenance roles and responsibilities. These comprehensive inspection and maintenance requirements will be included as conditions of approval for the proposed project.

In addition to the biofiltration features, which are considered structural BMPs, the proposed project would also incorporate source control and site design BMPs as identified in the preliminary SWQMP for the proposed project (Appendix J.2). Source control BMPs include, but are not limited to: 1) preventing illicit discharges into the MS4; 2) stenciling the future on-site public road storm drain inlets; and 3) protecting trash storage areas from rainfall, run-on, runoff, and wind dispersal. Site design BMPs include, but are not limited to: 1) conserving natural areas, soils, and vegetation; 2) minimizing impervious areas; 3) runoff collection through multiple private inlets; and 4) landscaping with native or drought tolerant species.

Threshold #1: Violate any water quality standards or waste discharge requirements or other substantially degrade surface or groundwater quality?

Pollutants generated by development projects could include sediments, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides. These pollutants can make their way to drainages and watercourses where they can degrade surface water quality, and in some cases groundwater quality. The project would

discharge to San Marcos Creek, which discharges to Batiquitos Lagoon, which discharges to the Pacific Ocean.

The proposed project would comply with all applicable water quality standards and waste discharge requirements. The proposed project includes a comprehensive water quality management approach that includes the use of biofiltration and source control and site design BMPs to ensure that there would not be an increase in pollutant discharge to receiving waters. No flow-thru treatment BMPs are proposed to be implemented on site in lieu of retention or biofiltration. The stormwater management design for the project was developed following the forms and checklists found in the BMP Design Manual for Permanent Site Design, Storm Water Treatment and Hydromodification Management (City of San Marcos 2016).

The BMP Design Manual provides the guidance necessary to comply with the performance standards presented in Order R9-2013-0001 as amended (RWQCB 2015). This order indicates that discharges from MS4s must not cause or contribute to the violation of water quality standards in any receiving water (RWQCB 2015, Page 18).

In accordance with NPDES regulations, the State requires that any construction activity that disturbs one acre or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a SWPPP and implement BMPs, including erosion and sediment control and non-stormwater management measures, to reduce construction effects on receiving water quality. Since the proposed project includes disturbance to more than one acre, a General Construction Activity Stormwater Permit from the SWRCB would be required prior to the issuance of a grading permit. A SWPPP would also be developed and implemented in accordance with the appropriate Risk Level, as determined by the City Engineer. Preparation and implementation of the SWPPP would ensure compliance with the provisions of the NPDES General Permit.

As previously noted, the proposed project has been designed to comply with the land development requirements of Order R9-2013-0001 as amended and the BMP Design Manual. These requirements were used to recommend BMPs for the proposed project to ensure there would be no impacts. Long-term water quality and HMP requirements are mitigated through appropriate design requirements for commercial, parking lot, and street land uses. The proposed project is therefore in compliance with the RWQCB MS4 permit.

In summary, the proposed project would not violate any water quality standards or waste discharge requirements. Impacts would be **less than significant**.

Threshold #2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Implementation of the project would not use any groundwater. Therefore, the project would not substantially deplete groundwater supplies. The project will increase the amount of impervious surface on the project site; however, 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 level. **Impacts are less than significant.**

Threshold #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: result in substantial erosion or siltation on- or off-site?

This section analyzes the potential for the proposed project to alter existing drainage patterns in a way that results in substantial erosion or siltation on- or off-site.

Short Term (Project Construction)

The project site is currently vacant. Grading will consist of approximately 36,394 cubic yards (cy) of cut material and 91,526 cy of fill material requiring an import of approximately 46,341 CY of material. The proposed project would incorporate construction BMPs in compliance with the General Construction Permit and SWPPP. In addition to the biofiltration features, which are considered structural BMPs, the proposed project would also incorporate source control and site design BMPs as identified in the preliminary SWQMP for the proposed project (Appendix J.2). Source control BMPs include, but are not limited to: 1) preventing illicit discharges into the MS4, 2) stenciling the future on-site public road storm drain inlets, and 3) protecting trash storage areas from rainfall, run-on, runoff, and wind dispersal. Site design BMPs include: 1) conserving natural areas, soils, and vegetation, 2) minimizing impervious areas, 3) runoff collection through multiple private inlets, and 4) landscaping with native or drought tolerant species. These BMPs have been designed in a manner to be consistent with the requirements of the BMP Design Manual (City of San Marcos 2016) which requires that no pollutants are discharged to the MS4s. Per the BMP Design Manual (Page 1-5) all development projects, or phases of development projects, are required to implement temporary erosion, sediment, good housekeeping and pollution prevention BMPs to mitigate storm water pollutants during the construction phase. Short term, construction-related impacts would be **less than significant.**

Long Term (Project Operation)

The proposed project would increase the area of impervious surface on the project site. If not carefully planned for, increased runoff from impervious surfaces could cause alterations to drainage courses, increases in erosion and siltation, and increases in flooding due to increased runoff. However, the proposed project has been designed to carefully handle runoff and to meet regulatory requirements to ensure that post-development runoff quantities and rates are similar to or less than the pre-development condition.

The drainage study for the proposed project identifies the pre- and post-development conditions for runoff rates and quantities (SB&O 2020a, Pages 4-6). The 100-year existing/predevelopment flows from the project area are approximately 33.81 cubic feet per second (cfs). In the post development condition, the flows would increase to 60.45 cfs. However, with detention, the flows would be 27.99 cfs resulting in a 5.82 cfs decrease from existing conditions. Runoff quantities and rates are less than in the post-development condition due to the incorporation of biofiltration and source control and site design BMPs.

The post–development condition of the project site would include a new biofiltration area. The project proposes a surface biofiltration basin with enhanced below grade storage to provide water quality treatment and flow control for post development runoff. The surface basin has additional storage depth and an overflow structure with both a weir opening and grated top to provide attenuation of larger storm events. These biofiltration features include hydromodification and water quality treatment before discharging runoff to the existing storm drain system. The existing storm drain system conveys discharge to San Marcos Creek which discharges to Batiquitos Lagoon, and ultimately the Pacific Ocean.

The project boundary was compared with the areas of the County with Potential Critical Coarse Sediment Yield Areas (CCSYA). No areas of potential CCSYA are present on this project.

In summary, implementation of the proposed project would not increase the rate or quantities of runoff beyond the pre-development condition. The proposed project therefore meets the applicable peak flow discharge requirements (SB&O 2020, Page 6). The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site (e.g., downstream). Long term impacts would be **less than significant**.

Threshold #4: 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As identified in response to Threshold #3, the proposed project would increase the area of impervious surface on the project site which could increase runoff flow rates or volumes. However, the proposed project has been designed to carefully handle runoff and meet regulatory requirements to ensure that post-development runoff quantities and rates are similar or less than the pre-development condition. Specifically, post-development runoff rates would be approximately 5.82 cfs less than in the pre-development condition due to the incorporation of biofiltration, source control and site design BMPs, and the pervious surfaces located throughout the project site (SB&O 2020a, Page 6). Therefore, the proposed project would not create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes. Impacts would be **less than significant**.

Threshold #5: 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: create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The project proposes a comprehensive approach to stormwater and drainage management. This includes a biofiltration area and source control and site design BMPs that would detain and retain stormwater flows from the project site. The treated stormwater from the biofiltration area (water quality and hydromodification) would be discharged to the existing storm drain system. Since the runoff will be treated for hydromodification before it enters the system, no changes to downstream flow rates or storm drain capacity are expected.

As described above, the proposed project would not generate increased runoff volumes. Additionally, project-related runoff would be adequately treated prior to discharge into planned drainage systems via biofiltration and BMPs such that the proposed project would not provide substantial additional sources of polluted runoff (SB&O 2020a, Page 6). Off-site storm drains will not be adversely affected by the proposed project as the project would mitigate all storm water flows to be less than existing conditions. The proposed project would not contribute any increase in flows to existing storm drain infrastructure. The proposed project meets all current storm water and hydrology requirements, including hydromodification. An expansion of existing facilities would not be required to serve the proposed project.

Therefore, the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Impacts would be **less than significant**.

Threshold #6: 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: impede or redirect flood flows?

As identified in response to Threshold #3, the proposed project would increase the area of impervious surface on the project site which could increase runoff flow rates or volumes; however, the project has been designed to carefully handle runoff and meet regulatory requirements to ensure that post-development runoff quantities and rates are similar or less than the pre-development condition. Specifically, post-development runoff rates would be approximately 5.82 cfs less than in the pre-development condition due to the incorporation of biofiltration, source control and site design BMPs, and the pervious surfaces located throughout the project site (SB&O 2020a, Page 6).Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would impede or redirect flood flows. Impacts would be **less than significant**.

Threshold #7: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Short Term

The project site is currently vacant. Grading will consist of approximately 36,394 cy of cut material and 91,526 cy of fill material requiring an import of approximately 46,341 cy of material. The proposed project would incorporate construction BMPs in compliance with the General Construction Permit and SWPPP. Potential construction-related impacts to receiving water quality could include siltation and erosion, the use of fuels for construction equipment, and the generation of trash and debris from the construction site. In accordance with NPDES regulations, the project will be required to secure a General Construction Activity Stormwater Permit, which will require the preparation of a SWPPP and implementation of BMPs. Examples of typical BMPs implemented in SWPPPs that could be applicable to the project include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water. These measures are designed to minimize the generation of pollutants, including sediment and trash/debris and would ensure that the proposed project would not result in significant alteration of receiving water quality during construction. Impacts would be **less than significant**.

Long Term (Project Operation)

Buildout of the proposed project would increase the amount of imperviousness at the project site; however, based upon the analysis in the preliminary SWQMP prepared for the proposed project, the proposed project includes a comprehensive water quality management approach that incorporates biofiltration features and source control and site design BMPs to ensure that there would not be an increase in pollutant discharge to receiving waters. The biofiltration features and BMPs would also be subject to regular inspection and maintenance as per the preliminary SWQMP (Appendix J.2).

As identified above, impaired water bodies in the Carlsbad Watershed, within which the project site is located, include San Marcos Creek, Batiquitos Lagoon and the Pacific Ocean. Potential pollutants to

be generated by development projects include sediment, nutrients, heavy metals, organic compounds, trash/debris, oxygen demanding substances, oil/grease and bacteria/viruses.

The BMP Design Manual (Page 2-19) requires that the pollutants of concern for each impaired water body in each watershed be treated by engineered treatment controls to a medium pollutant removal efficiency or better prior to leaving each development site. This requirement results in reductions in pollutants. Biofiltration has a high efficiency for removal of sediments, nutrients, trash, metals, oil/grease, organics, and oxygen demanding substances and has a medium efficiency for removal of bacteria. No flow-thru BMPs are proposed in lieu of retention or biofiltration BMPS. Therefore, the project's water quality management approach would effectively treat stormwater runoff prior to discharge from the site and to receiving waters. The proposed project would not result in significant alteration of receiving water quality following construction. Impacts would be **less than significant**.

Threshold #8: Result in significant alteration of receiving water quality during or following construction?

As identified in response to Threshold #7, short-term, construction-related impacts resulting from siltation and erosion, the use of fuels for construction equipment, and the generation of trash and debris from the construction site would be minimized through project design features and construction-related water quality BMPs identified in the project's SWPPP. For long-term impacts, and in compliance with the BMP Design Manual, the proposed project includes a comprehensive water quality approach, including biofiltration features and source control and site design BMPs that would pre-treat storm water discharge from impervious areas to a medium pollutant removal efficiency or better, to ensure that there would not be an increase in pollutant discharge to receiving waters. Therefore, the proposed project would not result in an increase in pollutant discharges to receiving waters. Impacts would be **less than significant.**

Threshold #9: Result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity, and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).

As identified above, impaired water bodies in the Carlsbad Watershed, within which the project site is located, include San Marcos Creek, Batiquitos Lagoon and the Pacific Ocean. Potential pollutants to be generated by development projects include sediment, nutrients, heavy metals, organic compounds, trash/debris, oxygen demanding substances, oil/grease and bacteria/viruses.

The proposed project includes a comprehensive water quality management approach to ensure that there would not be an increase in pollutant discharge to receiving waters. The comprehensive use of biofiltration and source control and site design BMPs would effectively treat stormwater runoff prior to discharge from the site and to receiving waters in compliance with the requirements of the BMP Design Manual. No flow-thru treatment BMPs are proposed to be implemented on site in lieu of retention or biofiltration. As identified above, biofiltration has a medium to high efficacy for pollutant removal. Therefore, the project would not result in an increase in pollutant discharges to receiving waters. Impacts would be **less than significant**.

Threshold #10: Be tributary to an already impaired water body as listed on the Clean Water Act Section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?

As identified above, impaired water bodies in the Carlsbad Watershed, within which the project site is located, include San Marcos Creek, Batiquitos Lagoon and the Pacific Ocean. Potential pollutants to be generated by development projects include sediment, nutrients, heavy metals, organic compounds, trash/debris, oxygen demanding substances, oil/grease and bacteria/viruses.

The proposed project includes a comprehensive water quality management approach to ensure that there would not be an increase in pollutant discharge to receiving waters. Nutrient sensitive media will be used in the biofiltration basin to provide treatment. The comprehensive use of biofiltration and source control and site design BMPs would effectively treat stormwater runoff prior to discharge from the site and to receiving waters in compliance with the requirements of the BMP Design Manual. As identified above, biofiltration has a medium to high efficacy for pollutant removal. Therefore, while the project site is tributary to already impaired water bodies as listed on the CWA Section 303(d) list, the project would not result in an increase in any pollutant for which those water bodies are already impaired. Impacts would be **less than significant**.

Threshold #11: Be tributary to environmentally sensitive areas (e.g., MSCP, RARE, Areas of Special Biological Significance, etc.)? If so, can it exacerbate already existing sensitive conditions?

As discussed in Section 3.3 Biological Resources, the project site is located within the MHCP. However, the project site is not located within a Focused Planning area as defined in the MHCP and the draft San Marcos Subarea Plan. From a water quality and hydrology perspective, conditions in environmentally sensitive areas could be exacerbated by increases in erosion, increases in pollutants, and impacts related to hydrology and flooding.

Erosion – As identified above, with the proposed development and incorporation of biofiltration and BMPs, the runoff would be reduced by 5.82 cfs. The proposed biofiltration and BMPs would also minimize the potential for erosion and siltation. Thus, through a combination of reduced runoff and adequately stabilized soils as required by provisions in the NPDES General Permit, Order R9-2013-0001 as amended and the BMP Design Manual, the proposed project would not increase erosion on or offsite and would not exacerbate already existing sensitive conditions at environmentally sensitive areas.

Pollutants/Water Quality – the proposed project includes a comprehensive water quality management approach to ensure that there would not be an increase in pollutant discharge to receiving waters. The use of biofiltration and source control and site design BMPs would effectively treat stormwater runoff prior to discharge from the site and to receiving waters. As identified above, biofiltration has a high efficiency for removal of sediments, nutrients, trash, metals, oil/grease, organics, and oxygen demanding substances and has a medium efficiency for removal of bacteria. The biofiltration features would be subject to regular inspection and maintenance as per the preliminary SWQMP (Appendix J.2). Furthermore, the property owner would also enter into a stormwater management and discharge control maintenance agreement for the installation and maintenance of permanent BMPs prior to issuance of permits.

Hydrology/Flooding - The proposed project has been designed such that the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. As identified above, the runoff would be reduced

by 5.82 cfs post-development. Therefore, the proposed project would adequately attenuate stormwater runoff during storm events and not contribute to flooding or hydrology disruptions in sensitive environments.

In conclusion, the proposed project will control of erosion, pollutants, and flooding and would not exacerbate already existing sensitive conditions at environmentally sensitive areas. Impacts would be **less than significant**.

Threshold #12: Have a potentially significant environmental impact on surface water quality, to either marine, fresh or wetland waters?

To reduce potential impacts to marine, fresh, or wetland waters downstream, the proposed project includes a comprehensive water quality management approach that includes the use of biofiltration and source control and site design BMPs to effectively treat stormwater runoff prior to discharge into Escondido Creek and San Elijo Lagoon. Biofiltration has a high efficiency for removal of sediments, nutrients, trash, metals, oil/grease, organics, and oxygen demanding substances and a medium efficiency for removal of bacteria. The biofiltration features would be subject to regular inspection and maintenance as per the preliminary SWQMP (Appendix J.2). Furthermore, the property owner would also enter into a stormwater management and discharge control maintenance agreement for the installation and maintenance of permanent BMPs prior to issuance of permits. Therefore, the proposed project would not have a potentially significant environmental impact on surface water quality, to either marine, fresh, or wetland waters. Impacts would be **less than significant**.

3.9.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to hydrology/water quality, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts on hydrology/water quality. All of the cumulative projects identified in Table 2-3 are considered in this cumulative analysis.

Hydrology

Development of the proposed project and cumulative projects would increase the amount of impervious surfaces. This would potentially result in increased surface runoff, alteration of the regional drainage pattern, and flooding. However, like the proposed project, each individual project applicant would be required to hydrologically engineer the respective project sites to ensure that post-development surface runoff flows can be accommodated by the regional drainage system. Runoff volume from the project site in the post-development condition is less than in the pre-development condition due to the implementation of a comprehensive drainage plan, including the use of biofiltration facilities and BMPs. Therefore, the proposed project's contribution to a cumulative impact from a hydrology perspective is **less than significant**.

Water Quality

Development of the proposed project, in conjunction with cumulative projects that drain to the San Marcos Hydrologic Area, has the potential to increase the concentration of pollutants in surface runoff and downstream water quality. However, all cumulatively considered projects would be subject to the same federal water quality standards and state waste discharge requirements that the proposed project is subject to. This includes preparation of project-specific SWPPPs per the NPDES permit program and implementation of associated BMPs to prevent construction-related runoff from polluting receiving waters. Additionally, the proposed project has been designed to incorporate biofiltration and BMPs to limit the potential for water quality impacts to the greatest extent feasible. By incorporating these features into the project design, the proposed project would not substantially contribute to a significant cumulative impact to water quality. Impacts would be **less than significant**.

3.9.6 Mitigation Measures

Based upon the analysis presented in Section 3.9.4 and 3.9.5, no impacts were identified and no mitigation measures are required.

3.9.7 Conclusion

The proposed project would increase the number of impervious surfaces at the project site; however, the project site would be hydrologically engineered such that post-development runoff would be less than in the pre-development condition. Therefore, hydrologic impacts resulting from the proposed project would be less than significant. Additionally, with incorporation of biofiltration and BMPs that would treat and eliminate the pollutants of concern prior to discharging to Escondido Creek, as well as implementation of a project-specific SWPPP, construction and operation of the proposed project would not result in substantial adverse water quality impacts.

3.10 Land Use and Planning

Introduction

This section analyzes the potential for the proposed project to have impacts related to land use and planning. This section considers consistency with applicable land use plans and habitat conservation plans. The transportation portion of the analysis is based on the following report, which is included as **Appendix K** of the Environmental Impact Report (EIR)[12]:

- *Transportation Impact Analysis & Local Transportation Analysis, Hallmark Barham Specific Plan*, San Marcos, California, prepared by Linscott Law & Greenspan (LLG) (May 2021).

The Local Transportation Analysis focuses on automobile delay/Level of Service (LOS), consistent with the City's *Transportation Impact Analysis Guidelines* (San Marcos 2020). The LOS analysis was conducted to identify roadway deficiencies in the project study area and recommend project improvements to address such deficiencies. The Local Transportation Analysis is incorporated and addressed in this section as it relates to consistency with the City's Mobility Element policies in the General Plan.

In the Initial Study prepared for the project (**Appendix B.1**), the proposed project was determined to have no impact related to physical division of an established community. Therefore, this issue is not discussed further in this EIR section. Section 5.0, Environmental Effects Found not to be Significant - Land Use, provides additional information on this topic.

Table 3.10-1 summarizes the project- and cumulative-level land use impact analysis for the proposed project.

Table 3.10-1. Land Use Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
Threshold #1: 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?	Significant	Significant	Significant and Unavoidable

3.10.1 Existing Conditions

This section describes the existing planning context for the project site, including the General Plan and Zoning designations that currently apply to the site.

12 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.

Project Site

As shown in Figure 2-1 in Chapter 2, the 10.56- acre project is located at 943 E. Barham Drive, west of La Moree Road in the Barham/Discovery Community within the eastern portion of the City of San Marcos. The project vicinity is developed primarily with residential uses. To the east of the project is the Mira Lago residential development and to the southeast is the Williamsburg residential development. West of the project site is Grace Church and the Barham Park & Ride. Southwest of the project site is residential development associated with the Walnut Hills II Specific Plan. The northern boundary of the project site is E. Barham Drive and immediately north of E. Barham Drive is landscaping, a sound wall, and the State Route 78 (SR-78). South of the project site is preserved open space, a private community park/viewpoint and additional residences within the Williamsburg residential development.

The project site is generally undeveloped but appears to have been disturbed historically based on the presence of non-native grassland distinct from adjacent habitats and visible in historical aerial photographs of the area. Based upon historical aerial photography reviews, a residential structure and associated outbuilding were constructed on the project site sometime between 1949 and 1968. All structures and outbuilding were removed sometime between 1983 and 1996.

Elevations range from 710 feet above mean sea level (amsl) in the southeast portion of the site to 650 feet amsl in the northwest portion of the site. The majority of the project site supports non-native grassland, with Diegan coastal sage scrub habitat occurring along the southern project site boundary. A smaller area of Diegan coastal sage scrub – *Baccharis* dominated habitat occurs along the eastern project boundary, and disturbed land and ornamental vegetation occur scattered throughout the non-native grassland across the majority of the site. Developed, ruderal, and ornamental land border the north, east, and west project boundaries

Existing General Plan Designation

The project site has an existing General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. According to Table 2-3 of the Land Use Element of the City's General Plan, this designation "Provides for a variety of commercial and office uses integrated as a cohesive development. These uses may be mixed 'vertically' (on separate floors of a building) or 'horizontally' (on a single site or adjacent parcels). Structured parking, while not required to achieve the maximum FAR, may be allowed. Shared parking arrangements may also be allowed consistent with the nature of mixed uses. Typical uses include retail, commercial services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants, and health care facilities. To maintain a pedestrian scale and orientation, retail and other active services are encouraged at street level. This designation does not allow residential uses. A Specific Plan is required for development" (City of San Marcos 2012).

Existing Zoning Designation

The project site has a zoning designation of MU-3. According to Section 20.225.060 of the City's Zoning Ordinance, this zone is intended to "support a job-based mixed use area combining a variety of commercial and office uses integrated as a cohesive development. This business-oriented area shall be complementary to the MU-1 and MU-2 Zones; residential uses are not permitted in the MU-3 (SP) Zone. Typical uses include commercial retail, business services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants and health care facilities. Horizontal and vertical mixed use is permitted" (City of San Marco 2021).

Surrounding Land Uses

Existing General Plan Designations

As stated above, the project site has a General Plan land use designation of MU3 (Mixed Use 3). The properties to the west of the site are also designated MU3. To the southwest are parcels designated OS (Open Space) and SPA (Specific Plan Area). To the south of the site is land designated for OS. Parcels designated LDR (Low Density Residential) are located to the east and southeast. To the north of the site, across E. Barham Drive and SR-78 are parcels designated as LI (Light Industrial).

Existing Zoning Designations

As mentioned, the proposed project site is zoned MU-3 (Mixed-Use-3). The properties to the west of the site are also designated MU-3. To the southwest, the parcels are designated O-S (Open Space) and SPA (Specific Plan Area). To the south, the land is zoned O-S. To the east, parcels are R-1-10 (PRD), Residential Low (Planned Residential Development). To the north of the site, across E. Barham Drive and SR-78 are parcels zoned LI (Light Industrial).

Roadway Circulation System

The study area includes seven intersections and four roadway segments based on guidance provided in the City of San Marcos' Transportation Impact Analysis Guidelines (November 2020), the anticipated distribution of the project traffic, and areas of potential effect. **Figure 3.10-1** shows the existing circulation conditions in the project study area.

State Route 78 (SR-78) is an east/west freeway facility connecting Oceanside, Vista, San Marcos, and Escondido. SR-78 is generally built with three general purpose lanes in each direction. The posted speed limit in the study area is 65 MPH. In the study area, local access is provided as follows:

- Westbound SR-78
    - Signalized on/off-ramps at the Nordahl Road diamond interchange
    - Unsignalized on/off ramps from/to Rancheros Drive
- Eastbound SR-78
    - Signalized on/off-ramps at the Nordahl Road diamond interchange
    - Signalized off-ramp to Barham Drive (west of Woodland Parkway)
    - Signalized on-ramp from Barham Drive (east of Woodland Parkway)

Rancheros Drive is an east/west street north of the project site on the opposite side of SR-78. It is identified as an unclassified Major Road on the *City of San Marcos Mobility Element*. In the project study area Rancheros Drive provides access to SR-78 and is currently built as a two-lane undivided roadway with a posted speed limit that ranges from 30-35 mph. The distance between the SR-78 westbound ramps and Woodland Parkway is approximately 400 feet. On-street parking is generally not allowed west of Woodland Parkway, but is provided intermittently on portions of Rancheros Drive east of Woodland Parkway.

Woodland Parkway is a north-south street west of the project site. It is identified as a 4-lane roadway on the *City of San Marcos Mobility Element*. In the project study area, Woodland Parkway connects Barham Drive to Rancheros Drive, which provides access to/from westbound SR-78. Between Barham

Drive and Rancheros Drive, Woodland Parkway is approximately 400 feet in length, and provides 3 lanes (including turn lanes) in 32 feet of width. The posted speed limit in the study area is 40 mph, and on-street parking is not allowed.

E. Barham Drive is an east/west facility that is classified within the study area on the *City of San Marcos Mobility Element* as a 4-Lane Arterial w/ Class II or III bicycle facilities from Woodland Parkway east to the San Marcos city limits with Escondido, just west of Meyers Avenue.

E. Barham Drive is currently built as a four-lane roadway undivided roadway (two-way left-turn lane median) from Woodland Parkway to east of La Moree Road, where it transitions to a two-lane undivided roadway with a two-way left turn lane median) to the city limits. The posted speed limit is 45 mph between Twin Oaks Valley Road and La Moree Road. The four-lane section described provides Class II bicycle lanes while the two-lane section does not provide separate bicycle facilities. On-street parking is generally prohibited.

La Moree Road is a two-lane local collector on the *City of San Marcos Mobility Element*. The posted speed limit is 35 mph. and curbside parking is prohibited in both directions. No sidewalks are provided. Bicycle facilities are not provided.

Existing Level of Service for Intersections and Roadway Segments

Table 3.10-2 summarizes the LOS criteria for signalized and unsignalized intersections. Section 3.10.4 below, provides additional information regarding the level of service analysis and methodology.

Table 3.10-2. Levels of Service Criteria for Intersections

LOS	Signalized Intersections	Unsignalized Intersections	Description
A	≤10	≤10	Operations with very low delay and most vehicles do not stop.
B	>10 and ≤20	>10 and ≤15	Operations with good progression but with some restricted movements.
C	>20 and ≤35	>15 and ≤25	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35 and ≤55	>25 and ≤35	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55 and ≤80	>35 and ≤50	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80	>50	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Traffic Counts

LLG conducted manual hand counts at the study area intersections in September 2018 between the hours of 7:00-9:00 AM and 4:00-6:00 PM while schools were in session. A growth factor of 1% per year for three years (3% total) was added to the traffic counts to represent Year 2021 conditions.

Intersections

Table 3.10-3 displays intersection LOS and average vehicle delay results for the key study area intersections under existing conditions. As seen in Table 3.10-3, all intersections are calculated to currently operate at LOS D or better during both the AM and PM peak hours, with the exception of Rancheros Drive / SR-78 WB ramps which is calculated to operate at LOS F.

Table 3.10-3. Peak Hour Intersection LOS – Existing Conditions

#	Intersection	Control Type	Peak Hour	Existing	
				Avg. Delay (seconds)(1)	LOS(2)
1	E. Barham Drive/ SR-78 EB Off Ramp	Signal	AM	30.0	C
			PM	17.0	B
2	Rancheros Drive/ SR-78 WB Ramp	AWSC(3)	AM	**69.3**	**F**
			PM	**55.0**	**F**
3	Rancheros Drive/ Woodland Pkwy	Signal	AM	31.3	C
			PM	25.2	C
4	E. Barham Drive/ Woodland Pkwy	Signal	AM	49.1	D
			PM	45.6	D
5	E. Barham Drive/ Project Driveway (West)(4)	--	AM	-	-
			PM	-	-
6	E. Barham Drive/ Project Driveway (East) (4)	--	AM	-	-
			PM	-	-
7	E. Barham Drive/ La Moore Road	Signal	AM	4.8	A
			PM	4.8	A

Source: LLG 2021

Notes: (1) Average Delay expressed in seconds per vehicle
(2) Level of Service
(3) AWSC = All Way Stop Control
(4) Intersection does not currently exist
Bold indicates substandard LOS E or F.

Roadway Segments

Table 3.10-4 shows the classification of each project area roadway and the current operating conditions for the study area roadway segment. As seen in Table 3.10-4, the study area segments are calculated to currently operate at acceptable LOS C.

Table 3.10-4. Roadway Segment LOS – Existing Conditions

Roadway	Segment	Classification	Capacity (LOS E)(1)	ADT(2)	LOS(3)	V/C(4)
E. Barham Drive	Woodland Pkwy to Project Driveway (West)	4-Lane Collector/ Secondary Arterial	30,000	18,025	C	0.601
	Project Driveway (West) to Project Driveway (East)	4-Ln Collector/ Secondary Arterial	30,000	18,025	C	0.601
	Project Driveway (East) to La Moree Road	4-Ln Collector/ Secondary Arterial	30,000	18,025	C	0.601
	East of La Moree Road	4-Ln Collector/ Secondary Arterial	30,000	18,025	C	0.601

Source: LLG 2021
Notes: (1) Capacities based on City of San Marcos's Roadway Classification Table
(2) Average Daily Traffic Volumes
(3) Level of Service
(4) Volume to Capacity

3.10.2 Regulatory Setting

This section provides an overview of the regulatory setting related to planning and land use that apply to the project, including state, regional, and local regulation and planning documents.

State

California Planning and Zoning Law

The legal framework in which California cities and counties exercise local planning and land use functions is provided in the California Planning and Zoning Law, Government Code Sections 65000 et seq. Under state planning law, each city and county is required to adopt a General Plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning" (Section 65300). The California Supreme Court has called the General Plan the "constitution for future development." The General Plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private. A General Plan consists of several elements, including land use, circulation, housing, conservation, open space, noise, and safety; other elements may be included at the discretion of the jurisdiction that relate to the physical development of the county or city.

Senate Bill 743

California Senate Bill (SB) 743 mandated specific types of CEQA analysis of transportation projects effective July 1, 2020. Prior to implementation of SB 743, CEQA transportation analyses of individual projects typically determined impacts on the circulation system in terms of roadway delay and/or capacity usage at specific locations, such as street intersections or roadway segments. SB 743, signed into law in September 2013, required changes to the guidelines for CEQA transportation analysis. The changes include the elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. The purpose of SB 743 is to

promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.

Under SB 743, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, LOS and other similar vehicle delay or capacity metrics may no longer serve as transportation impact metrics for CEQA analysis. The California Office of Planning and Research (OPR) has updated the CEQA Guidelines and provided a final technical advisory in December 2018, which recommends VMT as the most appropriate measure of transportation impacts under CEQA. The California Natural Resources Agency certified and adopted the CEQA Guidelines including the Guidelines section implementing SB 743. The changes have been approved by the Office of the Administrative Law and are now in effect. Section 3.15 Transportation, of this EIR analyzes potential VMT impacts related to the proposed project.

While VMT is the preferred quantitative metric for assessing potentially significant transportation impacts under CEQA, it should be noted that SB 743 does not prevent a city or county from using metrics such as LOS as part of the application of local general plan policies, municipal and zoning codes, conditions of approval, or any other planning requirements through a city's planning approval process; cities can still ensure adequate operation of the transportation system in terms of transportation congestion measures related to vehicular delay and roadway capacity. As such, the City can continue to require congestion-related transportation analysis and mitigation projects through planning approval processes outside CEQA.

To comply with the requirements of SB 743, the City of San Marcos has prepared its Transportation Impact Analysis Guidelines (November 2020) to provide guidance on conducting transportation impact analyses in the City as follows:

- CEQA Analysis Requirements: Requirements for conducting CEQA analysis, which consists of SB 743-consistent VMT analysis as well as assessing impacts to pedestrians, bicyclists, transit, hazards, emergency access, and other impacts (See Section 3.15 Transportation).

- Local Transportation Analysis Requirements: Requirements for conducting LOS analysis, site access assessments, and other local transportation analyses for non-CEQA purposes (Section 3.10 Land Use and Planning).

This section analyzes the project's impact to roadway capacity and roadway deficiencies as it relates to consistency with the City's Mobility Element policies.

Regional/Local

SANDAG San Diego Forward: The Regional Plan

The Regional Comprehensive Plan (RCP), adopted in 2004 by the San Diego Association of Governments (SANDAG), laid out key principles for managing the region's growth while preserving natural resources and limiting urban sprawl. The plan covered eight policy areas, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, our borders, and social equity.

In 2011, SANDAG approved the 2050 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). This approval marked the first time SANDAG's RTP included a sustainable communities strategy, consistent with the Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill 375. This RTP/SCS provided a blueprint to improve mobility, preserve

open space, and create communities, all with transportation choices to reduce greenhouse gas emissions and meet specific targets set by the California Air Resources Board (CARB) as required by the 2008 Sustainable Communities Act. In 2010, CARB established targets for each region in California governed by a metropolitan planning organization. SANDAG is the metropolitan planning organization for the San Diego region.

The SANDAG target, as set by CARB, is to reduce the region's per capita emissions of greenhouse gas emissions from cars and light-duty trucks by 7% by 2020, compared with a 2005 baseline. By 2035, the target is a 13% per capita reduction. There is no target set beyond 2035. To achieve the 2020 and 2035 targets, SANDAG and other metropolitan planning organizations are required to develop a Sustainable Communities Strategy (SCS) as an element of its RTP. The SANDAG SCS integrates land use and transportation plans to achieve reductions in greenhouse gas emissions and meet the CARB-required targets.

On October 9, 2015, the SANDAG Board of Directors adopted San Diego Forward: The Regional Plan (Regional Plan). The Regional Plan combines the two previously described existing regional planning documents: the RCP and the RTP/SCS. The Regional Plan updates growth forecasts and is based on the most recent planning assumptions considering currently adopted land use plans, including the City's General Plan and other factors from the cities in the region and the County. SANDAG's Regional Plan will change in response to the ongoing land use planning of the City and other jurisdictions. For example, the City's General Plan, and other local General Plans of cities, may change based on General Plan amendments initiated by the jurisdiction or landowner applicants. The General Plan amendments may result in increases in development densities by amending the regional category designations or zoning classifications. Accordingly, SANDAG's RTP/SCS latest forecasts of future development in the San Diego region, including location, must be coordinated closely with each jurisdiction's ongoing land use planning because that planning is not static, as recognized by the need for updates to SANDAG's RTP/SCS every 4 years.

In 2019, the SANDAG Board of Directors adopted the San Diego Forward: The 2019 Federal Regional Transportation Plan. It combines the big-picture vision for how the region will grow by 2050 with an implementation program to help make that vision a reality.

SANDAG is in the processing of developing San Diego Forward: The 2021 Regional Plan. The Regional Plan is updated every four years and combines three planning documents that SANDAG must complete per state and federal laws: The Regional Transportation Plan, Sustainable Communities Strategy, and Regional Comprehensive Plan. The Regional Plan also supports other regional transportation planning and programming efforts, including overseeing which projects are funded under the Regional Transportation Improvement Program and the TransNet program. SANDAG is applying data-driven strategies, innovative technologies, and stakeholder input to create a future system that is faster, fairer, and cleaner. Part of this data-driven approach includes the implementation of five key transportation strategies referred to as the 5 Big Moves. These strategies provide the framework for the Regional Plan and consider policies and programs, changes in land use and infrastructure, take advantage of the existing transportation highway and transit networks, and leverage trends in technology to optimize use of the transportation system. Together, these initiatives will create a fully integrated, world-class transportation system that offers efficient and equitable transportation choices, meets state climate targets, and supports local jurisdictions' achievements of Climate Action Plan goals.

Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program (MHCP) is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in northwestern San Diego County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species.

The City of San Marcos began preparing a draft of the City Subarea Plan of the MHCP in December 1999 and although the Subarea Plan has not yet been approved by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), the plan is a component of the adopted MHCP and is currently being used as a guide for open space design and preservation within the City. The intent of the City's Draft Subarea Plan is to identify a citywide preserve system that meets local and regional biological goals while minimizing fiscal and economic impacts to the City and adverse impacts on private property owners. To help achieve this goal, certain areas, known as FPAs, have been designated with parcel-level preserve goals which would contribute to achieving local and regional conservation goals while minimizing adverse effects on property rights and property values. The project site is not located within an FPA.

San Diego County Regional Airport Authority/Airport Land Use Commission

The nearest public airport is the McClellan-Palomar Airport, which is located approximately five miles southwest of the project site. The McClellan-Palomar Airport Land Use Compatibility Plan (ALUCP) contains policies to promote land use compatibility between the McClellan-Palomar Airport and adjacent and proximate land uses, to the extent these areas are not already developed with existing uses, and to protect the public health, safety, and welfare. Using airport-related forecasts and background data approved by the California Department of Transportation, Division of Aeronautics, the plan reflects anticipated growth of the airport over a 20-year horizon. The plan includes land use compatibility criteria and identifies policies applicable to the airport and surrounding land uses.

According to the McClellan-Palomar ALUCP, the project site partially lies within Review Area 2 of the airport influence area. The influence area is regulated by the Airport Land Use Commission (ALUC), which regulates land uses in the area to be compatible with airport-related noise, safety, airspace protection, and over-flight factors through review of development proposals within the airport influence area. Review Area 2 consists of limits on heights of structures in areas of high terrain. Residential development in Review Area 2 may be subject to annoyances commonly associated with proximity to airports, such as noise, vibration, and overflights.

City of San Marcos General Plan

The San Marcos General Plan consists of the following elements:

- *Land Use and Community Design Element* - Describes the desired future physical composition of the planning area in terms of location, type, and intensity of new development and open space to ensure balanced development that maximizes the long-term livability of the San Marcos community.
- *Mobility Element* - Describes the mobility strategy for the City, which identifies a network of options including streets, sidewalks, trails, and transit, that connects people with the City.

- *Conservation and Open Space Element* – Recognizes the habitat and scenic value of natural and cultural open spaces within the City and lists goals and policies that ensure long-term stewardship of these resources. This element also addresses climate change, water conservation, energy conservation, air quality, watersheds, and water quality.
- *Parks, Recreation and Community Health Element* – Identifies the recreational amenities and community service programs offered within the City and outlines goals for increased access to parks, trails, recreational facilities, and community service programs for all community members.
- *Safety Element* - Establishes policies and programs to protect public health, safety, and welfare of all residents and property. This element identifies and describes plans for response to natural and human-caused safety issues, including geologic, seismic, flood, and fire hazards.
- *Noise Element* - Identifies problematic noise sources within the City and outlines strategies to reduce overall ambient noise levels. This element also includes measures to strategically distribute land uses throughout the City.
- *Housing Element* - Describes the strategy for developing a variety of housing opportunities to accommodate all residents and preserve the quality of existing housing in order to promote safe, decent, and affordable housing within the 2013-2021 planning period.

The City's Land Use and Community Design Element identifies five goals and associated policies to guide well-balanced land use planning in the City. The following goals and policies from the City of San Marcos General Plan, Land Use Element pertain to planning:

- Goal LU-1: Achieve a balanced distribution and compatible mix of land uses to meet the present and future needs of all residents and the business community.
    - Policy LU-1.1: Ensure that adjacent land uses complement one another by considering compatibility of activities, development patterns and architectural character elements, and access to various mobility choices.
    - Policy LU-1.4: Maintain the natural integrity of open space preserves by ensuring development projects are sensitively integrated along the edges of preserved or protected areas.
- Goal LU-2: Promote development standards and land use patterns that encourage long-term environmental sustainability.
    - Policy LU-2.1: Promote compact development patterns that reduce air pollution and automobile dependence and facilitate walking, bicycling, and transit use.
    - Policy LU-2.2: Encourage new development to be sited to respond to climatic conditions, such as solar orientation, wind, and shading patterns.
    - Policy LU-2.3: Require the incorporation of green building practices, technologies, and strategies into development projects per code standards.
    - Policy LU-2.5: Promote landscaping (e.g., native, drought-tolerant plants) that minimizes demands on water supply.
    - Policy LU-2.7: Promote the installation of trees to reduce the urban heat island effect and green infrastructure to reduce storm water runoff.

- Goal LU-3: Develop land use patterns that are compatible with and support a variety of mobility opportunities and choices.
    - Policy LU-3.1: Require that new development and redevelopment incorporate connections and reduce barriers between neighborhoods, transit corridors, and activity centers within the City.
    - Policy LU-3.5: Provide an interconnected open space system that is accessible to the public, including pedestrian and equestrian links, bicycle paths, multi-use trails, recreation areas, and drainage-ways.
- Goal LU-5: Promote community design that produces a distinctive, high-quality built environment with forms and character that create memorable places and enrich community life.
    - Policy LU-5.4: Require building and site design that respects the natural topography and iconic ridgelines that serve as the visual backdrop for San Marcos.
    - Policy LU-5.6: Require a specific plan for strategic areas/properties that require high-quality design, orientation and development due to their location or visibility within the community.
    - Policy LU-5.7: Architecture shall be enhanced with high-end building materials, varied roof lines, and decorative details.
- Goal LU-7: Direct and sustain growth and expansion in areas of San Marcos that can support a concentration of a variety of uses and are particularly suitable for multimodal transportation and infrastructure expansion and improvements.
    - Policy LU-7.2: Coordinate pedestrian, transit and infrastructure upgrades with infill and redevelopment opportunities.

The Mobility Element of the General Plan identifies specific goals and policies related to an efficient circulation system, traffic calming and safety, and alternative modes of travel. Those that are applicable to the land use for the proposed project are identified below. Policies associated with Goals M-2 and M-3 are analyzed in Table 3.10-5 and discussed in Section 3.15, Transportation.

- Goal M-1: Provide a comprehensive multimodal circulation system that serves the City land uses and provides for the safe and effective movement of people and goods.
    - Policy M-1.1: Safely and efficiently accommodate traffic generated by development and redevelopment associated with implementation of the General Plan Land Use Policy Map
    - Policy M-1.2: Require new development to finance and construct internal adjacent roadway circulation and City-wide improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian and bicycle facilities.
    - Policy M-1.3: Require new developments to prepare and implement Transportation Demand Management (TDM) programs to minimize vehicle trip generation and promote alternative modes of travel within the city.
    - Policy M-1.4: Utilize multi-modal LOS techniques to evaluate transportation facilities. For identified prioritized modes (based on facility typology), provide the following minimum LOS as shown in Table 3-4 of the Mobility Element:

        - LOS D or better for Vehicles as a prioritized mode
            - Generally, provides facilities that have minimum vehicle congestion during peak periods. Most motorists are delayed less than 55 seconds at a signal (or less than one signalized cycle).
        - The City shall allow for flexible LOS where warranted (e.g., accepting a lower LOS than identified above).
    - Policy M-1.6: Work to improve connectivity within the City by closing gaps in the existing bicycle, pedestrian, trail, transit, and roadway network. Work with new development to provide connectivity and redundancy in the mobility network.
    - Policy M-1.7: Strive to ensure that streets within San Marcos shall be complete streets where feasible; thereby providing accessibility, safety, connectivity, and comfort for all modes and users of the system. Appropriate new local streets and Main Streets will prioritize pedestrian and bicycle users through the corridor.
- Goal M-2: Protect neighborhoods by improving safety for all modes of travel and calming traffic where appropriate.
    - Policy M-2.1: Work with new development to design roadways that minimize traffic volumes and/or speed, as appropriate within residential neighborhoods; while maintaining the City's desire to provide connectivity on the roadway network.
    - Policy M-2.3: Consider roundabouts, as appropriate, as an intersection control device with demonstrated air quality, traffic efficiency, and safety benefits.
- Goal M-3: Promote and encourage use of alternative transportation modes, including transit, bicycles, neighborhood electric vehicles (NEVs), and walking, within the City.
    - Policy M-3.1: Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.
    - Policy M-3.2: Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians through design, maintenance and law enforcement. Install wider sidewalks and curb extensions at pedestrian crossings (bulb outs) where appropriate.
    - Policy M-3.3: Provide a pedestrian and bicycle network in existing and new neighborhoods that facilitates convenient and continuous pedestrian and bicycle travel free of major impediments and obstacles.
    - Policy M-3.5: Ensure that streets in areas with high levels of pedestrian activity (such as employment centers, residential areas, mixed use areas, and schools) support safe pedestrian travel by providing detached sidewalks, bulb-outs, enhanced pedestrian crossings, pedestrian bridges, and medians.
    - Policy M-3.9: Create a pleasant walking environment for roadway typologies where pedestrian travel is prioritized. This includes providing shade trees, landscaping, benches, pedestrian-scale lighting, way finding signage, transit shelters, and other appropriate amenities.

The General Plan includes goals and policies applicable to other areas, such as mobility, safety, noise, and conservation. The project's consistency with applicable General Plan goals and policies is presented in **Table 3.10-5**, at the end of this section.

San Marcos Municipal Code and Zoning Ordinance, Title 20

The provisions of Title 20 of the San Marcos Municipal Code are referred to as the Zoning Ordinance. The Zoning Ordinance is based on the official Zoning Map of the City of San Marcos. The purpose of this Zoning Ordinance is to protect and promote the public health, safety, comfort, convenience, and general welfare of the San Marcos community; to implement the policies of the General Plan; and to provide the physical, environmental, economic, and social advantages that result from the orderly planned use of land resources.

The project site has a zoning designation of MU-3. According to Section 20.225.060 of the City's Zoning Ordinance, this zone is intended to "support a job-based mixed-use area combining a variety of commercial and office uses integrated as a cohesive development. This business-oriented area shall be complementary to the MU-1 and MU-2 Zones; residential uses are not permitted in the MU-3 (SP) Zone. Typical uses include commercial retail, business services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants and health care facilities. Horizontal and vertical mixed use is permitted" (City of San Marco 2021).

3.10.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to land use if it would:

- **Threshold #1:** Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

As identified above, impacts related to physical division of an established community are not discussed in this section. Section 5.0, Environmental Effects Found not to be Significant, provides additional information on this topic.

3.10.4 Project Impact Analysis

The proposed project proposes 151 multi-family residential units situated on approximately 10.6 gross acres. There are two main categories of open space proposed for the project – common open space (5.53 acres) and approximately 23,390 sq. ft of private open space. The proposed project is requesting approval of a General Plan Amendment (GPA20-0002), Specific Plan (SP20-0002), Rezone (R20-0001), Multi-Family Site Development Plan (MFSDP20-0001), Tentative Subdivision Map (TSM20-0001), Conditional Use Permit (CUP20-0007), and Grading Variance (GV20-0002), as further detailed below:

- **General Plan Amendment (GP20-0002)** – A General Plan Amendment would be required to change the existing Mixed Use 3 (MU3) designation to Specific Plan Area (SPA).
- **Specific Plan (SP20-0002)** - The Specific Plan establishes the development rules and regulations of all land uses within the project site. Upon adoption of the Specific Plan by the City, all development within the project site must conform to the regulations of the Specific Plan.

- **Rezone (R20-0001)** - A rezone would be required to change the existing Mixed-Use-3 (MU-3) zoning to Specific Plan Area (SPA).
- **Multi-Family Site Development Plan (MFSDP20-0001)** - The Site Development Plan approval would be required to construct 151 multi-family residential units and address the details of the architectural style, building elevation, fencing, landscaping, among other criteria, within the development.
- **Tentative Subdivision Map (TSM20-0001)** – A Tentative Subdivision Map would be required for formation of residential condominium units, private driveways, and open space areas.
- **Conditional Use Permit (CUP20-0007)** - A Conditional Use Permit would be required for potential use of a temporary rock crusher.
- **Grading Variance (GV20-0002)** - A Grading Variance would be required to allow manufactured slopes and/or retaining walls in excess of 20 feet in height without benching within the project area.

Specific Plan

The proposed project is requesting approval of Specific Plan (SP 20-002). The Hallmark Barham Specific Plan will guide the orderly development on the project site. The following objectives describe the underlying purpose of the project:

- Provide a multi-family housing opportunity through a range of unit types, sizes, and number of different bedroom counts, including one, two, three, and four-bedroom units, as well as a range of affordability to accommodate a full spectrum of family demographics to contribute to the growing housing needs of the region;
- Create a development which accommodates appropriate recreational open space for the anticipated residents expected to reside within the Specific Plan Area;
- Provide development standards to regulate the nature and appearance of all construction within the Hallmark-Barham Specific Plan Area through integration of landform use, architectural design, unified landscape theme, and recreation areas;
- Design a safe and efficient circulation system that adequately supports the appropriate level of traffic within the Specific Plan Area as well as connections to public roadways and improvements to public streets and rights-of-way inclusive of vehicular, bicycle, pedestrian modes of travel;
- Develop a financing plan that provides for the efficient and timely provision of infrastructure and public services prior to and as development occurs;
- Implement a maintenance program which will ensure all common areas are maintained to standards set forth in the City's General Plan; and
- Finance and/or contribute to all appropriate community and citywide infrastructure as warranted.

Threshold #1: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

Plans and policies considered in this analysis include the San Marcos General Plan, the City of San Marcos zoning ordinance and the Multiple Habitat Conservation Program (MHCP).

San Marcos General Plan

As identified above, the project site has an existing General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum FAR of 1.50. Once approved, the project will be consistent with the General Plan as the proposed project includes a GPA. The requested GPA would amend the project site's designation in the Land Use and Community Design Element to "Specific Plan Area." This GPA would allow for development of the Hallmark Barham Specific Plan including 151 multi-family residential units and common and private open space in an urbanized area of the City with existing residential uses to the east and southeast of the project.

Table 3.10-5 at the end of this section summarizes the applicable San Marcos General Plan goals and policies relating to land use. As shown in Table 3.10-5, the project is consistent with the applicable goals and policies.

Mobility Element Consistency – Level of Service Analysis

Analysis Methodology

The AM intersection analysis evaluates LOS during the hour with the highest vehicular traffic between 7:00 AM and 9:00 AM. The PM intersection analysis evaluates LOS during the hour with the highest vehicular traffic between 4:00 PM and 6:00 PM. Table 3.10-2 summarizes the LOS criteria for signalized and unsignalized intersections.

The analysis of signalized intersections utilized the operational analysis procedure as outlined in the Highway Capacity Manual (HCM) 6th Edition signalized intersection analysis methodology with the assistance of the Synchro (version 10) computer software. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. City of Santee and Caltrans location-specific signal timing information such as minimum greens, cycle lengths, splits for the freeway interchanges and real-time peak hour field observations were included in the analysis, where available.

Street segment analysis is based upon the comparison of daily traffic volumes to the City of San Marcos's Roadway Classifications, Capacity, and LOS Table. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

Level of Service Standards

The City of San Marcos strives to maintain intersection and roadway segment operations based on LOS standards outlined in the General Plan Mobility Element. If the addition of the traffic generated from a proposed project results in any one of the following, improvements should be identified to increase performance to acceptable or pre-project conditions under each scenario:

- Triggers an intersection operating at acceptable LOS to operate at unacceptable LOS (LOS E or F) and increases the delay by more than 2.0 seconds.

- Increases the delay for a study intersection that is already operating at unacceptable LOS (LOS E or F) by more than 2.0 seconds.
- Triggers a roadway segment operating at acceptable LOS (LOS A, B, C, D) to operate at unacceptable LOS and increases the volume/capacity (V/C) ratio by more than 0.02.
- Increases the V/C ratio for a study roadway segment that is already operating at unacceptable LOS (LOS E or F) by more than 0.02.

Project Trip Generation

To determine the traffic generation of the proposed project, the April 2002 *SANDAG Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG 2002) rates were applied to the proposed project. The "Multi-family Residential" (6- 20 DU/acre)" trip rate was used to estimate the project trip generation. **Table 3.10-6** presents the trip generation rates and forecasted project-generated trips for weekday conditions. As shown in Table 3.10-6, the project would generate approximately 1,208 average daily trips (ADTs), including 97 AM peak hour trips and 121 PM peak hour trips. The project traffic was distributed and assigned to the street system based on the project's proximity to state highways and arterials, the project's two full-access driveways and based on other traffic studies prepared for developments in the area.

Table 3.10-6. Project Trip Generation

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
		Rate	Volume			In	Out	Total			In	Out	Total
Multi-Family Residential (6-20 DU/ acre)	151 DU	8/DU	1,208	8%	20:80	19	78	97	10%	70:30	85	36	121

Source: LLG 2021

Note: Trip generation rates were obtained from the (Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002 by SANDAG

Construction Trip Generation

Grading of the project site will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 cy of material. The grading phase of the project is not expected to generate trips above the trips associated with the 151-unit multi-family residential development. Therefore, the grading phase will not result in any traffic related significant impacts or substantial effects above those associated with the project. No traffic related impacts are identified during construction.

Local Transportation Analysis of Near-Term (Year 2025) Conditions

The following section presents the analysis of study area intersections and street segments under Near Term (Year 2025) conditions without and with the proposed project. Assuming project approvals in late 2021, the project is expected to start construction in late 2022 with an occupancy of Spring 2025. Near Term (Year 2025) traffic volumes were calculated based on the manual hand counts at

the study area intersections conducted in September 2018. A growth factor of 1% per year for seven years (7% total) was added to the traffic counts to represent Near Term (Year 2025) conditions.

Near-Term (Year 2025) Intersection Analysis

Table 3.10-7 summarizes the intersection operations through the study area for the Near-Term (Year 2025) With and Without Project conditions.

Table 3.10-7. Near-Term Year (2025) Intersection Operations Without and With Project

#	Intersection	Control Type	Peak Hour	Movement	Year 2025 Without Project		Year 2025 With Project		Δ[3]	Consistent with City LOS Standards?[4]
					Avg. Delay (sec.)[1]	LOS[2]	Avg. Delay (sec.)[1]	LOS[2]		
1	E. Barham Drive/ SR-78 EB Off Ramp	Signal	AM	Average	35.9	D	37.6	D	1.7	Yes
			PM		21.7	C	25.5	C	3.8	Yes
2	Rancheros Drive/ SR-78 WB Ramp	AWSC[5]	AM	Average	**79.7**	**F**	88.2	**F**	**8.5**	**No**
			PM		**63.8**	**F**	68.9	**F**	**5.1**	**No**
3	Rancheros Drive/ Woodland Pkwy	Signal	AM	Average	35.0	C	37.2	D	2.2	Yes
			PM		26.5	C	27.7	C	1.2	Yes
4	E. Barham Drive/ Woodland Pkwy	Signal	AM	Average	54.5	D	54.6	D	0.1	Yes
			PM		43.8	D	48.5	D	4.7	Yes
5	E. Barham Drive/ Project Driveway (West)[f]	MSSC[7]	AM	NBL	-	-	30.0	D	-	Yes
				NBR	-	-	14.9	B	-	Yes
				WBL	-	-	12.5	B	-	Yes
			PM	NBL	-	-	**46.7**	**E**	-	**No**
				NBR	-	-	18.6	C	-	Yes
				WBL	-	-	16.5	C	-	Yes
6	E. Barham Drive/ Project Driveway (East)[f]	MSSC[7]	AM	NBL			27.7	D		Yes
				NBR			15.4	C		Yes
				WBL			12.5	B		Yes
			PM	NBL			**43.0**	**E**		**No**
				NBR			18.7	C		Yes

				WBL			16.3	C		Yes
7	E. Barham Drive/ La Moore Road	Signal	AM	Average	4.8	A	4.8	A	0.0	Yes
			PM		4.9	A	4.9	A	0.0	Yes

Source: LLG 2021

Notes: (1) Average Delay expressed in seconds per vehicle
(2) Level of Service
(3) Δ denotes the increase in delay due to project
(4) City of San Marcos strives to maintain intersection and roadway segment operations based on LOS standards (LOS D or better) outlined in the General Plan Mobility Element.
(5) AWSC = All Way Stop Control
(6) Intersection does not exist under "Without Project" condition
(7) MSSC= Minor Street Stop Controlled Intersection. Worst-Case movement approach delay and LOS reported
Bold indicates substandard LOS E or F.

As shown in Table 3.10-7, without the project, all intersections are calculated to operate acceptably at LOS D or better during both the AM and PM peak hours with the exception of Rancheros Drive/SR-78 WB ramps, which is calculated to operate at LOS F. With the addition of project traffic all intersections would continue to operate acceptably at LOS D or better during both the AM and PM peak hours with the exception of Rancheros Drive/SR-78 WB Ramps, which would operate at LOS F under both "Without" and "With Project" conditions. A **significant LOS related impact** is identified at this intersection since the project-related increase in delay exceeds the LOS standard threshold maximum of 2.0 seconds and mitigation is required **(Impact LU-1)**.

- **Impact LU-1** Project-related traffic results in a significant increase in delay (greater than 2.0 seconds) at the Rancheros Drive/ SR- 78 WB intersection in the AM and PM peak hours under Near Term 2025 With Project condition.

Additionally, the northbound left-turn movements out of the project's western and eastern driveways are calculated to operate at LOS E during the PM peak hour. A **significant impact** is identified at these driveways due to the deficient LOS E **(Impact LU-2a and LU-3a)** and mitigation is required. It should be noted that all other movements operate acceptably, including the northbound right-turns out of the site and the westbound left-turns into the site. The significant effect is only for the outbound left-turns during the PM peak hour.

- **Impact LU-2a** Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (West), the project's western driveway, is calculated to operate at LOS E during the PM peak hour under Near Term 2025 With Project condition.

- **Impact LU-3a** Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (East), the project's eastern driveway, is calculated to operate at LOS E during the PM peak hour under Near Term 2025 With Project condition.

Near-Term (Year 2025) Segment Operations

Table 3.10-8 summarizes the segment operations throughout the study area for the Near-Term (Year 2025) Without and With Project conditions. As seen in Table 3.10-8, all of the study area segments are calculated to operate acceptably at LOS C without the project. As seen in 3.10-8, with the addition

of project traffic all of the study area segments would continue to operate at LOS C, and therefore **no impact** is identified and no roadway improvements are required.

Table 3.10-8. Near Term (Year 2025) Roadway Segment Operations

Roadway	Segment	Capacity (LOS E)(1)	Year 2035 Without Project			Year 2035 With Project			Δ(5)	Consistent with City LOS Standards? (6)
			ADT(2)	LOS(3)	V/C(4)	ADT(2)	LOS(3)	V/C(4)		
E. Barham Drive	Woodland Pkwy to Project Driveway (West)	30,000	18,930	C	0.631	19,570	C	0.652	0.021	Yes
	Project Driveway (West) to Project Driveway (East)	30,000	18,930	C	0.631	19,530	C	0.651	0.020	Yes
	Project Driveway (East) to La Moree Road	30,000	18,930	C	0.631	19,510	C	0.650	0.019	Yes
	East of La Moree Road	30,000	18,930	C	0.631	19,450	C	0.648	0.017	Yes

Source: LLG 2021

Notes: (1) Capacities based on City of San Marcos's Roadway Classification Table
(2) Average Daily Traffic Volumes
(3) Level of Service
(4) Volume to Capacity
(5) Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.
(6) City of San Marcos strives to maintain intersection and roadway segment operations based on LOS standards (LOS D or better) outlined in the General Plan Mobility Element.

Local Transportation Analysis of Horizon Year 2050 Conditions

Year 2050 Network Conditions

There are a series of improvements to the SR-78 freeway system in the vicinity of the project that are identified in the City of San Marcos' Capital Improvement Program (CIP) as the "Woodland Parkway Highway 78 Interchange" project (CIP Project Code No. 88005). These improvements would directly improve substandard locations in the study area. The following is a discussion of these improvements, organized by corridor.

- *Rancheros Drive Corridor:* widen Rancheros Drive to four-lane major street standards from the SR-78 Westbound Ramps to Woodland Parkway, including Class II bike lanes. Signalize the

Rancheros Drive/SR-78 Westbound Ramps intersection. Provide dual westbound-to-southbound left-turn lanes from Rancheros Drive to the SR-78 westbound on-ramp. Widen the SR-78 westbound on-ramp from Rancheros Drive to include two SOV and one HOV lanes. Widen the SR-78 westbound off-ramp to Rancheros Drive to include one left-turn lane and two right-turn lanes.

- *Woodland Parkway Corridor:* widen the Woodland Parkway undercrossing at SR-78 from Rancheros Drive to Barham Drive to four-lane major street standards. Provide two-travel lanes in each direction, with back-to-back left-turn lanes at both Barham Drive and Rancheros Drive. Provide Class II bike lanes.
- *Barham Drive Corridor:* realign Barham Drive from west of the SR-78 off ramp to Woodland Parkway to provide a six -lane prime arterial transitioning to a four-lane major street east of Woodland Parkway. Widen and realign the existing SR-78 eastbound off-ramp to include two left-turn lanes and one right-turn lane. Construct a new SR-78 eastbound on-ramp from E. Barham Drive to include two SOV and one HOV lanes. Install a traffic signal at the realigned E. Barham Drive/ SR-78 eastbound ramps intersection. Remove the existing on-ramp to eastbound SR-78 located east of La Moree Road, and the associated signalized intersection.
- *SR-78 Freeway:* widen and improve SR-78 to an 8-lane facility with two managed lanes in the median. Provide necessary on-ramp and off-ramp transitions, acceleration lanes and trap lanes, as required to provide the improvements listed above.

These improvements will be developed in phases, although the timing of delivery of these improvements is unknown. While these improvements were conservatively not assumed in the near-term analysis, they were assumed to be in place in the long-term.

The above-listed improvements are assumed in the baseline conditions for Year 2050 analysis of study area intersections and street segments.

Horizon Year 2050 Traffic Volumes

LLG reviewed several recent traffic studies prepared in the City of San Marcos that included buildout traffic volume assumptions, specifically the traffic study for the approved Sunrise Residential project located just east of the project. The Sunrise Residential project used the SANDAG Series 12 Year 2035 traffic model to forecast Year 2035 traffic volumes in the study area, assuming the Woodland Parkway Highway 78 Interchange project improvements discussed above were in place.

In order to conduct an analysis of Year 2050 conditions based on the City's Traffic Impact Analysis Guidelines, LLG conducted a comparison of the SANDAG Series 12 Year 2035 traffic volumes from the Sunrise Residential project traffic study to the SANDAG Series 13 Year 2050 model traffic volumes. The Series 13 Year 2050 volumes were found to be lower than the Series 12 Year 2035 volumes. Therefore, in order to provide a conservative analysis and be consistent with other documents prepared for projects in the area, the Year 2035 traffic volumes taken directly from the Sunrise Residential traffic study were used for the analysis of Year 2050 conditions instead of assuming lower volumes in Year 2050 as compared to Year 2035.

Horizon Year 2050 Intersection Analysis

Table 3.10-9 summarizes the Year 2050 Without and With Project peak hour intersection analysis. As shown in Table 3.10–9, without project, all intersections are calculated to operate acceptably at LOS D or better during both the AM and PM peak hours.

Table 3.10-9. Horizon Year (2050) Intersection Operations Without and With Project

#	Intersection	Control Type	Peak Hour	Movement	Year 2050 Without Project		Year 2050 With Project		Δ(3)	Consistent with City LOS Standards? (4)
					Avg. Delay (sec.)(1)	LOS(2)	Avg. Delay (sec.)(1)	LOS(2)		
1	E. Barham Drive/ SR-78 EB Off Ramp	Signal	AM	Average	6.7	A	6.7	A	0.0	Yes
			PM		4.9	A	5.0	A	0.1	Yes
2	Rancheros Drive/ SR-78 WB Ramp	Signal	AM	Average	14.4	B	14.7	B	0.3	Yes
			PM		18.7	B	18.9	B	0.2	Yes
3	Rancheros Drive/ Woodland Pkwy	Signal	AM	Average	24.9	C	26.0	C	1.1	Yes
			PM		21.9	C	22.7	C	0.8	Yes
4	E. Barham Drive/ Woodland Pkwy	Signal	AM	Average	15.6	B	15.7	B	0.1	Yes
			PM		28.3	C	32.7	C	4.4	Yes
5	E. Barham Drive/ Project Driveway (West)[e]	MSSC[(6)]	AM	NBL	-	-	27.3	D	-	Yes
				NBR	-	-	14.3	B	-	Yes
				WBL	-	-	12.0	B	-	Yes
			PM	NBL	-	-	**40.9**	**E**	-	**No**
				NBR	-	-	17.5	C	-	Yes
				WBL	-	-	15.4	C	-	Yes
6	E. Barham Drive/ Project Driveway (East)[e]	MSSC[(6)]	AM	NBL	-	-	25.7	D		Yes
				NBR	-	-	14.7	B		Yes
				WBL	-	-	12.0	B		Yes
			PM	NBL	-	-	**38.1**	**E**		**No**
				NBR	-	-	17.5	C		Yes
				WBL	-	-	15.2	C		Yes
7	E. Barham Drive/ La Moore Road	Signal	AM	Average	5.1	A	5.1	A	0.0	Yes
			PM		5.3	A	5.3	A	0.0	Yes

Source: LLG 2021

Notes: (1) Average Delay expressed in seconds per vehicle
(2) Level of Service
(3) Δ denotes the increase in delay due to project
(4) City of San Marcos strives to maintain intersection and roadway segment operations based on LOS standards (LOS D or better) outlined in the General Plan Mobility Element.
(5) Intersection does not exist under "Without Project" condition

(6) MSSC= Minor Street Stop Controlled Intersection. Worst-Case movement approach delay and LOS reported

Bold indicates substandard LOS E or F.

With the addition of project traffic all intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours with the exception of the northbound left-turn movements out of the project's western and eastern driveways which are calculated to operate at LOS E during the PM peak hour. Significant LOS related impacts are identified at these approaches due to the deficient LOS E. It should be noted that all other movements operate acceptably, including the northbound right-turns out of the site and the westbound left-turns into the site. The significant impact is only for the outbound left-turns during the PM peak hour.

Implementation of the proposed project would result in a significant impact at the E. Barham Drive/ Project Driveway (West) and E. Barham Drive/ Project Driveway (East) Northbound Lanes **(Impacts LU-2b and LU-3b)**. Mitigation is required.

- **Impact LU-2b** Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (West) (the project's western driveway) is calculated to operate at LOS E during the PM peak hour under Horizon Year 2050 with Project condition. The significant effect is only for the outbound left-turns during PM peak hour.

- **Impact LU-3b** Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (East) (the project's eastern driveway) is calculated to operate at LOS E during the PM peak hour under Horizon Year 2050 with Project condition. The significant effect is only for the outbound left-turns during PM peak hour.

Horizon Year 2050 Segment Operations

Table 3.10-10 summarizes the Year 2050 Without and With Project daily street segment operations. As shown in Table 3.10-10, all street segments are calculated to operate acceptably at LOS C without and with the addition of project traffic. Therefore, no impact is identified and roadway improvements are not required.

Community Facility District (Congestion Management) Participation

As a condition of project approval, the applicant/developer/property owner shall submit an executed version of petition to annex into and establish, with respect to the property, the special taxes levied by the following Community Facility District: CFD2011-01 (Congestion Management).

Consistency with City of San Marcos Zoning Ordinance

As identified above, the Zoning Map of the City of San Marcos identifies the project site as MU-3. The project proposes Rezone (R20-0001) to Specific Planning Area (SPA). The Specific Plan would serve as the zoning document for the property establishing development and zoning standards. The Specific Plan provides for the development of 151 multi-family residential units situated on approximately 10.6 gross acres. Residential buildings compose approximately 2.8-acres of the project site. Multi-family residential dwelling units are comprised of one, two, and three-story condominiums with ten dwelling unit types interspersed throughout the project site. Overall building heights will not exceed 40 feet.

Multiple Habitat Conservation Program

The project's consistency with the MHCP is analyzed in Section 3.3, Biological Resources, of this EIR. The analysis concludes that while the project is located within the MHCP, it is not located within a Focused Planning Area (FPA) as defined in the MHCP and San Marcos Subarea Plan. Additionally, the project would comply with habitat mitigation requirements outlined in the City's Draft MHCP Subarea Plan. The project, therefore, is consistent with the MHCP.

Table 3.10-10. Horizon Year (2050) Roadway Segment Operations

Roadway	Segment	Capacity (LOS E)(1)	Year 2050 Without Project			Year 2050 With Project			Δ(5)	Consistent with City LOS Standards?(6)
			ADT(2)	LOS(3)	V/C(4)	ADT(2)	LOS(3)	V/C(4)		
E. Barham Drive	Woodland Pkwy to Project Driveway (West)	30,000	18,380	C	0.613	19,020	C	0.634	0.021	Yes
	Project Driveway (West) to Project Driveway (East)	30,000	18,380	C	0.613	18,980	C	0.633	0.020	Yes
	Project Driveway (East) to La Moree Road	30,000	18,380	C	0.613	18,960	C	0.632	0.019	Yes
	East of La Moree Road	30,000	18,380	C	0.613	18,900	C	0.630	0.017	Yes

Source: LLG 2021

Notes: (1) Capacities based on City of San Marcos's Roadway Classification Table
(2) Average Daily Traffic Volumes
(3) Level of Service
(4) Volume to Capacity
(5) Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.
(6) City of San Marcos strives to maintain intersection and roadway segment operations based on LOS standards (LOS D or better) outlined in the General Plan Mobility Element.

3.10.5 Cumulative Impact Analysis

No existing or reasonably foreseeable land use impacts were identified as a result of development of the proposed project because it would not conflict with any plans adopted for the purposes of avoiding environmental impacts, other than Mobility Element Policy M-1.1 (Safely and efficiently accommodate traffic generated by development and redevelopment associated with implementation of the General Plan Land Use Policy Map) and M-1.4 (Utilize multi-modal LOS techniques to evaluate transportation facilities).

The preceding analysis of the proposed project in Section 3.10.4 is based on methodologies that incorporate the cumulative effects of traffic from general growth and anticipated development in the area. This reflects background traffic and traffic from area-wide growth already approved by the City of San Marcos plus the development of the proposed project.

Near Term Year 2025 traffic volumes were calculated based on the manual hand counts at the study area intersections conducted in September 2018. A growth factor of 1% per year for seven years (7% total) was added to the traffic counts to represent Year 2025 conditions. Implementation of the proposed project would result in significant impacts at three intersections in the Near Term 2025 With Project conditions: Rancheros Drive/ SR- 78 WB ramp (Impact LU-1) and E. Barham Drive/ Project Driveway (West), Northbound Lane (Impact LU-2a), and E. Barham Drive/ Project Driveway (East), Northbound Lane (Impact LU-3a). Mitigation measure MM-LU-1 would reduce the cumulative impact to Rancheros Drive/ SR-78 WB ramp to below a level of significance but because the improvement is located outside of City of San Marcos's jurisdiction, the impact would remain **significant and unavoidable.** Mitigation measures LU-2 and LU-3 would reduce the cumulative impact to the project's western and eastern driveways at E. Barham Drive/ Project Driveway (West) and (East) Northbound Lane during the PM peak hour by restricting left-turns out of the project site between the hours of 4 PM and 6 PM in order to improve operations at the intersection. Therefore, a **less than significant cumulative impact** is identified for these intersections under Near Term Year 2025 conditions.

In order to conduct an analysis of Horizon Year 2050 conditions based on the City's *Traffic Impact Analysis Guidelines*, LLG conducted a comparison of the SANDAG Series 12 Year 2035 traffic volumes from the recent Sunrise Residential project traffic study to the SANDAG Series 13 Year 2050 model traffic volumes. The Series 13 Year 2050 volumes were found to be lower than the Series 12 Year 2035 volumes. Therefore, in order to provide a conservative analysis and be consistent with other documents prepared for projects in the area, the Year 2035 traffic volumes taken directly from the Sunrise Residential traffic study were used for the analysis of Year 2050 conditions instead of assuming lower volumes in Year 2050 as compared to Year 2035. Implementation of the proposed project would result in a significant impact at the northbound left-turn movements out of the project's western driveways (E. Barham Drive/ Project Driveway (West) and eastern driveways (E. Barham Drive/ Project Driveway (East)) Northbound Lanes (Impact LU-2b and LU-3b) which are calculated to operate at LOS E during the PM peak hour. Mitigation Measures MM-LU-2 and LU-3 would reduce the cumulative impact to E. Barham Drive/ Project Driveway (West) and (East) Northbound Lanes to below a level of significance by restricting left-turns out of the project site between the hours of 4 PM and 6 PM. Therefore, a **less than significant cumulative impact** is identified for these intersections under Horizon Year 2050 conditions.

3.10.6 Mitigation Measures

Traffic Mitigation

The following improvements are recommended to mitigate the identified significant impacts under Near Term 2025 and Horizon Year 2050 With Project conditions (as indicated).

Rancheros Drive/ SR-78 WB Ramp - Near Term 2025 during AM and PM peak hour (Impact LU-1)

MM-LU-1 Prior to the issuance of the first building permit, the Project Developer shall pay the local and regional Public Facility Fees (PFF) development fees assessed to address the impact to the City of San Marcos' SR 78 Interchanges.

Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (West) Near Term 2025 (Impact LU-2a) and Horizon Year 2050 (Impact LU-2b) during PM Peak Hour

MM-LU-2 The project shall restrict left-turns out of the western project driveway between the hours of 4 PM and 6 PM. Signage shall be placed at the western project driveway identifying the turning movement timing restriction. The signage requirement shall be noted on the final project plans and shall be put in place prior to project operation.

Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (East) Near Term 2025 (Impact LU-3a) and Horizon Year 2050 (Impact LU-3b) during PM Peak Hour

MM-LU-3 The project shall restrict left-turns out of the eastern project driveway between the hours of 4 PM and 6 PM. Signage shall be placed at the eastern project driveway identifying the turning movement timing restriction. The signage requirement shall be noted on the final project plans and shall be put in place prior to project operation.

3.10.7 Conclusion

The current General Plan land use and zoning designation is MU-3. With the proposed GPA and Rezone to Specific Plan and SPA, respectively, the project would be consistent with the applicable goals and policies of the City's General Plan. The project would also be consistent with the MHCP. Based upon the analysis presented in Sections 3.10.3 and 3.10.4, including Table 3.10-5, implementation of the proposed project would not conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect, with the exception of Mobility Element Policies M-1.1: Safety and efficiently accommodate traffic generated by development and redevelopment associated with implementation of the General Plan Land Use Policy Map (related to LOS) and M-1.4: Utilize multi-modal LOS techniques to evaluate transportation facilities.

The proposed project is forecast to generate 1,208 average daily trips, with 97 AM peak hour trips and 121 PM peak hour trips during the week. The Local Mobility Analysis shows that all study intersections and street segments are calculated to operate acceptably at LOS D or better with the addition of project traffic, with the exception of Rancheros Drive / SR-78 WB Ramps, which is calculated to operate at LOS F under both "Without" and "With Project" conditions during Near Term 2025. A significant LOS related effect is identified at this intersection since the project-related increase in delay exceeds the LOS standard threshold maximum of 2.0 seconds (Impact LU-1). The existing traffic conditions at this location are already substandard and warrant a traffic signal. Provision of a traffic signal alone would be sufficient to reduce the project's LOS related effect to less than significant. In addition, MM-LU-1 requires payment of local and regional PFF development fees prior to the issuance of the first building permit to address the impact to the City of San Marcos' SR 78 Interchanges.

The project site is currently zoned MU-3, which is intended to support a job-based mixed-use area combining a variety of commercial and office uses. The project will result in reduced traffic as compared to the current MU-3 zoning considered in the Capital Improvement Program (CIP). Therefore, no additional payment is required based on the proposed zone change. A comparison of the project's trip generation calculations and the MU-3 zoning trip generation calculations is shown below in **Table 3.10-11**, and shows that the project is calculated to generate approximately 900 fewer ADT as compared to the land uses assumed in the General Plan.

It should be noted that the improvement would be Capital Improvement Project (CIP) located within the jurisdiction and control of the State of California (Caltrans), and neither the developer nor the City of San Marcos can ensure that Caltrans will permit the improvement to be made. Based on regional standards of practice, the near-term direct project impacts at this location would be considered **significant and unavoidable** for the purposes of CEQA. However, inter-jurisdictional coordination would be expected to occur to permit the implementation of this mitigation measure and the intersection and impacts would be less than significant in the Horizon Year.

Table 3.10-11. Proposed Project and Existing Zoning Comparison

Land Use(1)			Daily Trip Ends (ADT)	
Proposed Project	**Quantity**		**Rate**	**Volume**
Multi-family Residential (6- 20 DU/acre)	151	DU	8 /DU	1,208
Existing Zoning	**Quantity**		**Rate**	**Volume**
Industrial/Business Park (Commercial Included)	10.56	Acres	200 /Acre	2,112

Source: LLG 2021

Note: (1) Rates are based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.

Additionally, the northbound left-turn movement out of the project's western driveway is calculated to operate at LOS E during the PM peak hour. A significant LOS related effect is identified at this approach due to the deficient LOS E during Near Term (Year 2025) and Horizon Year (2050) during PM Peak Hour (Impacts LU-2a and 2b). Similarly, the northbound left-turn movement out of the project's eastern driveway is calculated to operate at LOS E during the PM peak hour. A significant LOS related effect is identified at this approach due to the deficient LOS E during Near Term (Year 2025) and Horizon Year (2050) during PM Peak Hour (Impacts LU-3a and 3b). Mitigation Measures MM-LU-2 and MM-LU-3 requires the project to restrict left-turns out of the project site between the hours of 4 PM and 6 PM in order to improve operations at these intersections and reduce the project's LOS related effects to **less than significant.**

Figure 3.10-1. Existing Circulation Network

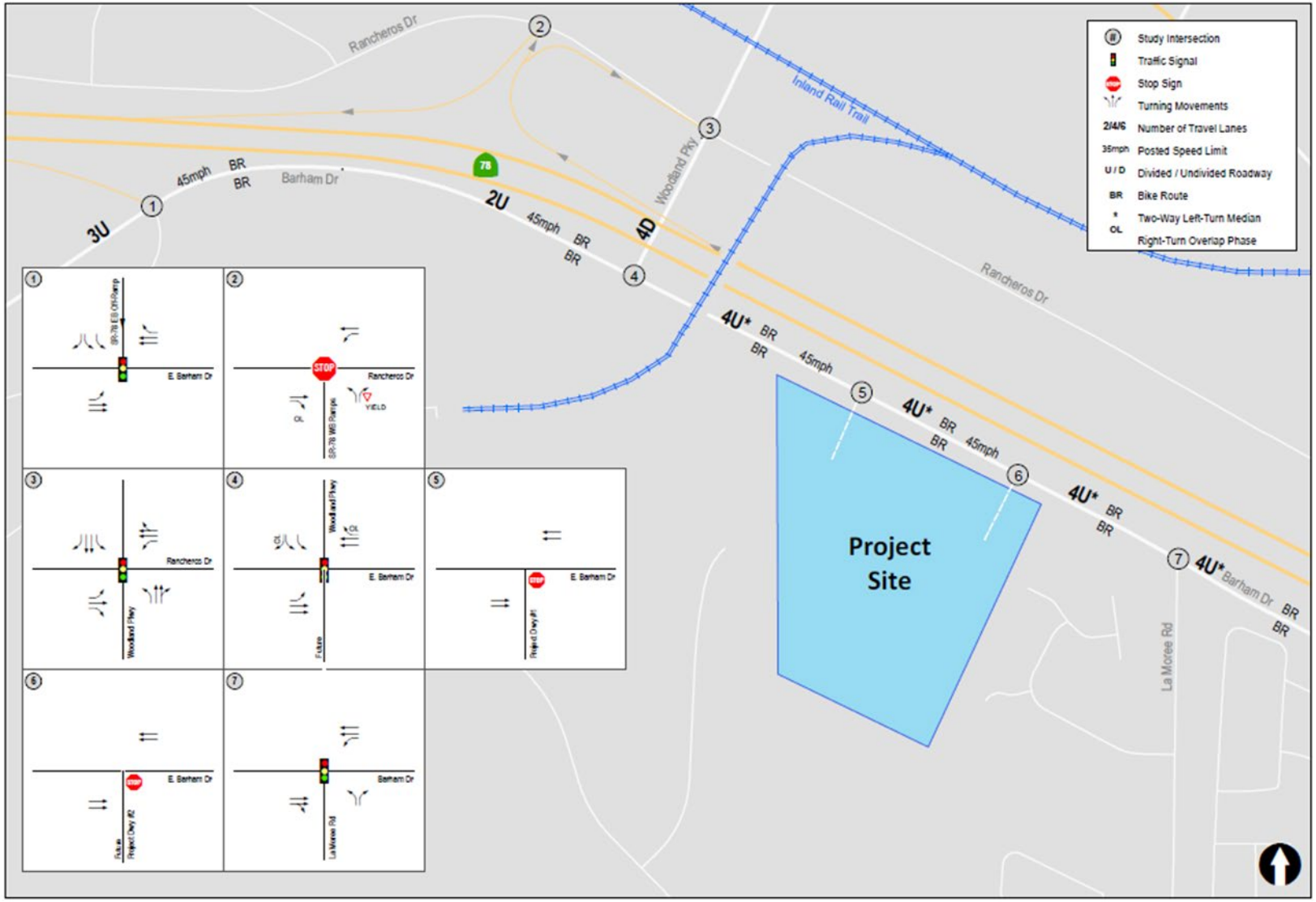


Table 3.10-5. Project Consistency with Applicable San Marcos General Plan Goals and Policies

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
Land Use and Community Design Element		
Goal LU-1	Achieve a balanced distribution and compatible mix of land uses to meet the present and future needs of all residents and the business community.	The project would construct 151 multi-family residential units, which would add to the housing stock within the City and the greater North County area of San Diego. These units would meet the demand for future housing in the City, as contemplated by the City's General Plan. Additionally, the project proposes a density and type of development compatible with existing surrounding development patterns in the City. The project is consistent with this goal.
Goal LU-1, Policy LU-1.1	Ensure that adjacent land uses complement one another by considering compatibility of activities, development patterns and architectural character elements, and access to various mobility choices.	The project vicinity is developed primarily with residential uses. To the east of the project is the Mira Lago residential development and to the southeast is the Williamsburg residential development. West of the project site is Grace Church and the Barham Park & Ride. Southwest of the project site is residential development associated with the Walnut Hills II Specific Plan. The northern boundary of the project site is E. Barham Drive and immediately north of E. Barham Drive is landscaping, a sound wall, and SR-78. South of the project site is preserved open space, a private community park/viewpoint and additional residences within the Williamsburg residential development. The architectural style of the project will be Contemporary Spanish which was chosen based on compatibility with the surrounding land uses. Proposed residential structures will also be a similar height to current and planned residential projects. The project improves roadways, and sidewalks, providing for a variety of transportation options. Each residence has garages for parking. The project is consistent with this policy.
Goal LU-1, Policy LU-1.4	Maintain the natural integrity of open space preserves by ensuring development projects are sensitively integrated along the edges of preserved or protected areas.	South of the project site is preserved open space, a private community park/viewpoint and additional residences within the Williamsburg residential development. The project is designed with a 150-foot fire fuel modifications buffer and the residential units would be buffered from the open space area by common open space with grades 10% or greater. The project is consistent with this policy.
Goal LU-2	Promote development standards and land use patterns that encourage long-term environmental sustainability.	The project clusters development and provides 5.35 acres of common open space. The project also includes a comprehensive water quality management approach

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
		using low impact development (LID) techniques to mitigate any impacts to environmental sustainability. The project is consistent with this goal.
Goal LU-2, Policy LU-2.1	Promote compact development patterns that reduce air pollution and automobile dependence and facilitate walking, bicycling, and transit use.	The project concentrates the proposed residential units together leaving the southern portion of the site to common open space. The project's internal pedestrian circulation network would connect to the existing sidewalk and bicycle facilities along the project frontage on E. Barham Dr. The closest bus stops are 0.7 mile from the project site and would not be impacted by the project. The proposed project is consistent with this policy.
Goal LU-2, Policy LU-2.2	Encourage new development to be sited to respond to climatic conditions, such as solar orientation, wind, and shading patterns.	The project would comply with the latest applicable Title 24 standards. The 2019 Title 24 standards require that all low-rise residential buildings shall have a photovoltaic system meeting the minimum qualification requirements such that annual electrical output is equal to or greater than the dwelling's annual electrical usage. The project is consistent with this policy.
Goal LU-2, Policy LU 2.3	Require the incorporation of green building practices, technologies, and strategies into development projects per code standards.	The project incorporates green features. As a design feature, the project would install three Level 2 EV charging stations. The project will also wire each garage for EV charging stations. The landscaping plan focuses on native, drought tolerant species. This minimizes the use of water for irrigation. The project has also been designed to meet current California Building Code requirements as related to green building practices. The project is consistent with this policy.
Goal LU-2, Policy LU-2.5	Promote landscaping (e.g., native, drought-tolerant plants) that minimizes demands on water supply.	The proposed landscape plan includes a mix of trees, shrubs, grasses and groundcover and the plant selection emphasizes moderate water use species. The landscape concept plan is included as Figure 2-4a and the plant material guide is included as Figure 2-4b. The landscape plan meets the requirements of the City of San Marcos development standards, and drought resistant plant species and fire-resistant landscape design consistent with the Fire Protection Plan. The project will comply with the City's Water Efficiency Landscaping Ordinance. The project is consistent with this policy.
Goal LU-2, Policy LU-2.7	Promote the installation of trees to reduce the urban heat island effect and green infrastructure to reduce storm water runoff.	The proposed landscape plan includes a mix of trees, shrubs, grasses and groundcover and the plant selection emphasizes moderate water use species. The landscape concept plan is included as Figure 2-4a and the plant material guide is included as Figure 2-4b. Proposed tree species include desert willow, majestic

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
		beauty Indian hawthorn, California laurel, columnar Italian cypress, fern pine, western redbud, European olive, Mexican palo verde, African suman, strawberry tree, flaxleaf paperbark, and date palms. See Figure 2-4b for a comprehensive list of proposed plant materials. The project will also comply with the City's Model Water Efficient Landscape Ordinance and Municipal Code, Title 20. As discussed in greater detail in Section 3.9 (Hydrology/Water Quality) the project incorporates biofiltration features and source control and site design BMPs to reduce storm water runoff. The project is consistent with this policy.
Goal LU-3	Develop land use patterns that are compatible with and support a variety of mobility opportunities and choices.	The project's internal pedestrian circulation network would connect to the existing sidewalk and bicycle facilities along the project frontage on E. Barham Dr. The closest bus stops are 0.7 mile from the project site and would not be impacted by the project. The project is consistent with this goal.
Goal LU-3, Policy LU-3.1	Require that new development and redevelopment incorporate connections and reduce barriers between neighborhoods, transit corridors, and activity centers within the City.	The project's internal pedestrian circulation network would connect to the existing sidewalk and bicycle facilities along the project frontage on E. Barham Dr. The closest bus stops are 0.7 mile from the project site and would not be impacted by the project. The proposed project is consistent with this policy. The project is consistent with this policy.
Goal LU-3, Policy LU-3.5	Provide an interconnected open space system that is accessible to the public, including pedestrian and equestrian links, bicycle paths, multi-use trails, recreation areas, and drainage-ways.	The project incorporates 5.35 acres of common open space. The project incorporates sidewalks on both sides of planned roadways, which connect to the City's larger pedestrian and bicycle network. There are no public use trails in the project vicinity. The project is consistent with this policy.
Goal LU-5	Promote community design that produces a distinctive, high-quality built environment with forms and character that create memorable places and enrich community life.	Section 2.3 of the Specific Plan details architectural treatments to ensure a complementary appearance of the structures. The architecture was chosen to complement existing architecture adjacent to the Specific Plan Area. The Specific Plan is included as Appendix A.1 of the EIR. The architecture incorporated with the Hallmark-Barham Specific Plan Area takes inspiration from traditional Spanish Colonial style architecture. Massing and scale provide the visual identity between residential dwelling units and the environment. Those qualities help dictate the placement, size, and form for multi-family residential buildings within the Specific Plan Area. Building type placement within the Specific Plan Area was studied to achieve the best possible groupings as well as providing transition massing

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		between the neighboring mobile homes and industrial structures, thereby enhancing the visual character of the neighborhood. The project is consistent with this goal.
Goal LU-5, Policy LU-5.4	Require building and site design that respects the natural topography and iconic ridgelines that serve as the visual backdrop for San Marcos.	The project has been designed to respect the existing topography on the site. Views of the surrounding hillsides would remain unobstructed from SR-78. The project site is not a protected scenic vista nor is it located on a ridgeline. The project also incorporates extensive design features that ensure that the visual character changes blend with the existing topography and surrounding development. The project is consistent with this policy.
Goal LU-5, Policy LU-5.6	Require a specific plan for strategic areas/properties that require high-quality design, orientation and development due to their location or visibility within the community.	The project is processing a new Specific Plan to provide for the cohesive design of the project. The Specific Plan details architectural treatments to ensure consistent, high-quality design. The Specific Plan is included as Appendix A.1 of the EIR. The project is consistent with this policy.
Goal LU-5, Policy LU-5.7	Architecture shall be enhanced with high-end building materials, varied roof lines, and decorative details.	Section 2.3 of the Specific Plan details architectural treatments to ensure a complementary appearance of the structures. The Specific Plan is included as Appendix A.1 of the EIR. The architecture incorporated with the Hallmark-Barham Specific Plan Area takes inspiration from traditional Spanish Colonial style architecture. Elements and materials traditionally used for the Spanish Colonial style include low pitched roofs using "S" tiles, simple forms with stucco walls, fiber cement trim at selected window enhancements, trim at window headers, accent tiles for a decorative look at select gables and select entryways, and decorative sectional garage doors. The architecture was chosen to complement existing architecture adjacent to the Specific Plan Area. The project is consistent with this policy.
Goal LU-7	Direct and sustain growth and expansion in areas of San Marcos that can support a concentration of a variety of uses and are particularly suitable for multimodal transportation and infrastructure expansion and improvements.	The project site is within the City of San Marcos, surrounded by existing residential development. Existing services and utilities are present in proximity to the project. The project is in proximity to transit and provides sidewalks to encourage non-motorized transportation. The project is consistent with this goal.

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Goal LU-8	Ensure that existing and future development is adequately serviced by infrastructure and public services.	As described further in Section 3.13 (Public Services), libraries are adequate to serve the proposed project. Increase in demand for fire and police protection services would be offset with payment of appropriate development fees, including payment of Public Facility Fees (PFF) and annexation into and participation in applicable Community Facilities Districts (CFD). Impacts to parks would be offset through provision of on-site recreational facilities and payment of PFF. Additionally, as analyzed in Section 3.17 (Utilities and Service Systems) water and sewer services are available to serve the project. The project is consistent with this goal.
Goal LU-8, Policy LU-8.1	New development shall pay its fair share of required improvements to public facilities and services.	As described further in Section 3.13 (Public Services), impacts to fire and police protection services would be offset with payment of appropriate CFD and PFF fees. The project is also required to pay appropriate statutory fees for schools, which would ensure impacts to schools are less than significant. Impacts to parks would be offset through payment of the City's PFF (see Section 3.14, Recreation). The project is consistent with this policy.
Goal LU-8, Policy LU-8.2	Promote development timing that is guided by the adequacy of existing and/or expandable infrastructure, services, and facilities.	As described further in Section 3.13 (Public Services), impacts to fire and police protection services would be offset with payment of appropriate CFD and PFF fees. The project is also required to pay appropriate statutory fees for schools, which would ensure impacts to schools are less than significant. Impacts to parks would be offset through payment of the City's PFF (see Section 3.14, Recreation). Additionally, as analyzed in Section 3.17 (Utilities and Service Systems) water and sewer services are available to serve the project. The project is consistent with this goal.
Goal LU-10	Fire protection, emergency services, and law enforcement: Provide effective, high-quality and responsive services.	Based upon correspondence from the San Marcos Fire Department (SMFD) and information from the San Diego Sheriff's Department, current staff levels are adequate to meet current demand; however, development of the proposed project would increase this demand. Correspondence from SMFD is included in Appendix M of the EIR. To supplement fire and police protection services, the developer would annex into and contribute to applicable CFDs, which would aid in the continued provision of these services. The project is consistent with this goal.
Goal LU-10, Policy LU-10.1	Provide demand-based fire-fighting and emergency medical services infrastructure, equipment, and personnel to provide a high	According to correspondence with the San Marcos Fire Department current staff levels are adequate to meet current demand; however, development of the proposed project would increase this demand. Correspondence from SMFD is

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	level of fire, emergency medical, and law enforcement service in San Marcos to meet existing and future demands.	included in Appendix M of the EIR. To supplement fire protection services, the developer would annex into and contribute to applicable CFDs, which would aid in the continued provision of these services. The project is consistent with this policy.
Goal LU-10, Policy LU-10.2	Work closely with the County of San Diego Sherriff's Department to determine and meet the community needs for adequate personnel, equipment and state-of-the-art technology to effectively combat crime, and meet existing and projected service demands.	Current staff levels at the Sheriff's Department are adequate to meet current demand; however, development of the proposed project would increase this demand. To supplement police protection services, the developer would participate in an existing Community Facilities District (CFD 98-01, Improvement Area No. 1) for police protection, which would aid in the continued provision of these services. The project is consistent with this policy.
Goal LU-10, Policy LU-10.3	Continue to conduct Public Outreach and education regarding fire safety and crime prevention within San Marcos.	The San Marcos Fire Department public education program provides comprehensive fire education via presentations, informational demonstrations, health fairs, and station tours, among others. The San Diego County Sheriff's Department provides safety presentations to youth groups and community groups through their Community Oriented Policing and Problem Solving (COPPS) deputies. Deputies also attend Neighborhood Watch meetings. In addition, the Crime Prevention Unit focuses on community outreach regarding crime prevention techniques, current trends, and prevention education. The project's annexation into and contribution to the applicable CFD would aid in the continued provision of these services. The project is consistent with this policy.
Goal LU-11	Schools: Ensure all residents have access to high-quality education.	Based upon information from San Marcos Unified School District (SMUSD), there is available capacity at some of the schools that would serve the project; however, there are District-wide shortages in capacity for SMUSD. The project developer would pay school mitigation fees to offset impacts to schools. The project is consistent with this goal.
Goal LU-11, Policy LU-11.1	Collaborate with the local public school district (SMUSD), private schools, and institutions of higher learning to ensure a range of traditional and distance-learning educational opportunities are provided in superior, accessible facilities that complement the surrounding land uses.	Based upon information from SMUSD, there is available capacity at some of the schools that would serve the project; however, there are District-wide shortages in capacity for SMUSD. Correspondence from SMUSD is included in Appendix M of the EIR. The project developer would pay school mitigation fees to offset impacts to schools. The project is consistent with this policy.

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Goal LU-11, Policy LU-11.2	Work with San Marcos Unified School District and developers to ensure adequate school facilities are funded as required by State law and through developer mitigation agreements between the school district and the developer. The City shall require a "will serve" letter substantiating that the developer has paid fees to the satisfaction of the school district prior to issuance of building permits.	Based upon information from SMUSD, there is available capacity at some of the schools that would serve the project; however, there are District-wide shortages in capacity for SMUSD. Correspondence from SMUSD is included in Appendix M of the EIR. The project developer would pay school mitigation fees to offset impacts to schools. The project is consistent with this policy.
Goal LU-12	Libraries: Provide library resources and services that meet the needs of the community.	While the proposed project does not include construction of any library facilities, this EIR has determined the project would not have a significant impact on library facilities (see Section 3.13, Public Services). The project is consistent with this goal.
Goal LU-12, Policy LU-12.1	Provide adequate library facilities and technological access that enhance San Marcos's quality of life and create a civic environment with vast opportunities for self-learning and academic enrichment.	While the proposed project does not include construction of any library facilities, this EIR has determined the project would not have a significant impact on library facilities (see Section 3.13, Public Services). Additional library resources are also available to the community through CSUSM and Palomar Community College. The project is consistent with this policy.
Goal LU-12, Policy LU-12.2	Accommodate technology needs of the community and locate accessible technology in the library.	While the proposed project does not include construction of any library facilities, project residents would have access to public computers through the existing library facilities. The project does not conflict with this policy.
Goal LU-13	Water Service and Supply: Manage and conserve domestic water resources by reducing water usage and waste on a per capita basis, to ensure an adequate water supply for existing and future residents.	The landscape plan for the project focuses on low-water use, native species. The Landscape Plan is presented in Figure 2-4a and EIR Appendix A.2. According to the Specific Plan, any landscaping within the Plan area must conform to strict water conservation measures, including the City of San Marcos Water Efficient Landscape Ordinance (WELO). Additionally, the project is required to pay Water Capital Facility Fees to RDDMWD. The project is consistent with this goal.
Goal LU-13, Policy LU-13.1	Work closely with local and regional water providers to ensure high quality water supplies are available for the community.	According to the RDDMWD Urban Water Management Plan (UWMP), water acquired from SDCWA must be treated to meet stringent state and federal standards. Ensuring quality at the source is cheaper than treatment. As described

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		in Section 3.9 (Hydrology/Water Quality), the project would not contribute significant polluted runoff due to the incorporation of bioretention and water quality BMPs. Therefore, the project would not impact any local or regional water supplies. The project is consistent with this policy.
Goal LU-13, Policy LU-13.2	Actively promote water conservation programs aimed at reducing demand.	RDDMWD promotes conservation and has issued drought alerts under drought conditions. While not currently in effect, future residential users within this district would be required to comply with any drought alerts and required conservation measures that would reduce demand. The project also incorporates low-water landscaping and will be required to comply with the City's WELO. The project is consistent with this policy.
Goal LU-13, Policy LU-13.3	Encourage exploration and use of deep underground wells to reduce reliance on treatable water.	The project would irrigate common area slopes, public/private open space, and right-of-way landscaping with potable water. Groundwater use is not proposed by the project. According to the Specific Plan, any landscaping within the Plan area must conform to strict water conservation measures, including the City of San Marcos WELO. The project is consistent with this policy.
Goal LU-14	Wastewater: Ensure an adequate wastewater system for existing and future development.	Based on the analysis in Section 3.17 (Utilities and Service Systems), there is currently adequate wastewater treatment capacity to serve the project. VWD identified existing system deficiencies in pipe segments HB-29 through HB-31, as well as in capacity for solids handling, liquids handling, ocean disposal and parallel land outfall's capacity for ultimate build-out wastewater flows. Expansion of existing wastewater facilities would be necessary to accommodate buildout of the VWD services area per the 2018 Master Plan. The project would offset its contribution to conveyance impacts plus the increase in demand through the payment of Wastewater Capital Facility Fees to VWD. The project is consistent with this goal.
Goal LU-14, Policy LU-14.1	Work closely with local service providers to ensure an adequate wastewater system for existing and future development is in place.	The City has coordinated with VWD during the preparation of this EIR. Based up on the analysis in Section 3.17 (Utilities and Service Systems) and communication from VWD, there is currently adequate wastewater treatment capacity to serve the project. Expansion of existing wastewater facilities would be necessary to accommodate buildout of the VWD services area per the 2018 Master Plan. The project would offset its contribution to conveyance impacts plus the increase in

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		demand through the payment of Wastewater Capital Facility Fees to VWD. The project is consistent with this goal.
Goal LU-14, Policy LU-14.2	Ensure development approval is directly tied to commitments for the construction or improvement of primary water, wastewater, and circulation systems.	Based on the analysis in Section 3.17 (Utilities and Service Systems), there is currently adequate water and wastewater treatment capacity to serve the project. Expansion of existing wastewater facilities would be necessary to accommodate buildout of the VWD services area per the 2018 Master Plan. The project would mitigate its contribution to conveyance impacts plus the increase in demand through the payment of Water Capital Facility Fees to RDDMWD and Wastewater Capital Facility Fees to VWD. The project is consistent with this policy.
Goal LU-15	Flood control and storm water drainage facilities: ensure adequate flood control and storm water drainage is provided by the community.	As identified in Section 3.9 (Hydrology/Water Quality), off-site runoff is projected to be less than pre-development conditions with implementation of the project. No on-site or downstream flooding hazard is identified. Therefore, implementation of the project would not impact flood control or storm water drainage facilities. The project is consistent with this goal.
Goal LU-15, Policy LU-15.1	Implement activities, practices, procedures, or facilities that avoid, prevent, or reduce pollution of the San Marcos Storm Water Conveyance System and receiving waters.	As identified in Section 3.9 (Hydrology/Water Quality), implementation of the project's comprehensive water quality management plan, which incorporates biofiltration and BMPs, would ensure the project would treat runoff containing the pollutants of concern for locally impaired water bodies. Implementation of the project would reduce pollutants entering the San Marcos Storm Water Conveyance System and receiving waters. The project is consistent with this policy.
Goal LU-15, Policy LU-15.2	Improve inadequate or undersized drainage/flood control facilities to solve both small neighborhood and large regional drainage and flood control problems.	As identified in Section 3.9 (Hydrology/Water Quality), off-site runoff is projected to be less than pre-development conditions with implementation of the project. No on-site or downstream flooding hazard is identified. No inadequate or undersized drainage/ flood control facilities were identified that serve the project area. Therefore, implementation of the project would not impact flood control or storm water drainage facilities. The project is consistent with this policy.
Goal LU-15, Policy LU-15.3	Avoid, to the extent possible, development in floodplain and flood prone areas.	As identified in the Initial Study prepared for the proposed project (Appendix B.1), the project was determined to have no impact on 100-year flood hazards. The project does not propose development within a floodplain or flood prone area. The project is consistent with this policy.

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Goal LU-15, Policy LU-15.4	Retain drainage courses in their natural condition, to the extent possible. Consider smaller-scale drainage improvements to protect the environment and avoid disturbing natural drainage courses; consider detention areas and raised building pads.	The project is adequately designed such that it would not substantially alter the existing drainage pattern of the site or area. The project detains and retains runoff through the site with combined water quality and hydromodification bioretention and BMPs. The project is consistent with this policy.
Goal LU-16	Solid waste: reduce the amount of waste material entering regional landfills with an efficient and innovative waste management program.	As discussed in Section 3.17 (Utilities and Service Systems), the City of San Marcos has a disposal rate target of 8.9 lbs/person/day. If the City meets this target, the City is considered in compliance with the 50 percent diversion requirement of AB 939. The most recent data (2019) from CalRecycle identifies the annual per capital disposal rate for the City of San Marcos is 5.0 lbs/person/day. Thus, the City is exceeding their current targets for diversion. In accordance with AB 34, the project would be required to achieve a 75 percent waste diversion rate. All green waste will be diverted from landfills and recycled as mulch. The Sycamore Sanitary Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs. The project is consistent with this goal.
Goal LU-16, Policy LU-16.1	Work closely with local service providers to ensure adequate solid waste disposal, collection, and recycling services.	Non-recyclable waste, including general trash and green materials, would be collected and transported for disposal by EDCO, a licensed hauler. According to Section 3.17 (Utilities and Service Systems), the Sycamore Sanitary Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs. In accordance with AB 34, the project would be required to achieve a 75 percent waste diversion rate. All green waste will be diverted from landfills and recycled as mulch. The project is consistent with this policy.
Goal LU-16, Policy LU-16.2	Increase recycling, composting, source reduction, and education efforts throughout the city to reduce the amount of solid waste requiring disposal at landfills.	The City of San Marcos is in compliance with AB 939, which requires 50 percent waste diversion through recycling. The project is consistent with this policy.

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Mobility Element		
Goal M-1	Provide a comprehensive multimodal circulation system that serves the City land uses and provides for the safe and effective movement of people and goods.	Vehicular, bicycle, and pedestrian circulation within the Hallmark-Barham Specific Plan Area features a main circulation driveway, which allows free movement through the Plan area. The private driveway accesses Hallmark-Barham Specific Plan from Barham Drive to the north via two entry points; one located on the eastern end of the Plan area and another located at the western end of the Plan area. The private driveway loops through the northern half of the Specific Plan Area and connects the southern portion of the Plan area via a short north-south connection at the center of the Specific Plan Area. All internal alleys connect to the main driveway. The private internal driveway paved surface area within the Specific Plan will be a minimum of 26 feet in width. Alleys within the Specific Plan Area will be a minimum of 20 feet in width. All sidewalks within the Specific Plan Area will be a minimum of 5 feet in width and will allow for an accessible path of travel from each building to a sidewalk connection in the Barham Drive right-of-way. Sidewalks adjacent to perpendicular parking spaces feature a minimum of 6' of width to accommodate vehicle overhang. The project is consistent with this goal.
Goal M-1, Policy M-1.1	Safely and efficiently accommodate traffic generated by development and redevelopment associated with implementation of the General Plan Land Use Policy Map.	Implementation of the proposed project is anticipated to result in traffic impacts that would increase LOS and/or delay on project-area roadways in the existing, near term (Year 2025), and horizon year 2050 conditions. Mitigation measures, as identified in Section 3.10.6 (Land Use and Planning) would ensure project-area roadways would not experience a substantial increase in traffic. Project-related impacts would be reduced to below a level of significance with incorporation of these mitigation measures with the exception of the Rancheros Drive/ SR-78 WB Ramps during Near Term 2025 conditions. A traffic signal is warranted at this intersection and is assumed to be in place by 2050 but because the intersection is located outside the jurisdiction of the City, the impact is considered significant and unavoidable. However, inter-agency coordination is expected and impacts would be less than significant in the horizon year. Because the impact is considered significant and unavoidable in the near term, implementation of the project would be inconsistent with this policy.

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Goal M-1, Policy M-1.2	Require new development to finance and construct internal adjacent roadway circulation and City-wide improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian and bicycle facilities.	The project has been designed to include private streets. The project applicant will build and maintain the private streets. Additionally, due to off-site traffic impacts resulting from development of the proposed project, the developer would be required to mitigate as described in Section 3.10.6 (Land Use and Planning). Therefore, the project is consistent with this policy.
Goal M-1, Policy M-1.4	Utilize multi-modal LOS techniques to evaluate transportation facilities. For identified prioritized modes (based on facility typology), provide the following minimum LOS as shown in Table 3-4 of the Mobility Element: LOS D or better for Vehicles as a prioritized mode or the City shall allow for flexible LOS where warranted (e.g., accepting a lower LOS than identified above).	The location transportation analysis prepared for the project relied on this LOS technique to determine project-related impacts to the circulation network. As summarized in Section 3.10.4 (Land Use and Planning) of this EIR, project-related impacts resulting in a degradation of LOS to below acceptable levels would occur at three study area intersections during two scenarios. Project-related impacts would be reduced to below a level of significance with incorporation of mitigation measures provided in Section 3.10.6 (Land Use and Planning). However, the Rancheros Drive/SR-78 WB Ramps is located outside of the City's jurisdiction so neither the developer nor the City can ensure that Caltrans will permit the improvement that is required. Based on regional standards of practice, the near-term direct project impacts at this location would be considered significant and unavoidable for the purposes of CEQA. However, inter-agency coordination is expected and impacts would be less than significant in the horizon year. Because the impact is considered significant and unavoidable in the near term, implementation of the project would be inconsistent with this policy.
Goal M-1, Policy M-1.6	Work to improve connectivity within the City by closing gaps in the existing bicycle, pedestrian, trail, transit, and roadway network. Work with new development to provide connectivity and redundancy in the mobility network.	Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. The project is consistent with this policy.
Goal M-1, Policy M-1.7	Strive to ensure that streets within San Marcos shall be complete streets where feasible; thereby providing accessibility, safety, connectivity, and comfort for all modes and users of the system. Appropriate	Complete streets balance the needs of all users, both motorized and non-motorized, in design and construction. Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect with the existing pedestrian and bicycle network. Therefore, the project is consistent with this policy.

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	new local streets and Main Streets will prioritize pedestrian and bicycle users through the corridor.	
Goal M-2	Protect neighborhoods by improving safety for all modes of travel and calming traffic where appropriate.	Travel modes within and surrounding the project area include vehicular, pedestrian, and bicycle. Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. Internal traffic calming measures such as speed limit signs and stop signs may be provided to improve the overall safety of circulation within the Specific Plan Area. The provision of these amenities improves safety for pedestrians and cyclists. The project is consistent with the goal.
Goal M-2, Policy M-2.1	Work with new development to design roadways that minimize traffic volumes and/or speed, as appropriate within residential neighborhoods; while maintaining the City's desire to provide connectivity on the roadway network.	Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. Roadways have been designed per City of San Marcos requirements and are consistent with the City's Mobility Element. Therefore, the project is consistent with this policy.
Goal M-2, Policy M-2.3	Consider roundabouts, as appropriate, as an intersection control device with demonstrated air quality, traffic efficiency, and safety benefits.	Streets internal to the project do not have enough traffic volumes to warrant a traffic circle. Internal traffic calming measures such as speed limit signs and stop signs may be provided to improve the overall safety of circulation within the Specific Plan Area. The provision of these amenities improves safety for pedestrians and cyclists. The project is consistent with this policy.
Goal M-3	Promote and encourage use of alternative transportation modes, including transit, bicycles, neighborhood electric vehicles (NEVs), and walking, within the City.	Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. The closest bus stops are 0.7 mile from the project site and would not be impacted by the project. As a design feature, the project would install three Level 2 electric vehicle (EV) charging stations. The project will also wire each garage for EV charging stations. Therefore, the project is consistent with this goal.
Goal M-3, Policy M-3.1	Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution	Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. Therefore, the project is consistent with this policy.

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	and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.	
Goal M-3, Policy M-3.2	Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians through design, maintenance and law enforcement. Install wider sidewalks and curb extensions at pedestrian crossings (bulb outs) where appropriate.	Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. Vehicular, bicycle, and pedestrian circulation within the Specific Plan Area features a main circulation driveway, which allows free movement through the Plan area. All internal alleys connect to the main driveway. The private internal driveway paved surface area within the Specific Plan will be a minimum of 26 feet in width. Alleys within the Specific Plan Area will be a minimum of 20 feet in width. All sidewalks within the Specific Plan Area will be a minimum of 5 feet in width and will allow for an accessible path of travel from each building to a sidewalk connection in the Barham Drive right-of-way. Sidewalks adjacent to perpendicular parking spaces feature a minimum of 6 feet of width to accommodate vehicle overhang. Internal traffic calming measures such as speed limit signs and stop signs may be provided to improve the overall safety of circulation within the Specific Plan Area. The provision of these amenities improves safety for pedestrians and cyclists. Therefore, the project is consistent with this policy.
Goal M-3, Policy M-3.3	Provide a pedestrian and bicycle network in existing and new neighborhoods that facilitates convenient and continuous pedestrian and bicycle travel free of major impediments and obstacles.	Streets proposed for the internal circulation network of the proposed project include sidewalks that would connect to the existing pedestrian and bicycle network. Therefore, the project is consistent with this policy.
Goal M-3, Policy M-3.5	Ensure that streets in areas with high levels of pedestrian activity (such as employment centers, residential areas, mixed use areas, and schools) support safe pedestrian travel by providing detached sidewalks, bulb-outs, enhanced pedestrian crossings, pedestrian bridges, and medians.	The project is not located in an area with high levels of pedestrian activity; however, streets proposed for the internal circulation network of the proposed project include sidewalks that connect to the existing sidewalks and bike lane along the project frontage. Therefore, the project is consistent with this policy.
Goal M-3, Policy M-3.9	Create a pleasant walking environment for roadway typologies where pedestrian travel	The project is not located in an area with high levels of pedestrian activity; however, streets proposed for the internal circulation network of the proposed

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	is prioritized. This includes providing shade trees, landscaping, benches, pedestrian-scale lighting, way finding signage, transit shelters, and other appropriate amenities.	project include sidewalks that connect to the existing sidewalks and bike lane along the project frontage. The landscape plan includes guidelines for landscape plantings in locations such as entries, streetscapes, and common open space areas. According to the Specific Plan, lighting within the project site would provide safety and accent lighting for vehicles and pedestrians. project is consistent with this policy.
Conservation and Open Space Element		
Goal COS-1	Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.	A biological resources study (Appendix E.1) was prepared for the project to identify significant resources on the project site. The study identified direct impacts to sensitive wildlife species and sensitive habitats. Mitigation measures proposed for the project would reduce these impacts to below a level of significance. See Section 3.3 (Biological Resources) of the EIR for a description of the biological mitigation measures. The project is consistent with this goal.
Goal COS-1, Policy COS-1.1	Support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas.	The project would result in a direct impact to sensitive habitats, including Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated and non-native grassland. This impact would be mitigated to below a level of significance through on-site preservation, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager at a 1:1 ratio for the Diegan coastal sage scrub and Diegan coastal sage scrub – *Baccharis* dominated habitats and at a 0.5:1 ratio for non-native grassland. Proof of onsite preservation, off-site acquisition, payment of in lieu fees, purchase of credits from an approved mitigation bank or a combination thereof shall be provided to the Planning Manager prior to issuance of a grading permit. The project is consistent with this policy.
Goal COS-1, Policy COS-1.2	Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats.	No oak woodlands, jurisdictional wetlands, or habitat linkages occur on the project site. The project would impact sensitive coastal sage scrub and non-native grassland communities. Mitigation measures identified for the project would reduce impacts to these communities to below a level of significance. See Section 3.3 (Biological Resources) of the EIR for a description of the biological resource mitigation measures. The project is consistent with this policy.

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Goal COS-2	The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.	The project would result in a direct impact to sensitive habitats, including Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated and non-native grassland. This impact would be mitigated to below a level of significance through on-site preservation, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the Planning Manager at a 1:1 ratio for the Diegan coastal sage scrub and Diegan coastal sage scrub – *Baccharis* dominated habitats and at a 0.5:1 ratio for non-native grassland. Proof of onsite preservation, off-site acquisition, payment of in lieu fees, purchase of credits from an approved mitigation bank or a combination thereof shall be provided to the Planning Manager prior to issuance of a grading permit. The project is consistent with this policy.
Goal COS-2, Policy COS-2.1	Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.	There are two main categories of open space proposed for the project – common open space and private open space. Common open space will total approximately 5.35 acres and includes open space with grades 10 percent and greater, common open space with grades less than ten percent, the water quality basin and recreational areas. The project site has no agricultural value as the site was never used for agriculture. The project is consistent with this policy.
Goal COS-2, Policy COS-2.2	Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.	The project site is currently undeveloped but is in a developed area and is not being used as open space. There are two main categories of open space proposed for the project – common open space and private open space. Common open space will total approximately 5.35 acres and includes open space with grades 10 percent and greater, common open space with grades less than ten percent, the water quality basin and recreational areas. There are no flood hazards management issues with the project. Water supply and resources were addressed in Section 3.17 (Utilities and Service Systems) and it was concluded that there is adequate potable water service to serve the project. The project also incorporates low-water landscaping and will be required to comply with the City's WELO. The project is consistent with this policy.
Goal COS-2, Policy COS-2.5	Continue to review future development proposals to ensure that cultural resources (including prehistoric, historic, paleontological, and SB 18 Tribal resources)	The proposed project's potential impacts to cultural resources are detailed in Section 3.4 (Cultural Resources) of the EIR. A cultural resources report was also prepared for the project and is included as Appendix F of the EIR. The City reached out to tribes consistent with the requirements of SB 18 and AB 52 and met with

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	are analyzed and conserved in compliance with CEQA requirements.	tribes that requested consultation. An archaeological significance evaluation (Appendix F.2) for a historic site, Barham-2020-ASM-HD-01, discovered during the cultural resources inventory for the proposed project was also conducted and concluded the historical resources identified on site would not meet the criteria for listing in CRHR. The project will not impact any known cultural and/or historical resources on the project site; however, there is a potential to impact resources that are unknown at this time. Mitigation measures are incorporated into the EIR (MM-CR-1a through MM-CR-1c and MM-CR-2) to reduce impacts to cultural resources to below a level of significance. The project is consistent with this policy.
Goal COS-2, Policy COS-2.6	Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.	No existing trees are proposed for removal. The proposed landscape plan is included as Figure 2-4a and the plant material guide is included as Figure 2-4b. Proposed tree species include desert willow, majestic beauty Indian hawthorn, California laurel, columnar Italian cypress, fern pine, western redbud, European olive, Mexican palo verde, African suman, strawberry tree, flaxleaf paperbark, and date palms. See Figure 2-4b for a comprehensive list of proposed plant materials. The project is consistent with this policy.
Goal COS-3	Protect natural topography to preserve and enhance the natural beauty of San Marcos.	According to Section 3.1 (Aesthetics), the project has been designed to respect the existing topography on the site. Views of the surrounding hillsides would remain unobstructed from SR-78. The project site is not a protected scenic vista. The project also incorporates extensive design features that ensure that the visual character changes blend with the existing topography and surrounding development. The project is consistent with this goal.
Goal COS-3, Policy COS-3.1	Preserve scenic resources, including prominent landforms such as Double Peak, Owens Peak, San Marcos Mountains, Merriam Mountains, Cerro de Las Posas, Franks Peak, and canyon areas through conservation and management policies.	None of the prominent landforms as identified in the General Plan are on-site. While implementation of the proposed project would result in changes in the viewshed, development would not alter or impede views of prominent landforms. Views to prominent landforms would remain unobstructed. In addition, the project site is not a protected scenic vista. The project is consistent with this policy.
Goal COS-3, Policy COS-3.2	Encourage and maintain high-quality architectural and landscaping designs that enhance or complement the hillsides,	According to Section 3.1 (Aesthetics), the Specific Plan includes an overall architectural design theme to ensure a pleasant, orderly, and visually appealing neighborhood. The architectural guidelines include a variety of elevation treatments, varied front yard setbacks, and enhanced side and rear elevations for

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	ridgelines, canyons, and view corridors that comprise the visual character in San Marcos.	select homes. The project has been designed to respect the existing topography on the site. Landscape materials will be used to enhance and accentuate key site and architectural elements, frame views, provide a visually stimulating site element. Plant material will be chosen for its appropriateness to scale, performance in the region, drought tolerance, and suitability of use. The project is consistent with this policy.
Goal COS-3, Policy COS-3.3	Continue to work with new development and redevelopment project applicants in designing land use plans that respect the topography, landforms, view corridors, wildlife corridors, and open space that exists.	The project has been designed to respect the existing topography; A grading variance is required for projects including slopes that exceed 20 feet in height without benching. Areas where slopes are proposed to be greater than 20 feet include the southern extent of development (31.6-foot maximum slope height), a small area on the western edge of the project site (25.8-foot maximum slope height) and a portion of the project frontage with E. Barham Drive (22.8-foot maximum slope height with 6-foot retaining wall). Figure 2-11 depicts the areas that are proposed to have manufactured slopes without benching in excess of 20 feet in height. Approval of a grading variance allows for reduced grading and lower overall slope heights due to the removal of benching. No Wildlife movement corridors have been identified on the project site. Finally, the project site is not a protected scenic vista. The project is consistent with this policy.
Goal COS-3, Policy COS-3.4	Evaluate potential impacts to visual and aesthetic resources, including the potential to create new light sources, while still maintaining and being sensitive to rural lighting standards.	Development of the proposed project would create new sources of light at a site that is currently undeveloped. Lighting will be guided by the City of San Marcos Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080, Light and Glare Standards to aid in the preservation of dark sky conditions. The Specific Plan requires all lighting to minimize glare, conflict, and light pollution while providing illumination levels that create a safe environment for vehicles and pedestrians. Lighting impacts were determined to be less than significant (Section 3.1 Aesthetics). The project is consistent with this policy.
Goal COS-4	Improve regional air quality and reduce GHG emissions that contribute to climate change.	The project's impacts to air quality would be less than significant as described in Section 3.2 (Air Quality) of this EIR. The project would not conflict with or obstruct implementation of any air quality plan or violate any air quality standard. Based upon the analysis in Section 3.7 (Greenhouse Gas), GHG emissions under the proposed project would be 70% less than if the project was built out under the

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		current General Plan Designation of MU3. The project will also implement all of the applicable CAP Consistency Review Checklist (CAP Checklist) measures. The project is consistent with this goal.
Goal COS-4, Policy COS-4.1	Continue to work with the U.S. EPA, CARB, SANDAG, and the SDAPCD to meet State and federal ambient air quality standards.	Implementation of the proposed project would not exceed any air quality standard during construction or operation. Impacts are less than significant. The project is consistent with this policy.
Goal COS-4, Policy COS-4.3	Participate in regional efforts to reduce GHG emissions.	The project is not anticipated to impair implementation of AB 32. Development of the project would not affect regional efforts to reduce GHG emissions. The City's updated 2020 CAP quantifies community emissions, identifies emission reduction targets, and specifies climate action measures to reduce GHG emissions. Based upon the analysis in Section 3.7 (Greenhouse Gas), GHG emissions under the proposed project would be 70% less than if the project was built out under the current General Plan Designation of MU3. The project will also implement all of the applicable CAP Checklist measures. The project is consistent with this policy. The project is therefore consistent with the City's CAP and the project would be consistent with the goals of AB32. The project is consistent with this policy.
Goal COS-4, Policy COS-4.4	Quantify community-wide and municipal GHG emissions, set a reduction goal, identify and implement measures to reduce GHG emissions as required by governing legislation.	The City's updated 2008 CAP quantifies community emissions, identifies emission reduction targets, and specifies climate action measures to reduce GHG emissions. Based upon the analysis in Section 3.7 (Greenhouse Gas), GHG emissions under the proposed project would be 70% less than if the project was built out under the current General Plan Designation of MU3. The project will also implement all of the applicable CAP Checklist measures. The project is therefore consistent with the City's CAP and the project would be consistent with the goals of AB32. The project is consistent with this policy.
Goal COS-4, Policy COS-4.5	Encourage energy conservation and the use of alternative energy sources within the community.	As discussed in Section 3.17 (Utilities and Service Systems), the proposed project includes various on-site features and measures to reduce the proposed project's energy consumption. Further, the proposed project would be required to be consistent with appropriate mandatory project design feature in the CAP Checklist that would reduce operational electricity consumption (details are provided in Appendix H.1 of this EIR) and would-be built-in compliance with Title 24 requirements applicable at that time. Based on the 2019 standards, homes built

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		under the 2019 Title 24 standards would use about 53% less energy than those under the 2016 Title 24 standards. On the residential side, the standards also encourage demand responsive technologies including battery storage and heat pump water heaters and improve the building thermal envelope. Additionally, as a design feature, the project would install three Level 2 EV charging stations. The project will also wire each garage for EV charging stations. The project has also been designed to meet current California Building Code requirements as related to green building practices. The project is consistent with this policy.
Goal COS-4, Policy COS-4.6	Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.	As discussed in Section 3.17 (Utilities and Service Systems), the proposed project includes various on-site features and measures to reduce the proposed project's energy consumption. Further, the proposed project would be required to be consistent with appropriate mandatory project design feature in the CAP Consistency Worksheet that would reduce operational electricity consumption (details are provided in Appendix H.1 of this EIR) and would-be built-in compliance with Title 24 requirements applicable at that time. Based on the 2019 standards, homes built under the 2019 Title 24 standards would use about 53% less energy than those under the 2016 Title 24 standards. On the residential side, the standards also encourage demand responsive technologies including battery storage and heat pump water heaters and improve the building thermal envelope. Additionally, as a design feature, the project would install three Level 2 EV charging stations. The project will also wire each garage for EV charging stations. The project has also been designed to meet current California Building Code requirements as related to green building practices. The project is consistent with this policy.
Goal COS-4, Policy COS-4.8	Encourage and support the generation, transmission and use of renewable energy.	Future homes would meet the requirements of California's Building Energy Efficiency Standards, which focus on several key areas to improve the energy efficiency of newly constructed buildings. The project has also been designed to

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		meet current California Building Code requirements as related to green building practices. The project is consistent with this policy.
Goal COS-5	Reduce water consumption and ensure reliable water supply through water efficiency, conservation, capture, and reuse.	RDDMWD promotes conservation and has issued drought alerts under drought conditions. Future residential users within this district would be required to comply with any issued alerts and required conservation measures that would reduce demand. The project proposes a landscape plan that emphasizes low-water use species in adherence to the City of San Marcos Water Efficient Landscape Ordinance. The project is consistent with this goal.
Goal COS-6	Protect and restore appropriate surface water and groundwater beneficial uses through prioritizing the improvement of locally impaired water bodies within the City of San Marcos subwatersheds.	The project is located within a watershed with numerous impaired water bodies. The BMP Design Manual requires that pollutants of concern for each impaired water body in the watershed be treated by engineered treatment controls to a medium pollutant removal efficiency or better prior to leaving the project site. The project proposes treatment of storm water runoff via biofiltration facilities prior to discharge, which would result in a medium or high efficiency for removal of the pollutants of concern. Any groundwater infiltration would likely reach surface flows before reaching groundwater due to the approximate depth to groundwater. Therefore, according to Section 3.9 (Hydrology/Water Quality), the project would not have a potentially significant adverse impact on groundwater quality or result in significant impacts to impaired water bodies. The project is consistent with this goal.
Goal COS-6, Policy COS-6.2	Promote watershed stewardship as the community norm.	The project includes a comprehensive water quality management approach, which incorporates biofiltration and the use of Best Management Practices (BMPs), to ensure the project would not contribute any pollutants to area watersheds. Additionally, the project proponent would obtain a General Construction Activity Stormwater Permit, prepare a Stormwater Pollution Prevention Plan, and implement BMPs in compliance with the National Pollution Discharge Elimination System (NPDES) permit. Erosion and sediment control and non-stormwater management measures implemented as required under these permits would contribute to watershed stewardship. The project is consistent with this policy.
Goal COS-7	Achieve sustainable watershed protection for surface and ground water quality that	The project includes a comprehensive water quality management approach, which incorporates biofiltration and the use of BMPs, to ensure the project would not contribute any pollutants to area watersheds. Additionally, the project proponent

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	balances social, economical, and environmental needs.	would obtain a General Construction Activity Stormwater Permit, prepare a SWPPP, and implement BMPs in compliance with the NPDES permit. Erosion and sediment control and non-stormwater management measures implemented as required under these permits would contribute to watershed stewardship. The project is consistent with this policy.
Goal COS-8	Focus watershed protection, surface and groundwater quality management on sources and practices that the City has the ability to affect.	Implementation of the project's comprehensive water quality management plan, which incorporates biofiltration and the use of BMPs, would ensure the project would treat runoff containing the pollutants of concern for locally impaired water bodies. Additionally, the project proponent would obtain a General Construction Activity Stormwater Permit, prepare a SWPPP, and implement BMPs in compliance with the NPDES permit. Erosion and sediment control and non-stormwater management measures implemented as required under these permits would reduce construction effects on receiving water quality and protect stormwater runoff. The project is consistent with this policy.
Goal COS-8, Policy COS-8.4	Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, BMPs, LID, hydromodification strategies consistent with the Current San Diego RWQCB Municipal Stormwater NPDES Permit, and all future municipal stormwater permits.	Implementation of the project's comprehensive water quality management plan, which incorporates biofiltration and the use of BMPs, would ensure the project would treat runoff containing the pollutants of concern for locally impaired water bodies. Additionally, the project proponent would obtain a General Construction Activity Stormwater Permit, prepare a SWPPP, and implement BMPs in compliance with the NPDES permit. Erosion and sediment control and non-stormwater management measures implemented as required under these permits would reduce construction effects on receiving water quality and protect stormwater runoff. The project is consistent with this policy.
Goal COS-10	Establish and maintain an innovative, sustainable solid waste collection, recycling, and disposal delivery system for present and future generations.	As discussed in Section 3.17 (Utilities and Service Systems), according to CalRecycle, the City of San Marcos has a disposal rate target of 8.9 lbs/person/day. If the City meets this target, the City is considered in compliance with the 50 percent diversion requirement of AB 939. The most recent data (2019) from CalRecycle identifies the annual per capital disposal rate for the City of San Marcos is 5.0 lbs/person/day. Thus, the City is exceeding their current targets for diversion.

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		In accordance with AB 34, the project would be required to achieve a 75 percent waste diversion rate. All green waste will be diverted from landfills and recycled as mulch. The Sycamore Sanitary Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs. The project is consistent with this goal.
Goal COS-10, Policy COS-10.1	Promote the curbside recycling program to divert residential refuse from the landfills.	The City of San Marcos is in compliance with AB 939, which requires 50 percent waste diversion through recycling. The project would participate in the City's recycling efforts. The project is consistent with this policy.
Goal COS-11	Continue to identify and evaluate cultural, historic, archaeological, paleontological, and architectural resources for protection from demolition and inappropriate actions.	A cultural resources report and archaeological significance evaluation were prepared for the project site, summarized in this Section 3.4 (Cultural Resources) of the EIR, and is included as Appendix F of the EIR. Mitigation measures are incorporated into the EIR (MM-CR-1a through MM-CR-1c and MM-CR-2) to reduce impacts to cultural resources to below a level of significance. The project is consistent with this goal.
Goal COS-11, Policy COS-11.1	Identify and protect historic and cultural resources including individual properties, districts, and sites (e.g., archaeological sites) in compliance with CEQA.	Based upon the cultural resources report prepared for the project, several historic remnants were identified on site associated with an early twentieth-century agricultural homestead. These resources were documented via the appropriate DPR forms and are included in Appendix D of the cultural resources report (Appendix F1 of this EIR) and an archaeological significance evaluation was conducted to determine eligibility for listing in the CRHR. The evaluation concluded that the site would not be eligible for listing and the site is not considered historically significant. However, mitigation measures described in Section 3.4.6 (Cultural Resources) would ensure impacts would be less than significant for any unknown subsurface archaeological resources that could be encountered during project grading and construction. The project is consistent with this policy.
Goal COS-11, Policy COS-11.2	Prohibit the demolition or removal of a historic structure without evaluation of the condition of the structure, the cost of rehabilitation, and the feasibility of alternatives to preservation in place including but not limited to relocation, or	Based upon the cultural resources and archaeological significance evaluation reports prepared for the project, the remnants associated with an early twentieth-century agricultural homestead were determined not to be significant resources. Therefore, there are no historic structures on-site. However, mitigation measures described in Section 3.4.6 (Cultural Resources) would ensure impacts would be less than significant for any unknown subsurface archaeological resources that

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	reconstruction offsite, and/or photo-preservation.	could be encountered during project grading and construction. The project is consistent with this policy.
Parks, Recreation and Community Health Element		
Goal PR-1	Plan for, acquire, develop, and maintain a system of local parks connected through an integrated network of trails and high quality recreational facilities.	Section 3.14 (Recreation) analyzed the project's impacts to recreation. The proposed project would result in an increase in the City of San Marcos population by approximately 469 residents. The additional residents would require approximately 2.35 acres of new park space to fulfill the City's General Plan requirement of five acres of park space per every 1,000 residents. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be less than significant. The project is consistent with this goal.
Goal PR-1, Policy PR-1.1	Develop and maintain a complete system of public parks and recreational amenities that provide opportunities for passive and active recreation at a minimum standard of 5 acres per 1,000 residents. Parks, trails, and recreational facilities will enhance community livability, public health, and safety; should be equitably distributed throughout the City; and be responsive to the needs and interests of residents, employees, and visitors.	Section 3.14 (Recreation) analyzed the project's impacts to recreation. The proposed project would result in an increase in the City of San Marcos population by approximately 469 residents. The additional residents would require approximately 2.35 acres of new park space to fulfill the City's General Plan requirement of five acres of park space per every 1,000 residents. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be less than significant. The project is consistent with this policy.
Goal PR-1, Policy PR-1.3	Ensure that the development of parks, trails, and recreation facilities and services keeps pace with development and growth within the City.	Section 3.14 (Recreation) analyzed the project's impacts to recreation. The proposed project would result in an increase in the City of San Marcos population by approximately 469 residents. The additional residents would require approximately 2.35 acres of new park space to fulfill the City's General Plan

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		requirement of five acres of park space per every 1,000 residents. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be less than significant. The project is consistent with this policy.
Goal PR-1, Policy PR-1.4	Promote increased access to parks and open spaces, pedestrian- and bike-oriented routes to parks and open space, greening of public rights-of-way, and a variety of active and passive uses of parks and open space.	The proposed project includes internal streets that connect to the City's existing pedestrian and bicycle network. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be less than significant. The project is consistent with this policy.
Goal PR-1, Policy PR-1.5	Require new development to be designed and constructed in accordance with the approved Parks Master Plan to meet or exceed the City's parkland standard of 5 acres per 1,000 residents.	Section 3.14 (Recreation) analyzed the project's impacts to recreation. The proposed project would result in an increase in the City of San Marcos population by approximately 469 residents. The additional residents would require approximately 2.35 acres of new park space to fulfill the City's General Plan requirement of five acres of park space per every 1,000 residents. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be less than significant. The project is consistent with this policy.
Goal PR-1, Policy PR-1.6	Require new infill development to provide plazas, mini parks, or other civic spaces as part of their parkland requirement.	The proposed project does not propose infill development, but does incorporate private park and open space areas. The proposed project is consistent with this policy.

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Goal PR-1, Policy PR-1.7	Promote park and facility design that discourages vandalism, deters crime, provides natural surveillance, and creates a safe and comfortable environment.	Safety considerations of the proposed project are discussed in Section 3.13 (Public Services). As proposed, the proposed project, including development of park and open space areas, does not present any unique public safety challenges. The proposed project is consistent with this policy.
Goal PR-2, Policy PR-2.2	Implement the trail network per the Master Trails Plan to increase opportunities for physical activity (e.g., walking, biking), healthy lifestyles, and to reduce reliance on cars.	The City's Master Trail Plan indicates an Urban Trail along the project frontage, which is already constructed. The internal street system would connect to the existing pedestrian and bicycle network. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be less than significant. The project is consistent with this policy.
Safety Element		
Goal S-1	Reduce risks to the community from earthquakes by regulating new development and redevelopment to prevent the creation of new geologic and seismic hazards.	The project would implement all recommendations from the geotechnical investigation (Appendix G of EIR). Additionally, development on the project site would be subject to the requirements of the latest California Building Code for resistance to seismic shaking, and would be constructed in accordance with other CBC criteria, current seismic design specifications of the Structural Engineers Association of California, other applicable regulations, and all applicable requirements of the State of California Occupational Safety and Health Administration (Cal/OSHA) to minimize risks from earthquakes. The project is consistent with this goal.
Goal S-1, Policy S-1.1	Reduce the risk of impacts from geologic and seismic hazards by applying current and proper land use planning, development engineering, building construction, and retrofitting requirements.	The project would implement all recommendations from the geotechnical investigation (Appendix G of EIR). Additionally, development on the project site would be subject to the requirements of the latest California Building Code for resistance to seismic shaking, and would be constructed in accordance with other CBC criteria, current seismic design specifications of the Structural Engineers Association of California, other applicable regulations, and all applicable requirements of (Cal/OSHA) to minimize risks from earthquakes. The project is consistent with this policy.

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Goal S-1, Policy S-1.2	Investigate specific groundwater levels and geologic conditions underlying all new development or redevelopment proposals in areas where potential fault rupture, liquefaction, or other geologic hazards are suspected.	No natural groundwater condition is known to exist at the project site. Furthermore, there is no known faulting at the project site so the potential for surface fault rupture is low. The project site is not located in a State liquefaction susceptibility zone and is mapped in an area with generally zero to low liquefaction. The project is consistent with this policy.
Goal S-2	Minimize the risk to people, property, and the environment due to flooding hazards.	The project site is not located within a 100-year flood hazard area nor the City's Flood Damage Prevention Overlay Zone. Additionally, off-site runoff is projected to be less than pre-development conditions with implementation of the project. No on-site or downstream flooding hazard is identified. The project is consistent with this goal.
Goal S-2, Policy S-2	Require existing private development to take responsibility for maintenance and repair of structures to resist flood damage.	The project site is not located within a 100-year flood hazard area nor the City's Flood Damage Prevention Overlay Zone. Additionally, off-site runoff is projected to be less than pre-development conditions with implementation of the project. No on-site or downstream flooding hazard is identified. The project is consistent with this policy.
Goal S-3	Minimize injury, loss of life, and damage to property results from structure or wildland fire hazards.	Implementation of the proposed project would result in a developed area with roads, structures, and landscape vegetation as well as maintained parks and open spaces. The project site is located in a Local Responsibility Area with a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) designation per CalFire's San Marcos Fire Hazards Severity Zones Map (2009) and is surrounded by areas identified as a Non-VHFHSZ. Further, per Figure 6-4 of the City's General Plan, the project site and surrounding area are not identified as a SMFPD Community Hazard Zone. The project includes a 150-foot fuel modification buffer along the southern portion of the project site to further minimize fire risk to the proposed development. The proposed project is consistent with this goal.
Goal S-3, Policy S-3.1	Require development to be located, designed and constructed to provide adequate defensibility and reduce the risk of structural loss and life resulting from wildland fires. Development will consider hazards relative to terrain, topography,	The project site is located in a Local Responsibility Area with a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) designation per CalFire's San Marcos Fire Hazards Severity Zones Map (2009) and is surrounded by areas identified as a Non-VHFHSZ. Further, per Figure 6-4 of the City's General Plan, the project site and surrounding area are not identified as a SMFPD Community Hazard Zone. The project includes a 150-foot fuel modification buffer along the southern portion of

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	accessibility and proximity to vegetation. One such provision for development to minimize the risk of structural loss and life shall be the inclusion of overhead fire sprinklers.	the project site to further minimize fire risk to the proposed development. The proposed project is consistent with this policy.
Goal S-3, Policy S-3.2	Provide sufficient level of fire protection service to reduce risk from urban and wildland fire. Advocate and support regional coordination among fire protection and emergency service providers.	According to Section 3.13 (Public Services), while current staff levels and equipment at the San Marcos Fire Department Station One is adequate to serve the proposed project, SMFD continues to experience an increase in emergency and non-emergency demands. Additional staff and resources would be provided via Community Facilities District No. 2001-01, into which the project would annex and pay required mitigation fees. The proposed project is consistent with this policy.
Goal S-3, Policy S-3.3	Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.	Access to the project site will be via two unsignalized driveways on E. Barham Drive. The western driveway will be 40-feet wide and serve as the primary entry to the project site and provide full access. The eastern driveway will be 26-feet wide and will also provide full access. Based upon mitigation measures identified in Section 3.10, Land Use (MM-LU-2 and MM-LU-3), the project will be required to limit left turns out of both driveways between the PM Peak Hour (4:00 PM to 6:00 PM). A secondary emergency-only access is provided through the western boundary of the project site at the western terminus of Street "C". This access will connect to an existing emergency access driveway on the adjacent property which connects to Saddleback Way and then to E. Barham Drive. This access point is for emergency vehicles only and bollards would be put in place. The Fire Marshal has reviewed and approved all project plans. The proposed project is consistent with this policy.
Goal S-3, Policy S-3.4	Coordinate with fire protection and emergency service providers to assess fire hazards before and after wildfire events to adjust fire prevention and suppression needs, as necessary, commensurate with both short- and long-term fire prevention needs.	The Fire Marshal has reviewed and approved all project plans. The project site is located in a Local Responsibility Area with a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) designation per CalFire's San Marcos Fire Hazards Severity Zones Map (2009) and is surrounded by areas identified as a Non-VHFHSZ. Further, per Figure 6-4 of the City's General Plan, the project site and surrounding area are not identified as a SMFPD Community Hazard Zone. The project includes a 150-foot fuel modification buffer along the southern portion of the project site to

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
		further minimize fire risk to the proposed development. The proposed project is consistent with this policy.
Goal S-4	Protect life, structures, and the environment from the harmful effects of hazardous materials and waste.	During construction, there is a potential for accidental upset of fuels, lubricants, and other materials; however, there are existing federal and state standards in place for the handling, storage, and transport of these materials. During operation, the only hazardous materials anticipated for transport, use, or disposal would be routinely used household products. Household hazardous waste programs are in place, which address the use, handling, and disposal of these items. Additionally, the project site and surrounding properties are not considered hazardous materials sites. See Section 3.8 (Hazards and Hazardous Materials) for additional information. The proposed project is consistent with this goal.
Goal S-4, Policy S-4.1	Promote and support the proper disposal, handling, transport, delivery, treatment, recovery, recycling, and storage of hazardous materials in accordance with applicable federal, State, and local regulations.	During construction, there is a potential for accidental upset of fuels, lubricants, and other materials; however, there are existing federal and state standards in place for the handling, storage, and transport of these materials. During operation, the only hazardous materials anticipated for transport, use, or disposal would be routinely used household products. Household hazardous waste programs are in place, which address the use, handling, and disposal of these items. Additionally, the project site and surrounding properties are not considered hazardous materials sites. See Section 3.8 (Hazards and Hazardous Materials) for additional information. The proposed project is consistent with this policy.
Goal S-4, Policy S-4.2	Require areas of known or suspected contamination to be assessed prior to reuse or redevelopment. Plan for reuse of contaminated areas in a manner that is compatible with the nature of the contamination and subsequent remediation efforts.	A Phase I ESA was prepared for the project (Appendix I). The project site was not listed on any list of hazardous materials sites. The Phase I concluded there is a low likelihood that recognized environmental conditions are present at the project site as a result of the current or historical land uses or from a known and reported off-site source. The project would not develop an area of known or suspected contamination. The proposed project is consistent with this policy.
Goal S-4, Policy S-4.3	Require that land uses using hazardous materials be located and designed to ensure sensitive uses, such as schools, hospitals, day care centers, and residential neighborhoods, are protected.	The proposed project is not anticipated to generate, release, or use large amounts of hazardous materials. During operation, the only hazardous materials anticipated for transport, use, or disposal would be routinely used household products. Household hazardous waste programs are in place, which address the use, handling, and disposal of these items. The proposed project is not anticipated to

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
		impact any sensitive uses in the project vicinity. The proposed project is consistent with this policy.
Goal S-4, Policy S-4.4	Avoid locating sensitive uses near established hazardous materials users or industrial areas where incompatibilities would result, except in cases where appropriate safeguards have been developed and implemented.	A Phase I ESA was prepared for the proposed project site (Appendix I). The project site was not listed on any list of hazardous materials sites. The Phase I ESA concluded that there is a low likelihood that recognized environmental conditions are present at the project site as a result of the current or historical land uses or from a known and reported off-site source. The proposed project would not place sensitive uses near any known hazardous materials users or industrial areas. The proposed project is consistent with this policy.
Goal S-5	Establish and maintain an effective emergency response program to respond to disasters and maintain continuity-of-life support functions during an emergency.	The San Marcos Emergency Operations Plan identifies several main thoroughfares, including Las Posas Road, as primary evacuation corridors in an emergency. San Marcos is also included in the San Diego County Multi-Jurisdictional Hazard Mitigation Plan, which identifies risks posed by natural and human-caused disasters. The project provides for two driveways and one emergency-only access route. According to Section 3.8 (Hazards and Hazardous Materials), the project would not impact any roadway or staging areas identified in any emergency planning documents. The project is consistent with this goal.
Goal S-5, Policy S-5.3	Develop, implement, and maintain an effective evacuation program for areas of risk in the event of a disaster.	The San Marcos Emergency Operations Plan identifies several main thoroughfares as primary evacuation corridors in an emergency. The project provides two driveways and one emergency access routes are provided on the project site. According to Section 3.8 (Hazards and Hazardous Materials), the project would not impact any roadway or staging areas identified in any emergency planning documents. The project is consistent with this policy.
Goal S-6	Provide neighborhood safety through effective law enforcement.	Current staff levels are adequate to meet current law enforcement demand; however, development of the proposed project would increase this demand. To supplement police protection services, the developer would contribute to CFD 98-01 Improvement Area #1. The project is consistent with this goal.
Goal S-6, Policy S-6.1	Continue to maintain demand-based law enforcement service levels to reduce the risk of criminal activity.	Current staff levels are adequate to meet current law enforcement demand; however, development of the proposed project would increase this demand. To supplement police protection services, the developer would contribute to CFD 98-01 Improvement Area #1. The project is consistent with this policy.

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
Goal S-6, Policy S-6.2	Continue public education efforts and community outreach programs to promote community involvement in crime and drug prevention.	The San Diego County Sheriff's Department provides presentations to schools through their COPPS deputies. A school resource officer who handles all crimes relating to school students is also assigned to high schools within the City of San Marcos. The project's contribution to CFD 98-01 Improvement Area #1 would aid in the continued provision of these services. The project is consistent with this policy.
Goal S-6, Policy S-6.3	Use Crime Prevention through Environmental Design (CPTED) principles in the design or redevelopment of projects and buildings.	The San Diego County Sheriff's Department provides CPTED reviews through their crime prevention unit. The project's required contribution to a CFD would aid in the continued provision of this service. The Sheriff's Department has reviewed all project plans. The project is consistent with this policy.
Goal S-7	Comply with the McClellan-Palomar Airport Land Use Compatibility Plan.	The project site is located within Review Area 2 of the McClellan-Palomar airport influence area and may be subject to annoyances associated with noise, vibration, and overflights. Consistent with the ALUCP, recordation of overflight notification documents will be required as a condition of project approval. Review Area 2 also limits heights of structures in areas of high terrain. The project site is not characterized as high terrain and proposed development would remain below surrounding prominent topographic features. The project is consistent with this goal.
Goal S-7, Policy S-7.1	Record an overflight notification document in association with the approval of any new residential land use within the AIA overflight notification area consistent with the ALUCP.	The project site is located within Review Area 2 of the McClellan-Palomar airport influence area and may be subject to annoyances associated with noise, vibration, and overflights. Consistent with the ALUCP, recordation of overflight notification documents will be required as a condition of project approval. Review Area 2 also limits heights of structures in areas of high terrain. The project site is not characterized as high terrain and proposed development would remain below surrounding prominent topographic features. The project is consistent with this goal.
Noise Element		
Goal N-1	Promote a pattern of land uses compatible with current and future noise levels.	The noise study prepared for the project (Appendix L) modeled ambient and future noise levels at the project site and compared with exterior and interior noise thresholds contained in the City's General Plan. With the incorporation of mitigation measures included in Section 3.11 (Noise), the noise levels will be consistent with General Plan's noise thresholds for residential projects.

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
		Additionally, the project is not of a type that would generate excessive noise to neighboring uses during daily operation. Noise associated with increased traffic as a result of the project would not increase levels above the significance threshold of 3 dBA CNEL. Therefore, the project is consistent with this goal.
Goal N-1, Policy N-1.1	Address the potential for excessive noise levels when making land use planning decisions in accordance with Table 7-3 Land Use Compatibility Noise Standards.	The noise study prepared for the project analyzed noise impacts to and generated from implementation of the proposed project. As summarized in Section 3.11 (Noise), incorporation of mitigation measures would ensure that noise levels on the project site and generated from implementation of the project would be below the City's threshold. The project is consistent with this policy.
Goal N-1, Policy N-1.2	Ensure that acceptable noise levels are maintained near noise-sensitive uses.	With incorporation of mitigation measures included in Section 3.11 (Noise), the project would not generate noise levels in excess of any standards. Therefore, the project would not impact nearby noise-sensitive receptors. The project is consistent with this policy.
Goal N-1, Policy N-1.3	Incorporate design features into residential land use projects that can be used to shield residents from excessive noise. Design features may include, but are not limited to: berms, walls, and sound attenuating architectural design and construction methods.	Mitigation in the form of 5- to 8-foot barriers (landscape berms and/or sound walls) would ensure noise levels at the project site meet stated thresholds as detailed in Section 3.11 (Noise). Additionally, mitigation measure MM-N-5 requires a final noise assessment be performed to identify interior noise requirements based on architectural and building plans to meet the City's established interior noise limit. The identified interior noise requirements may include conventional building construction methods and providing a closed window condition requiring a means of mechanical ventilation (e.g., air condition) for each building and upgraded windows for all sensitive rooms (e.g., bedrooms and living spaces). The project is consistent with this policy.
Goal N-1, Policy N-1.4	Require new development projects to provide barriers to reduce noise levels, or provide sufficient spatial buffers to separate excessive noise generating land uses and noise-sensitive land uses.	Mitigation in the form of 5- to 8-foot barriers (landscape (landscape berms and/or sound walls) would ensure noise levels at the project site meet stated thresholds as detailed in Section 3.11 (Noise). The project is consistent with this policy.
Goal N-1, Policy N-1.5	Require an acoustical study for proposed developments in areas where the existing and projected noise level exceeds or would	A noise study was prepared for the project (Appendix L). In summary, noise impacts would be mitigated to below a level of significance through the inclusion of 5- to 8-foot barriers (landscape berms and/or sound walls) as well as additional

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
	exceed the Normally Acceptable levels identified in Table 7-3.	noise measurements and requirements for interior spaces once residences are constructed. The project is consistent with this policy.
Goal N-2	Control transportation-related noise from traffic, rail, and aviation sources near noise sensitive land uses.	The project is anticipated to experience traffic-related noise impacts. Mitigation in the form of 5- to 8-foot barriers (landscape berms and/or sound walls) as well as additional noise measurements and requirements for interior spaces once residences are constructed would ensure noise levels at the project site meet stated thresholds. The project is consistent with this goal.
Goal N-2, Policy N-2.1	Encourage only noise-compatible land uses along existing and future roadways, highways, and freeways.	The project is anticipated to experience traffic-related noise impacts. Mitigation in the form of 5- to 8-foot barriers (landscape berms and/or sound walls) as well as additional noise measurements and requirements for interior spaces once residences are constructed would ensure noise levels at the project site meet stated thresholds. The project is consistent with this goal.
Goal N-2, Policy N-2.2	Promote coordinated site planning and traffic control measures that reduce traffic noise on noise-sensitive land uses.	The project is anticipated to experience traffic-related noise impacts. Mitigation in the form of 5- to 8-foot barriers (landscape berms and/or sound walls) as well as additional noise measurements and requirements for interior spaces once residences are constructed would ensure noise levels at the project site meet stated thresholds. The project is consistent with this goal.
Goal N-2, Policy N-2.3	Advocate the use of alternative transportation modes such as walking, bicycling, mass transit, and non-combustible engine vehicles to reduce traffic noise.	The project's internal pedestrian circulation network would connect to the existing sidewalk and bicycle facilities along the project frontage on E. Barham Dr. The closest bus stops are 0.7 mile from the project site and would not be impacted by the project. The project is consistent with this goal.
Goal N-3	Control non-transportation-related noise from commercial, industrial, construction, and other sources on noise sensitive land uses.	The nearest noise-sensitive land uses are located approximately 200 feet from the project site. As analyzed in Section 3.11 Noise, in general construction activities are modeled to comply with applicable noise limits. However, noise levels resulting from rock crushing operations and potentially from a rock drill depending on staging location, would exceed City standards. Implementation of MM-N-1 and MM-N-2 would ensure compliance during rock drilling and crushing activities. Additional mitigation or modified construction activity may occur. Therefore, the project is consistent with this goal.
Goal N-3, Policy N-3.1	When adjacent to noise sensitive receptors, require developers and contractors to	The nearest noise-sensitive land uses are located approximately 200 feet from the project site. As analyzed in Section 3.11 Noise, in general construction activities

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
	employ noise reduction techniques during construction and maintenance operations.	are modeled to comply with applicable noise limits. However, noise levels resulting from rock crushing operations and potentially from a rock drill depending on staging location, would exceed City standards. Implementation of MM-N-1 and MM-N-2 would ensure compliance during rock drilling and crushing activities. Additional mitigation or modified construction activity may occur. Therefore, the project is consistent with this goal.
Goal N-3, Policy N-3.2	Limit the hours of construction and maintenance operations located adjacent to noise-sensitive land uses.	Construction activities would comply with the City's Municipal Code requirement and any Conditional Use Permit requirements for the rock crusher to ensure impacts to nearby noise-sensitive uses are minimized. Construction activities will occur between 7:00 AM and 4:30 PM, Monday through Friday. Blasting activities would only be permitted between 9:00 AM and 4:00 PM, Monday through Friday. No construction activities will occur on weekends or holidays. project is consistent with this policy.
Housing Element		
Goal H-1	Provide a broad range of housing opportunities with emphasis on providing housing which meets the special needs of the community.	The proposed project proposes 151 multi-family residential units situated on approximately 10.6 gross acres for a maximum density of 14.3 du/acre. The Project proposes a mix of two and three-story condominiums ranging in size from a minimum of approximately 874 sq. ft. to a maximum of approximately 2,126 sq. ft. The project is consistent with this goal.
Goal H-1, Policy 1.1	Designate land for a variety of residential densities sufficient to meet the housing needs for a variety of household sizes and income levels, with higher densities being focused in the vicinity of transit stops and in proximity to significant concentrations of employment opportunities.	The proposed project proposes 151 multi-family residential units situated on approximately 10.6 gross acres for a maximum density of 14.3 du/acre. The Project proposes a mix of two and three-story condominiums ranging in size from a minimum of approximately 874 sq. ft. to a maximum of approximately 2,126 sq. ft. Primary project access is via E. Barham Drive, which connects the project site to regional transportation corridors. The project is consistent with this policy.
Goal H-2	Protect, encourage, and provide housing opportunities for persons of lower and moderate incomes.	The proposed project consists of a 151 multi-family residential development, consistent with the population growth projections. While the project is not a dedicated low-income development, the Specific Plan for the project provides for a range of two- and three-story unit plans and sizes on a variety of lot sizes, therefore

General Plan Element Goal or Policy	Goal/Policy Description	Project's Consistency with Goal/Policy
		providing housing for a range of income levels. The project is consistent with this policy.
Goal H-4, Policy 4.4	Balance the need to protect and preserve the natural environment with the need to provide additional housing and employment opportunities.	The project balances the provision of housing with the preservation of open space. The project will develop 151 single family residences on 10.6 acres and provides approximately 5.6 acres of common open space. Additionally, Section 4.0 (Alternatives) of the EIR provides a range of alternative development scenarios, including a no development alternative, considered for the project site.

3.11 Noise

Introduction

This section addresses the potential noise effects resulting from the construction of the project and analyzes the noise compatibility of the project site with surrounding land uses. The analysis is based on the following report, which is included as **Appendix L** of the Environmental Impact Report (EIR)[13]:

- *Noise Assessment,* East Barham Residential Development Project, City of San Marcos, prepared by LDN Consulting (May 2021).

In the Initial Study prepared for the project (**Appendix B.1**), the proposed project was determined to have no impact resulting from excessive noise levels from a private airstrip, as the project site is not located within the vicinity of a private airstrip. Therefore, this issue is not discussed further in this section. Section 5.6, Environmental Effects Found Not to Be Significant – Noise of the EIR provides additional information on this topic.

Table 3.11-1 summarizes the project- and cumulative-level noise impacts, by threshold.

Table 3.11-1. Noise Summary of Impacts

Threshold of Significance	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
#1 – Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excel of standards established in the location general plan or noise ordinance, or applicable standards of other agencies.	Potentially Significant	Less than Significant	Mitigated to Less Than Significant
#2 - Generation of excessive groundborne vibration or groundborne noise levels.	Potentially Significant	Less than Significant	Mitigated to Less Than Significant

3.11.1 Existing Conditions

This section provides background on noise analysis and a description of the existing noise environment on the project site and surrounding area and details the results of the ambient noise monitoring conducted by LDN Consulting in 2021.

13 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.

Background

Noise

Noise is generally defined as "unwanted sound" that interferes with normal activities. Excessive levels of noise can cause hearing loss, although the principal human response to environmental noise is annoyance. Noise is measured on a logarithmic scale of sound pressure level known as decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise sources by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only frequencies audible to the human ear. Equivalent sound level (Leq) is the noise metric used to collect short-term noise level measurement samples. It represents a steady state sound level containing the same total energy as a time varying signal over a given sample period, with Lmax and Lmin as the maximum and minimum, respectively. Community receptors are more sensitive to unwanted noise intrusion during the evening and at night. State law requires that, for some planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour A-weighted average noise descriptor called the Community Noise Equivalent Level (CNEL). In general, a change of 10 dBA is perceived as twice as loud (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear), a 5 dBA change in community noise levels is clearly noticeable, and a 3 dBA change is the smallest increment that is perceivable by most people. Changes of 1 to 2 dBA are not usually detectable by the human ear.

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a single point source, such as a piece of mechanical equipment, the sound level normally decreases by about 6 dBA for each doubling of distance from the source. Sound that originates from a linear, or "line" source, such as a heavily traveled traffic corridor, attenuates by approximately 3 dBA per doubling of distance, provided that the surrounding site conditions lack ground effects or obstacles that either scatter or reflect noise.

Surrounding site conditions, meteorological conditions, and the presence of manmade obstacles such as buildings and barriers may also reduce noise at the location of a receiver. For example, vegetation and loose soils may either absorb or scatter the sound from roadways, yielding sound attenuation rates in environments with these major ground effects that are as high as 4.5 dBA for each doubling of distance (compared to 3 dBA without major ground effects). In addition, barriers between a noise source and a receiver can substantially reduce noise levels at the receiver. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction. Taller barriers will provide increased noise reduction.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Human response to vibration is best approximated by the vibration velocity level.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be perceived by building occupants as perceptible vibration known as "structureborne/groundborne" vibration. Vibration in buildings is typically perceived as rattling of windows or items on shelves or the motion of building surfaces. The vibration of building surfaces can also be radiated as sound and heard as a low-frequency rumbling noise, known as groundborne noise. Although the perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient

magnitude to cause even minor cosmetic damage to buildings unless the receptors are in proximity to heavy equipment.

Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to rapidly decrease with distance away from the source. Soil properties also affect the propagation of vibration. Man-made vibration issues are, therefore, usually confined to short distances from the source (i.e., 50 feet or less).

Vibration amplitudes are usually described in terms of peak levels, as in peak particle velocity (PPV) in inches/second that correlates best with human perception. The particle velocity is the velocity of the soil particles resulting from a disturbance. Agencies such as California Department of Transportation (Caltrans) use the PPV descriptor because it correlates well with damage or complaints. Caltrans estimates that the threshold of perception is approximately 0.006 inches/second PPV and the level at which continuous vibration begins to annoy people is approximately 0.010 inches/second PPV (Caltrans 2020).

Existing Noise Environment

The project site is currently vacant, with areas disturbed from previous agricultural uses. The project site does not currently contain any sources of noise or vibration generation. The project vicinity is developed primarily with residential uses. To the east of the project is the Mira Lago residential development and further east is a mobile home park. To the southeast is the Williamsburg residential development. West of the project site is Grace Church, which includes preschool and daycare uses, and the Barham Park & Ride. Southwest of the project site is residential development associated with the Walnut Hills II Specific Plan. E. Barham Drive is to the north and then State Route 78 (SR-78) and existing open space is to the south. Sources of noise in the surrounding area primarily include traffic from E. Barham Drive and SR-78.

Existing ambient noise measurements were collected by LDN Consulting in September 2020 near the northwestern portion of the project site along E. Barham Drive. Sound level meters mounted to tripods approximately five feet above the ground were used and measured sound for a period of 15 minutes hours. The monitoring location is shown in **Figure 3.11-1**.

The results of the noise level measurements are presented in **Table 3.11-2.** The measurements were taken on site to establish a baseline of the vehicle noise from SR-78 and E. Barham Drive. The measurements were free of obstruction and had a direct line of sight to the roadways. As shown in Table 3.11-2, the overall sound level was found to be 69.0 dBA Leq, with a maximum of 79 dBA.

Table 3.11-2. Measured Ambient Noise Levels

Measurement Identification	Description	Date/Time	Noise Levels (dBA Leq)					
			Leq	Lmax	Lmin	L10	L50	L90
ML 1	E. Barham Drive	September 25, 2020 2:00PM to 2:15 PM	69.0	79.0	61.9	71.4	67.3	63.7

Source: LDN Consulting 2021c

3.11.2 Regulatory Setting

The following section provides a general description of the applicable regulatory requirements pertaining to noise, including federal, state and local guidelines.

Federal

Federal Bodies

Title 49 Chapter 65 of the United States Code of Federal Regulations (CFR) provides for the regulation of noise to protect the public health, safety, and welfare. The Federal Highway Administration (FHWA); Federal Rail Administration (FRA) and Federal Transit Administration (FTA); and the Federal Aviation Administration (FAA), respectively, regulate roadway, rail, and aircraft.

Vibration and Groundborne Noise Impact Regulations

Publications of the FTA and Caltrans are two of the seminal works for the analysis of groundborne noise and vibration relating to transportation and construction-induced vibration. While the project is not subject to FTA or Caltrans regulations, these guidelines serve as a useful tool to evaluate vibration impacts. Caltrans guidelines recommend that a standard of 0.2 in/sec peak particle velocity (PPV) not be exceeded for the protection of normal residential buildings, and that 0.08 in/sec PPV not be exceeded for the protection of old or historically significant structures. With respect to human response within residential uses (i.e., annoyance, sleep disruption), FTA recommends a maximum acceptable vibration standard of 80 vibration velocity (VdB).

State

State noise standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation. State regulatory guidelines governing noise levels generated by individual motor vehicles and guidelines governing occupational noise control are not applicable to planning efforts nor are these areas typically subject to California Environmental Quality Act (CEQA) analysis.

Office of Planning and Research General Plan Guidelines

The State of California General Plan Guidelines, published by the state Governor's Office of Planning and Research (OPR), provides guidance for the acceptability of specific land use types within areas of specific noise exposure. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. General Plan guidelines are advisory in nature. Local jurisdictions, including San Marcos, have the responsibility to set specific noise standards based on local conditions.

State of California Code of Regulations Title 24

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL

(or LDN) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or LDN) of at least 45 dBA [California's Title 24 Noise Standards, Chap. 2-35].

Local

City of San Marcos General Plan

The following are applicable goals and policies from the City of San Marcos General Plan, Noise Element:

- Goal N-1: Promote a pattern of land uses compatible with current and future noise levels.
    - Policy N-1.1: Address the potential for excessive noise levels when making land use planning decisions in accordance with Table 7-3 Land Use Compatibility Noise Standards.
    - Policy N-1.2: Ensure that acceptable noise levels are maintained near noise-sensitive uses.
    - Policy N-1.3: Incorporate design features into residential land use projects that can be used to shield residents from excessive noise. Design features may include, but are not limited to: berms, walls, and sound attenuating architectural design and construction methods.
    - Policy N-1.4: Require new development projects to provide barriers to reduce noise levels, or provide sufficient spatial buffers to separate excessive noise generating land uses and noise-sensitive land uses.
    - Policy N-1.5: Require an acoustical study for proposed developments in areas where the existing and projected noise level exceeds or would exceed the Normally Acceptable levels identified in Table 7-3.
- Goal N-2: Control transportation-related noise from traffic, rail, and aviation sources near noise sensitive land uses.
    - Policy N-2.1: Encourage only noise-compatible land uses along existing and future roadways, highways, and freeways.
    - Policy N-2.2: Promote coordinated site planning and traffic control measures that reduce traffic noise on noise-sensitive land uses.
    - Policy N-2.3: Advocate the use of alternative transportation modes such as walking, bicycling, mass transit, and non-combustible engine vehicles to reduce traffic noise.
- Goal N-3: Control non-transportation-related noise from commercial, industrial, construction, and other sources on noise sensitive land uses.
    - Policy N-3.1: When adjacent to noise sensitive receptors, require developers and contractors to employ noise reduction techniques during construction and maintenance operations.
    - Policy N-3.2: Limit the hours of construction and maintenance operations located adjacent to noise-sensitive land uses.

The following is an applicable goal and policy from the City of San Marcos General Plan, Safety Element:

- Goal S-7: Comply with the McClellan-Palomar Airport Land Use Compatibility Plan.
    - Policy S-7.1: Record an overflight notification document in association with the approval of any new residential land use within the AIA overflight notification area consistent with the ALUCP.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies.

City of San Marcos Municipal Code

Chapter 10.24 (Noise)

Chapter 10.24 of the San Marcos Municipal Code prohibits loud, annoying, or unnecessary noises. However, the Noise Ordinance does not specifically provide quantified property line noise level limits. Section 10.24.020 provides definitions for and examples of prohibited noise sources. Included in the list of prohibited noise sources is demolition and building construction activities that occur Monday through Friday before 7:00 AM and after 6:00 PM or on Saturdays before 8:00 AM or after 5:00 PM. The noise ordinance does not include a quantified noise level limit for construction noise. Section 10.24.030 describes the standards for how sound is assessed. Commonly, the City has utilized the County of San Diego's Noise Ordinance noise limit of 75 dBA for construction activities.

Section 17.32.180 (Grading Operation Restrictions)

City of San Marcos Municipal Code Section17.32.180 addresses the time limits that apply to grading, extraction, and blasting between 7:00 AM and 4:30 PM Monday through Friday. Grading, extraction, or related earth moving is not allowed in the City on the weekends or holidays. The Municipal Code does not set noise limits on construction activities. Commonly, the City has utilized the County of San Diego's Noise Ordinance noise limit of 75 dBA for construction activities.

The Noise Element of the County of San Diego General Plan establishes limitations on sound levels to be received by various land uses. New development may cause an existing noise sensitive land use (NSLU) to be affected by noise caused by the new development, or it may create or locate a NSLU in such a place that it is affected by noise. The Noise Element identifies airports and traffic on public roadways as the major sources of noise. The County Noise Element establishes the exterior noise level standards and provides interior standards and definitions. If the exterior noise level would exceed 75 dBA CNEL, new development would not be approved.

Section 17.60 (Blasting Operations)

Section 17.60 of the Municipal Code provides local control of blasting operations complementary to the Uniform Fire Code. The particular purpose is to define hours of operation and notification and inspection process to protect nearby residents and residences from damage or injury due to blasting. Section 17.60.060 identifies specific blasting procedures that are applicable to the project. These requirements include:

- The blaster shall notify the Building Division and the Fire Department no less than 12 hours prior to any blasting at the location or locations of the blasting, number of blasts or explosions, type of explosives to be used, and scheduled time blasting will begin, and name of contractor and Certificate of Authorization date.

- The general contractor or property owner/developer shall give reasonable notice in writing at the time of issuance of a building permit, grading permit or encroachment license to all residences or businesses within 600 feet of any potential blast location. The notice shall be in a form approved by the Building Official. Any resident or business receiving such notice may request of the Building Official. that a notice of impending blasting be given by the blaster at the time of the 12-hour advance notice given to the Building Official. The general contractor or property owner/developer shall make all reasonable efforts to contact any and all parties requesting the second notice.

- The blaster shall file a written certification with the Building Official. certifying that the general notice required by Section 17.60.060(b) has been given. The certificate shall include addresses and date(s) of notification. A copy shall be retained on file at the Building Division.

- Inspections of all structures within 300 feet of the blast site shall be made before blasting operations. The persons inspecting shall obtain the permission of the building owner to conduct an inspection. The inspections shall be done by a registered structural engineer employed by the blaster or project contractor. The inspection shall be only for the purpose of determining the existence of any visible or reasonably recognizable pre-existing defects or damages in any structure. Inspection refusal shall be at the discretion of the property owner.

- The structural engineer shall file a written report identifying all findings of the inspections with the Building Division. The report shall be signed by the engineer and countersigned by the contractor/developer or his agent receiving the report.

- The blaster shall confirm with the Building Division and Fire Department scheduled blasts no less than one hour prior to the scheduled blast.

- The blaster shall permit Fire Department personnel to inspect the blast site and blast materials or explosives at any reasonable time prior to any blasting. The general contractor and blaster shall request and arrange 12 hours in advance of the blast to have a Fire Department official present during the blast. The Fire Department shall, whenever possible and practicable, assign a Department member to be present to observe the blast.

- Blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday, Monday through Friday, exclusive of City recognized holidays unless special circumstances warrant another time or day and special approval is granted by the Building Official and Fire Chief.

- Possession, storage, transportation and use of explosives and blasting agents shall be in accordance with the Uniform Fire Code as adopted by Ordinance of the San Marcos Fire Protection District.

Chapter 20.300 (Zoning Ordinance)

The provisions of Title 20 of the San Marcos Municipal Code are referred to as the Zoning Ordinance. Section 20.300, Performance Standards, within the Zoning Ordinance identifies noise regulations to prohibit unnecessary, excessive, and annoying noises. Table 20.300-4, included below as **Table 3.11-3** identifies allowable noise levels (dBA) by zone type. For multifamily residential the allowable noise level, as measured at the property line is 65 dBA from 7:00 AM to 10:00 PM. and 55 dBA from 10:00 PM to 7:00 AM. Increases in allowable noise levels listed in Table 3.11-4 may be permitted in accordance with the standards outlined in **Table 3.11-4.**

1. Noise shall be measured with a sound-level meter that meets the standards of the American National Standards Institute (ANSI) (Section S1.4-1979, Type 1 or Type 2). Noise levels shall be measured in decibels at the property line of the receptor property, and at least five (5) feet above the ground and ten (10) feet from the nearest structure or wall. The unit of measure shall be designated as an A-weighted decibel (dBA) Leq standard. A calibration check shall be made of the instrument at the time any noise measurement is made.

2. No person shall create or allow the creation of exterior noise that causes the noise level to exceed the noise standards established by Table 20.300-4 (shown as Table 3.11-3). Increases in allowable noise levels listed in Table 20.300-4 (shown as Table 3.11-4) may be permitted in accordance with the standards outlined in Table 20.300- 5 (shown as Table 3.11-4).

3. No person shall create nor allow the creation of noise that causes the interior noise level when measured within a dwelling unit to exceed forty-five (45) dBA at any time, except as permitted by Table 20.300-6 (shown as **Table 3.11-5**).

4. Use of compressors or other equipment, including vents, ducts, and conduits, but excluding window or wall-mounted air conditioners, that are located outside of the exterior walls of any building, shall be enclosed within a permanent, noncombustible, view-obscuring enclosure to ensure that the equipment does not emit noise in excess of the ANSI standards.

Table 3.11-3. Exterior Noise Standards by Zone

Zone	Allowable Noise Level (dBA Leq) Measured from the Property Line
Single-Family Residential (A, R-1, R-2)[1,2]	
7:00 AM and 10:00 PM (daytime)	60
10:00 PM and 7:00 AM (overnight)	50
Multifamily Residential (R-3) (1)(2)	
7:00 AM and 10:00 PM (daytime)	65
10:00 PM and 7:00 AM (overnight)	55
Commercial (C, O-P, SR)(3)	
7:00 AM and 10:00 PM (daytime)	65
10:00 PM and 7:00 AM (overnight)	55
Industrial	
7:00 AM and 10:00 PM (daytime)	65
10:00 PM and 7:00 AM (overnight)	60

Source: City of San Marcos 2017 (Table 20.300-4)

Notes: (1) For single-family detached dwelling units, the "exterior noise level" is defined as the noise level measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum net lot area: (i) for lots less than 4,000 square feet in area, the exterior area shall include 400 square feet, (ii) for lots between 4,000 square feet to 10 acres in

area, the exterior area shall include 10 percent of the lot area; (iii) for lots over 10 acres in area, the exterior area shall include 1 acre.
(2) For all other residential land uses, "exterior noise level" is defined as noise measured at exterior areas which are provided for private or group usable open space purposes. "Private Usable Open Space" is defined as usable open space intended for use of occupants of one dwelling unit, normally including yards, decks, and balconies. When the noise limit for Private Usable Open Space cannot be met, then a Group Usable Open Space that meets the exterior noise level standard shall be provided. "Group Usable Open Space" is defined as usable open space intended for common use by occupants of a development, either privately owned and maintained or dedicated to a public agency, normally including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and equestrian and bicycle trails, but not including off-street parking and loading areas or driveways.
(3) For non-residential noise sensitive land uses, exterior noise level is defined as noise measured at the exterior area provided for public use.

Table 3.11-4. Permitted Increase in Noise Levels

Permitted Increase (dBA)	Duration (cumulative minutes per hour)
5	15
10	5
15	1
20	Less than 1 minute

Source: City of San Marcos 2017 (Table 20.300-5)

Table 3.11-5. Permitted Increase in Interior Noise Levels

Permitted Increase (dBA)	Duration (cumulative minutes per hour)
5	1
10	Less than 1 minute

Source: City of San Marcos 2017 (Table 20.300-6)

3.11.3 Thresholds of Significance

According to Appendix G of the State *California Environmental Quality Act (CEQA) Guidelines*, noise impacts are considered potentially significant if they cause:

- **Threshold #1:** Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excel of standards established in the location general plan or noise ordinance, or applicable standards of other agencies.

- **Threshold #2:** Generation of excessive groundborne vibration or groundborne noise levels.

The term “substantial increase” is not defined by any responsible agency. Under ambient conditions, people generally do not perceive that noise has clearly changed until there is a 3 dBA difference. Therefore, a threshold of 3 dBA is commonly used to define “substantial increase,” as it is noticeable to humans under typical ambient conditions. For this analysis, a direct roadway noise impact would be

considered significant if the project increases noise levels for a noise sensitive land use by 3 dBA CNEL and increases noise levels above an unacceptable noise level per the City's General Plan in the area adjacent to the roadway segment.

As identified above, impacts related to being in the vicinity of a private airstrip or airport land use plan are not discussed in this section. Section 5.6, Environmental Effects Found Not to Be Significant – Noise, provides additional information on this topic.

San Marcos Noise Impact Thresholds

Noise Due to Construction Sources

The City of San Marcos Municipal Code does not set noise limits on construction activities. Commonly, the City utilizes the County of San Diego's Noise Ordinance Section 36.410 noise limit of 75 dBA at any existing sensitive receptor for construction activities. The Municipal Code Section 17.32.180 does address and limit grading and extraction activities between the hours of 7:00 AM and 4:30 PM, Monday through Friday, and no grading or earth moving activities are allowed on the weekends or holidays. Commonly, the City has utilized the County of San Diego's Noise Ordinance noise limit of 75 dBA for other projects.

City of San Marcos Rock Crushing Limits

The City of San Marcos requires that noise levels from a proposed temporary rock crusher maintain noise levels of 60 dBA or less at surrounding single family residences, 65 dBA at multifamily uses, and 70 dBA at all commercial uses, which include churches and preschools. The proposed temporary rock crusher would require issuance of a Conditional Use Permit, which can also require more restrictive hours of operation for rock crushing than for general construction activity. The project will be conditioned to limit rock crushing activities between the hours of 9:00 AM and 4:00 PM, Monday through Friday.

City of San Marcos Blasting Standards

The City of San Marcos Municipal Code, Title 17 states that all blasting operations within the City of San Marcos are prohibited unless a Certificate of Authorization is first obtained from the San Marcos Building Official and an Operations Permit issued by the Fire Chief. Written notice to all residences and businesses within 600 feet of any potential blast location is required, and an inspection of all structures within 300 feet of the blast site by a structural engineer shall occur to determine any existing defects or damages. Consistent with Municipal Code Section 17.60.060, blasting is permitted only between 9:00 AM and 4:00 PM, Monday through Friday, holidays excepted.

Noise Due to Transportation Sources

To control transportation-related noise sources such as arterial roads, freeways, airports, and railroads, the City of San Marcos has established guidelines for acceptable community noise levels in the Noise Element of the General Plan. For noise sensitive rural and single-family residential uses, schools, libraries, parks, and recreational areas, the City Noise Element requires an exterior noise level of less than 60 dBA CNEL for outdoor usable areas, such as yard and patio areas. For multi-family developments, the standard is 65 dBA CNEL. A standard of 70 dBA CNEL is typically applied to commercial uses. The City has also established an interior noise limit of 45 dBA CNEL for all residential uses. Noise sensitive indoor spaces are subject to compliance with CCR Title 24 noise insulation standards demonstrating a 45 dBA CNEL interior noise level with all windows of the structure closed.

City of San Marcos Ground Vibration Standards

The City of San Marcos does not have adopted vibration criteria. The FTA provides criteria for acceptable levels of groundborne vibration for various types of buildings that are sensitive to vibration. For purposes of identifying potential project-related vibration impacts resulting from the proposed project, the FTA criteria will be used. **Table 3.11-6** shows the FTA groundborne vibration and noise impact criteria for human annoyance.

Table 3.11-6. Groundborne Vibration and Noise Impact Criteria (Human Annoyance)

	Groundborne Vibration Impact Levels (VdB re 1 microinch/second)			Groundborne Noise Impact Levels (dB re 20 micropascals)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events	Occasional Events	Infrequent Events
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]	N/A[4]	N/A[4]	N/A[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, September 2018.

Notes: (1) Frequent Events" are defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

(2) Occasional Events" are defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

(3) Infrequent Events" are defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

(4) This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

(5) Vibration-sensitive equipment is not sensitive to groundborne noise.

In addition to the vibration annoyance standards presented in Table 3.11-6, the FTA also applies the following standards for construction vibration damage. As shown in Table 3.11-7, structural damage is possible for typical residential construction when the PPV exceeds 0.2 inch per second (in/sec). This criterion is the threshold at which there is a risk of damage to normal dwellings.

Table 3.11-7. Groundborne Vibration Impact Criteria (Structural Damage)

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

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, September 2018.
Note: RMS = Root Mean Square (RMS) velocity calculated from vibration level (VdB) using the reference of one microinch/second.

3.11.4 Project Impact Analysis

Threshold #1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excel of standards established in the location general plan or noise ordinance, or applicable standards of other agencies.

Construction Noise

This section addresses the construction noise impacts associated with the project to determine if they would result in the exposure of persons to or generation of noise level in excess of applicable noise standards. Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders and scrapers can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours. As stated above, the City of San Marcos Municipal Code does not set noise limits on construction activities. Commonly, the City utilizes the County of San Diego's Noise Ordinance Section 36.410 noise limit of 75 dBA at any existing sensitive receptor for construction activities.

The U.S. Environmental Protection Agency (USEPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor and reduced to 63 dBA at 200 feet from the source.

LDN used a point-source noise prediction model to calculate the expected construction noise impacts (LDN 2021c). The essential model input data for these performance equations include the source levels of each type of equipment, relative source to receiver horizontal and vertical separations, the amount of time the equipment is operating in a given day, also referred to as the duty-cycle and any transmission loss from topography or barriers.

The equipment needed for the proposed project will consist of a large bulldozer, a water truck, a medium sized front loader, a medium sized crawler type excavator, a large highway haul truck, a small to medium sized road grader, and a medium sized rubber tire backhoe. Based on the EPA noise emissions, empirical data and the amount of equipment needed, worst case noise levels from the

construction equipment for site preparation would occur during the grading operations. Additionally, the project will require a rock crusher and may require blasting, which would also require the need for a rock drill. This equipment is utilized separately from the grading equipment and is discussed in more detail below.

Grading

The grading activities will consist of the preparation of internal roadways, parking and the finished pads. The equipment will be spread out over the project site from distances near the occupied property lines to distances of 500 feet or more away. Based upon the site plan, the majority of the grading operations, on average, will occur more than 200 feet from the property lines. This means that most of the time the average distance from all the equipment to the nearest property line is 200 feet.

As shown in **Table 3.11-8,** cumulative noise levels would be 82.4 dBA at 50 feet away. An average distance of 200 feet from the construction activities to the nearest property line would result in a noise attenuation of 12.0 dBA without shielding, resulting in 70.4 dBA. Therefore, the noise levels from construction equipment will comply with the 75 dBA Leq standard at the property lines. Therefore, a **less than significant impact** is anticipated during grading and no mitigation is required. Additionally, all equipment should be properly fitted with mufflers and all staging and maintenance should be conducted as far away for the existing residence as possible.

Table 3.11-8. Construction Noise Levels

Equipment Type	Quantity Used	Source @ 50 Feet (dBA)	Cumulative Noise Level @ 50 Feet (dBA)
Tractor/Backhoe	1	72	72.0
Dozer D9 Cat	1	74	74.0
Loader/Grader	1	73	73.0
Excavator	1	72	72.0
Water Truck	1	70	70.0
Haul Truck	1	75	75.0
Paver/Blade	1	75	75.0
		Cumulative Level	82.4
		Distance to Sensitive Uses	200
		Noise Reduction due to Distance	-12.0
		Property Line Noise Level	**70.4**

Source: LDN Consulting 2021c

Blasting and Rock Drilling

Areas of the project site that require deeper cuts and where the native material is not easily rippable (graded) may require blasting and the use of a rock drill. The rock drill would be moved around the site on an as needed basis dependent upon the site characteristics. The use of a rock drill would occur independently of all other proposed equipment. The drilling and blasting activities would occur in one area and then the grading equipment would relocate or remove the debris. To determine the worst-case noise levels from the drilling operations, the noise level from the rock drill is assumed to be 85.0 dBA at 50 feet. Utilizing a 6 dBA reduction per doubling of distance, at an average distance of 160 feet from any property line, the noise levels will comply with the 75 dBA standard as shown in **Table 3.11-9.**

Table 3.11-9. Construction Noise Levels

Construction Equipment	Quantity	Source @ 50 Feet (dBA)	Duty Cycle (Hours/Day)	Noise Level @ 50 Feet (dBA)
Rock Drill	1	85	8	85.0
Noise Reduction Needed to Comply				-10.0
Distance Required to Reduce Noise Levels				160
Nearest Property Line Noise Level				**74.9**

Source: LDN Consulting 2021c

However, in the event that a rock drill is staged within 160 feet of any occupied noise sensitive land use, noise levels would exceed the 75 dBA exterior noise threshold. This represents a **significant impact (Impact N-1)** and mitigation is required. Additionally, the project would comply with all provisions identified in the City's Municipal Code Section 17.60.06 as it relates to blasting and blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday.

- **Impact N-1** Depending on the staging location of a rock drill, noise levels may exceed the 75 dBA exterior noise threshold.

Rock Crushing

This section examines the potential noise source impacts associated with the operation of the proposed temporary rock crushing equipment. The project may utilize a Thunderbird Hazemag Impact Crushing Plant Model CP300 rock crusher, or equivalent as proposed by the applicant. City's Municipal Code limits the rock crusher to operate between the hours of 7:00 AM and 4:30 PM, Monday through Friday. Rock crushing is not allowed on weekends or holidays. According to the project applicant, rock crushing is only anticipated to occur for several weeks once the material is required. The crusher would be located at the northern grading limits of the project, adjacent to E. Barham Drive, approximately 500 feet from the nearest single-family residences to the east, 500 feet from the nearest single-family residences to the west, and 465 feet from the church and preschool to the west. Based on empirical data collected at a material processing plant in the City of Upland noise levels from a rock crusher ranged between 80-86 dBA at 45 feet (LDN 2011). A worst-case noise level of 86 dBA Leq at 45 feet was utilized for the analysis.

Although the City does not have a specific noise threshold for rock crushing in the municipal code or in the General Plan, historically the City has required that noise levels from the proposed temporary rock crusher maintain noise levels of 60 dBA or less at surrounding single-family residences, 65 dBA

at multi-family uses, and 70 dBA at all commercial uses. The City updated the municipal code with the approval to amend Chapter 20 in 2017. Specifically, the amendment established under Chapter 20.300.070 (Performance Standards) regulating exterior noise standards required that noise levels from the sources are maintained at 60 dBA or less at surrounding single-family residences, and 65 dBA at multi-family and all commercial uses. Although rock crushing activities are part of the construction phase of project development the City has applied these standards to rock crushers.

Table 3.11-10 presents the anticipated rock crushing noise levels. As shown in Table 3.11-10, distance alone is not adequate enough to achieve the City's 60 dBA Leq standard at the single-family residences or the City's 65 dBA Leq standard at the Church and preschool. Given this, the noise levels are anticipated to be above the City's 60 dBA Leq standard at the residences and 65 dBA Leq standard at the Church and preschool, for the rock crusher. This represents a **significant impact (Impact N-2)** and mitigation is required during rock crushing activities. As can be seen in Table 3.11-10, a five-decibel reduction is needed to reduce the noise level to 60 dBA Leq at the residences and a 0.7 decibel reduction is needed at the church and preschool.

- **Impact N-2** Noise levels resulting from rock crushing operations would exceed the City's 60 dBA Leq standard at the single-family residences and the City's 65 dBA Leq standard at the adjacent church and preschool.

Table 3.11-10. Rock Crushing Noise Levels

Sensitive Use	Rock Crusher Noise Level @ 45 Feet (dBA Leq)	Distance to Sensitive Use (Feet)	Noise Reduction due to Distance (dBA Leq)	Noise Level @ Sensitive Uses (dBA Leq)	Noise Threshold (dBA Leq)	Reduction Needed (dBA Leq)
Single-Family Residential	86	505	-21.0	65.0	60	5.0
Church/ Preschool		465	-20.3	65.7	65	0.7

Source: LDN Consulting 2021c

Cumulative Construction Noise

Sound levels are logarithmic not linear, so adding two sources of 68 dBA plus 68 dBA is equal to 71 dBA not 136 dBA. Sound levels that are separated by more than ten decibels generally do not cumulatively add to each other. The rock crusher noise level (60.0 dBA after mitigated) and the grading noise level (74.8 dBA) are not anticipated to add to each based on the difference between the two noise levels and the separation of the equipment. Therefore, the rock crusher and grading operations cumulatively would not exceed the 75 dBA Leq standard average over 8 hours at the property lines. Additionally, the rock drill and grading equipment will be separated from each other, typically by several hundred feet and working near different property lines and are not anticipated to cumulatively increase the noise level at a specific property line.

Operational Noise

This section addresses the operational noise impacts associated with the project to determine if they would result in the exposure of persons to or generation of noise level in excess of applicable noise standards.

Future Onsite Roadway Noise

To determine the future noise environment and impact potential resulting from increased traffic associated with the proposed project, the Sound32 model was utilized. The critical model input parameters, which determine the projected vehicular traffic noise levels, include vehicle travel speeds, the percentages of automobiles, medium trucks, and heavy trucks in the roadway volume, the site conditions, and the peak hour traffic volume. The peak hour traffic volumes range between six to 12 percent of the average daily traffic (ADT) and ten percent is generally acceptable for noise modeling. **Table 3.11-11** presents the roadway parameters used in the analysis including the peak traffic volumes, vehicle speeds, and the hourly traffic flow distribution (vehicle mix). The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the Sound32 model. The Buildout conditions for E. Barham Drive include the future year 2050 traffic volume forecasts provided in traffic study prepared for the project (LLG 2021).

Table 3.11-11. Future Traffic Parameters

Roadway	Average Daily Traffic (ADT)(1)	Peak Hour Volumes(1)	Modeled Speeds (MPH)	Vehicle Mix %(2)		
				Auto	Medium Trucks	Heavy Trucks
SR-78 West	-	6,300	65	95.5	2.1	2.4
SR-78 East	-	8,400	65	95.5	2.1	2.4
E. Barham Drive	19,040	1,904	45	96	2	2

Source: LDN Consulting 2021c

1 Traffic speeds from the project traffic report prepared by LLG 2021

2 Typical city vehicle mix

The required coordinate information necessary for the Sound32 model input was taken from the conceptual site plans provided by SB&O dated 2020. The conceptual plans were used to identify the pad elevations, roadway elevations, and the relationship between the noise source(s) and the outdoor receptor areas. The modeled observer locations for the outdoor use areas are shown in **Figure 3.11-2**.

The modeling results for the ground level patios are shown in **Table 3.11-12**. As shown, ground floor noise levels would exceed the 65 dBA exterior threshold as stated in the City's General Plan Noise Element for the units at the top of slopes along E. Barham Drive facing SR-78 (Receptors 2-4, 6-7, 10-14, and 16). This represents a **significant impact (Impact N-3)** and mitigation is required.

- **Impact N-3** Noise levels at 11 receptors at the top of slopes along E. Barham Drive facing SR-78 are modeled to exceed the City's General Plan Noise Element 65 dBA exterior noise threshold.

Table 3.11-12. Future Exterior Noise Levels (Ground Level)

Receptor Number	Receptor Location	Unmitigated Ground Level Noise Levels (dBA CNEL)	Barrier Heights (Feet)	Mitigated Ground Floor Noise Levels (dBA CNEL)
1	Building 8	54	0	54
2	Building 7	**69**	**8**	64
3	Building 7	**70**	**8**	65
4	Building 7	**70**	**8**	65
5	Building 8	65	0	65
6	Building 1	**71**	**8**	64
7	Building 2	**71**	**8**	65
8	Building 2	64	0	60
9	Building 3	65	0	62
10	Building 3	**72**	**8 and 6(1)**	64
11	Building 4	**74**	**8**	64
12	Building 5	**72**	**8**	65
13	Building 6	**74**	**8**	65
14	Building 6	**69**	**8**	62
15	Rec Area 1	62	0	61
16	Rec Area 2	**68**	0	63
17	Rec Area 3	65	0	65

Source: LDN Consulting 2021c
Note: (1) See Figure 3.11-4

The modeling results for the buildout analysis are quantitatively shown in and Tables 3.11-13 and 3.11-14 for the second and third floor balconies. As shown, noise levels would exceed the 65 dBA exterior threshold at the second and third floor balconies for the units facing E. Barham Drive and SR-78 and farther back (Receptors 2-14). This represents a **significant impact (Impact N-4)** and mitigation is required.

- **Impact N-4** Noise levels at 13 receptors on second and third floor balconies facing E. Barham Drive and SR-78 are modeled to exceed the City's General Plan Noise Element 65 dBA exterior noise threshold.

Table 3.11-13. Future Exterior Noise Levels (Second Level)

Receptor Number	Receptor Location	Unmitigated Ground Level Noise Levels (dBA CNEL)	Barrier Heights (Feet)	Mitigated Ground Floor Noise Levels (dBA CNEL)
1	Building 8	56	0	56
2	Building 7	**70**	**7**	63

Receptor Number	Receptor Location	Unmitigated Ground Level Noise Levels (dBA CNEL)	Barrier Heights (Feet)	Mitigated Ground Floor Noise Levels (dBA CNEL)
3	Building 7	**71**	**7**	64
4	Building 7	**71**	**7**	63
5	Building 8	**66**	**5**	64
6	Building 1	**73**	**7**	65
7	Building 2	**74**	**7**	65
8	Building 2	**66**	**5**	61
9	Building 3	**66**	0	65
10	Building 3	**75**	**7**	64
11	Building 4	**77**	**7**	64
12	Building 5	**74**	**7**	63
13	Building 6	**77**	**7**	65
14	Building 6	**72**	**7**	65

Source: LDN Consulting 2021c

Table 3.11-14. Future Exterior Noise Levels (Third Level)

Receptor Number	Receptor Location	Unmitigated Ground Level Noise Levels (dBA CNEL)	Barrier Heights (Feet)	Mitigated Ground Floor Noise Levels (dBA CNEL)
1	Building 8	61	0	61
2	Building 7	**71**	**7**	63
3	Building 7	**72**	**7**	63
4	Building 7	**72**	**7**	63
5	Building 8	**67**	**5**	64
6	Building 1	**75**	**7**	64
7	Building 2	**76**	**7**	64
8	Building 2	**77**	**7**	64
9	Building 3	**68**	**5**	64
10	Building 3	**75**	**7**	64
11	Building 4	**77**	**7**	64
12	Building 5	**74**	**7**	63
13	Building 6	**77**	**7**	64
14	Building 6	**72**	**5**	65

Source: LDN Consulting 2021c

Onsite Rail Line Noise

The proposed project is located approximately 500 feet from the San Diego Northern Railroad consisting of SPRINTER service operated by the North County Transit District. According to the City of San Marcos General Plan Noise Element, the 65 dBA CNEL noise contour from the rail activity, with no shielding, is located 130 feet from the centerline of the railroad. Noise levels from train activity would be reduced to less than 60 dBA CNEL at the project site and would not significantly impact the noise levels at the receptors. Therefore, no impact related to rail line noise is identified.

Project Related Offsite Transportation Noise

To determine if direct or cumulative off-site noise level increases associated with the development of the proposed project would create noise impacts, the traffic volumes for the existing conditions were compared with the traffic volume increase of existing plus the proposed project. According to the project traffic study, the project is estimated to only generate 1,208 daily trips with a peak hour volume of 119 trips (LLG 2021). The existing traffic volumes on adjacent E. Barham Drive is 18,025 ADT. Typically, it requires a project to double (or add 100%) the traffic volumes to have a direct impact of 3 dBA CNEL or be a major contributor to the cumulative traffic volumes. The project will add less than a 10% increase to E. Barham Drive volumes. Therefore, no direct or cumulative impacts are anticipated. Impacts would be **less than significant**.

Threshold #2: Generation of excessive groundborne vibration or groundborne noise levels.

This section analyzes the potential for the project to expose person to or generation of excessive vibration or groundborne noise. Proposed residential uses would not be characterized as creating excessive vibration during project operation. The noise modeling is based upon project construction details and schedule provided by the project applicant.

The nearest vibration-sensitive uses to the project site are the residences located 100 feet or more from the proposed construction. The FTA has determined the vibration levels that would cause annoyance to a substantial number of people and potential damage to building structures. As presented in Table 3.11-7, the FTA criterion for infrequent vibration induced annoyance is 80 Vibration Velocity (VdB) for residential uses. As shown in Table 3.11-7, the FTA criterion for vibration induced structural damage is 0.2 in/sec PPV.

Construction Equipment

Table 3.11-15 lists the average vibration levels that would be experienced at the nearest vibration sensitive uses (residences located 100 feet or more from construction) from temporary construction activities. As shown, project-related construction activities would result in PPV levels below the FTA's criteria for vibration-induced structural damage. Therefore, construction activities would not result in vibration-induced structural damage to residential buildings near the construction areas. Additionally, construction activities would generate levels of vibration that would not exceed the FTA criteria for nuisance for nearby residential uses. Therefore, vibration impacts from construction equipment would be **less than significant**.

Table 3.11-15. Vibration Levels from Construction Activities (Residential Receptors)

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate RMS Velocity at 25 Feet (in/sec)	Approximate Velocity Level at 100 Feet (VdB)	Approximate RMS Velocity at 100 Feet (in/sec)
Small bulldozer	58	0.003	68.9	0.0111
Jackhammer	79	0.035	60.9	0.0044
Loaded trucks	86	0.076	67.9	0.0095
Large bulldozer	87	0.089	39.9	0.0004
		FTA Criteria	80	0.2
		Significant Impact?	**No**	**No**

Source: LDN Consulting 2021c
1 PPV at Distance D = PPVref x (25/D)1.5

Blasting Activities

As stated above, blasting may be required during the project grading and site preparation activities. The project would comply with all provisions identified in the City's Municipal Code Section 17.60.06 as it relates to blasting and vibration. Blasting shall only be permitted between the hours of 9:00 AM and 4:00 PM during any weekday. The project will be conditioned to these defined hours of operation and require a notification and inspection process to protect nearby residents and residences from damage or injury due to blasting. Therefore, the project would not create excessive vibration or groundborne noise and impacts would be **less than significant**.

3.11.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to noise, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative noise impacts.

As discussed above, future traffic noise levels were analyzed comparing existing traffic with existing plus proposed project traffic levels. This analysis accounts for reasonably foreseeable cumulative traffic levels in the vicinity of the project. As discussed previously, impacts would be **less than significant.**

3.11.6 Mitigation Measures

Implementation of the following mitigation measures would be required as a condition of project approval:

Rock Drilling Noise (Impact N-1)

MM-N-1 If a rock drill is proposed within 160 feet of any occupied noise sensitive land use, a noise mitigation plan based upon the location of the construction equipment, topography and construction schedule shall be prepared by an acoustical engineer. If noise levels are determined to exceed City's noise threshold of 60 dBA at any existing sensitive receptor, a mitigation plan shall be developed that may include a temporary noise barrier along any property line where the impacts could occur. A barrier ranging from 8 to 12 feet in height may be needed. The proposed noise barrier shall be of solid non-gapping material to adequately reduce construction noise levels below the noise threshold. The mitigation plan may also incorporate the usage of the equipment (amount of time used and/or the location in respect to the property line). The mitigation plan shall determine the final height and location of a temporary barrier if one is necessary. The final mitigation design shall be reviewed and approved by the Planning Division Manager.

Rock Crusher Noise (Impact N-2)

MM-N-2 To minimize exterior noise levels related to rock crusher operation during construction and to comply with the City of San Marcos noise standards limiting noise levels to 60 dBA Leq at residences and 65 dBA Leq at the nearby church and preschool, barriers shall be constructed to break the line of sight from the rock crusher to a receptor. Assuming the rock crusher is 10 feet in height, the barrier must be at least 11-12 feet in height to shield the crusher both visually and acoustically. The barrier may consist of an earthen berm, 5/8" plywood, 1-inch acoustical blankets or any combination of these materials. The barriers shall be in place prior to the commencement of rock crushing activities. The locations of crusher and placement of the required barriers are presented in Figure 3.11-3. The design of the barriers, including materials and color for any sound walls shall be subject to review and approval by the Planning Division Manager.

To ensure compliance with the City's thresholds, noise measurements of the rock crusher should be conducted to determine the hourly noise level within the first week of operation once the final crusher type and location are determined. If noise levels are found to be above the established thresholds of 60 dBA Leq at any existing single family residential use, 65 dBA Leq for any multifamily use or 65 dBA Leq at a commercial use then additional mitigation in the form of higher barriers, sound absorbing materials or operational limits on the crusher usage shall be incorporated.

Future Onsite Roadway Noise (Impact N-3 and N-4)

MM-N-3 To minimize on-site exterior ground floor noise levels and to comply with the City of San Marcos noise standards, 6-8-foot barriers shall be constructed along the units adjacent to E. Barham Drive. The barriers shall be in place prior to project occupancy and shall be constructed of a non-gapping material (i.e., of masonry, ½ inch thick glass, earthen berm or any combination of these materials). The locations of barriers are presented in Figure 3.11-4. The design of the barriers, including materials and color for any sound walls shall be subject to review and approval by the Planning Division Manager.

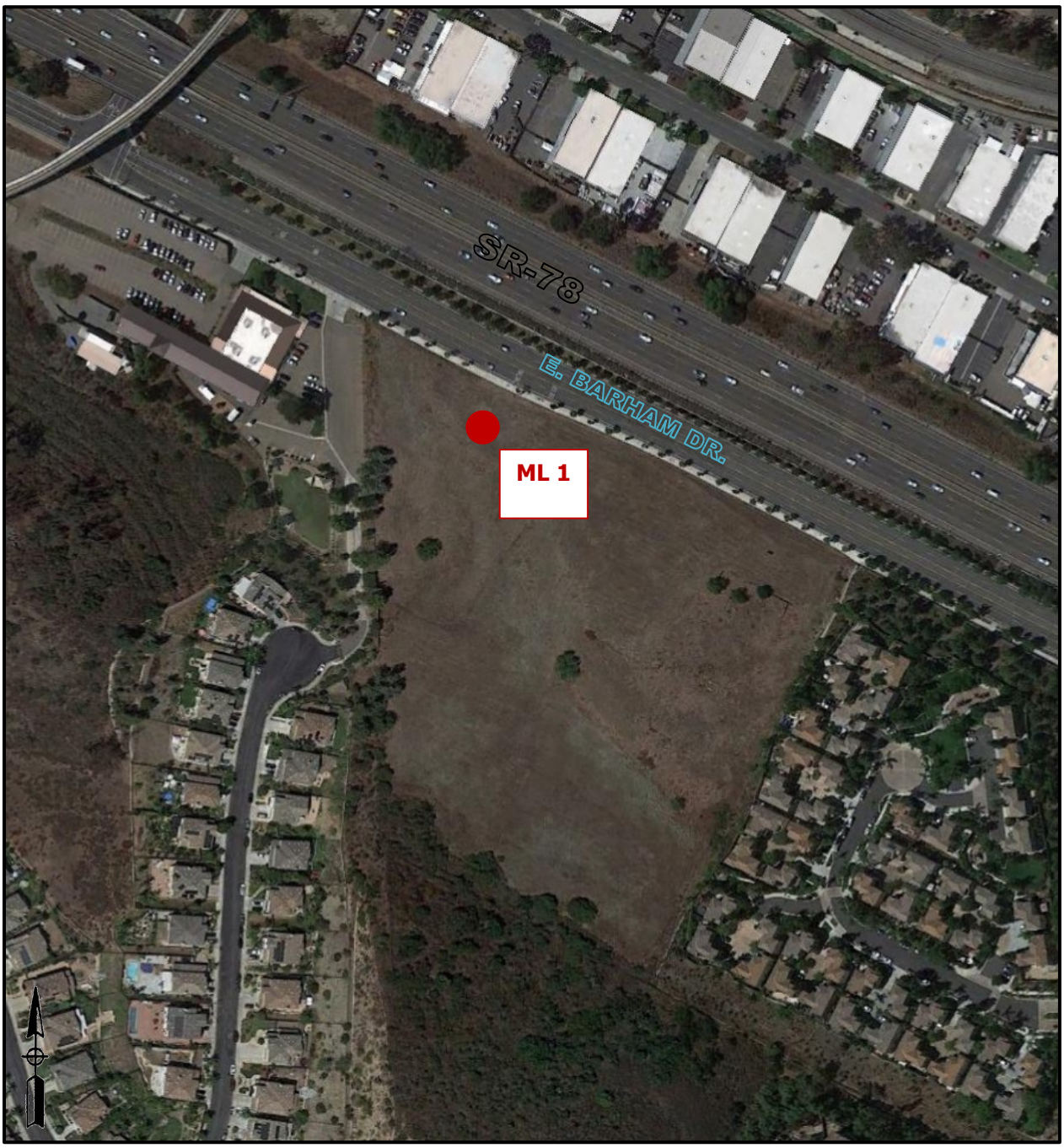
MM-N-4 To minimize on-site exterior second and third floor balcony noise levels and to comply with the City of San Marcos noise standards, open decks and balconies for the units adjacent to E. Barham Drive and additional units, as shown on Figure 3.11-5, shall require barriers to reduce sound levels. The barriers will range from 5 feet to 7 feet, as shown on Figure 3.11-5, and shall be in place prior to project occupancy and shall be constructed of a non-gapping material (i.e., masonry, 1/4 inch thick glass, or Plexiglass). The design of the barriers shall be subject to review and approval by the Planning Division Manager.

MM-N-5 To ensure compliance with the CCR Title 24 interior noise threshold of 45 dBA CNEL, a final noise assessment shall be performed prior to the issuance of building permits. This final report shall identify the interior noise requirements based on architectural and building plans to meet the City's established interior noise limit. The identified interior noise requirements, which may include conventional building construction methods and providing a closed window condition requiring a means of mechanical ventilation (e.g., air condition) for each building and upgraded windows for all sensitive rooms (e.g., bedrooms and living spaces), shall also be in place prior to occupancy of the residences adjacent to E. Barham Drive.

3.11.7 Conclusion

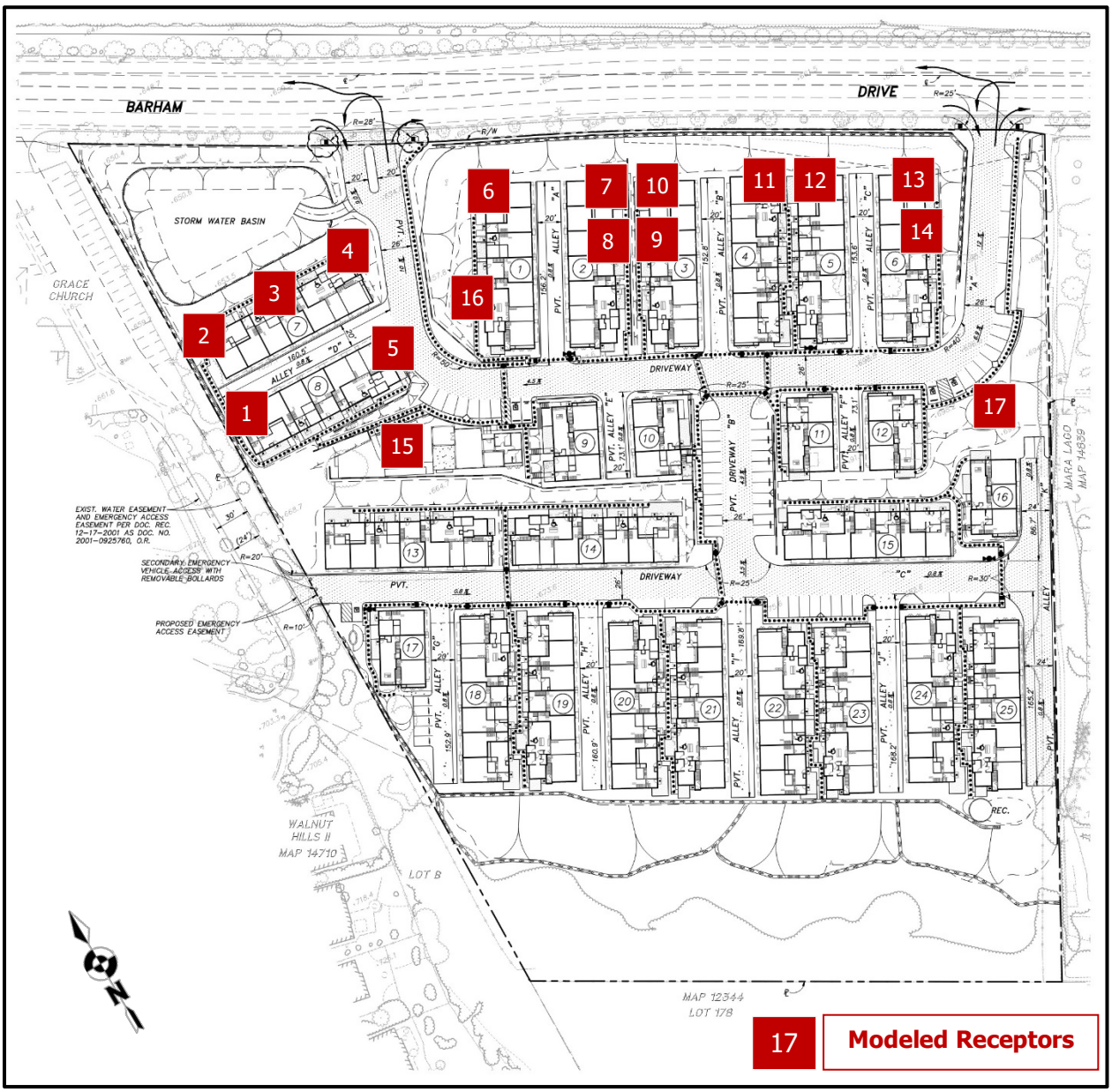
General project construction and grading would not exceed the 75dBA threshold. However, potential noise impacts could occur depending on the staging location of a rock driller and during rock crushing. Implementation of mitigation measure MM-N-1 and N-2 would reduce noise levels to below a level of significance by breaking line of sight from the noise source to ensure rock drilling and crushing operations comply with City standards. Implementation of the project would increase ambient noise levels in the project vicinity both temporarily and permanently. Operational noise impacts at the project site would exceed the City's General Plan Noise Element 65 dBA exterior noise threshold at the proposed units located along E. Barham Drive at the ground floor levels and second and third floor balconies. As shown in Tables 3.11-12 to 3.11-14, incorporation of mitigation measure MM-N-3 and MM-N-4 would ensure exterior noise levels at the project site are compliant with the City's thresholds by constructing noise barriers to reduce on-site noise. Additionally, since noise levels are modeled to exceed the City's General Plan Noise Element 65 dBA exterior noise threshold, an interior noise assessment is required per CCR Title 24 to ensure the interior noise threshold of 45 dBA CNEL is met. Incorporation of mitigation measure MM-N-5 would ensure interior noise levels would meet the City's threshold. With incorporation of these mitigation measures, noise impacts related to project implementation would be reduced to below a level of significance.

Figure 3.11-1. Ambient Monitoring Locations



Source: LDN 2021c

Figure 3.11-2. Modeled Receptor Locations



Source: LDN 2021c

Figure 3.11-3. Preliminary Rock Crusher Location and Mitigation

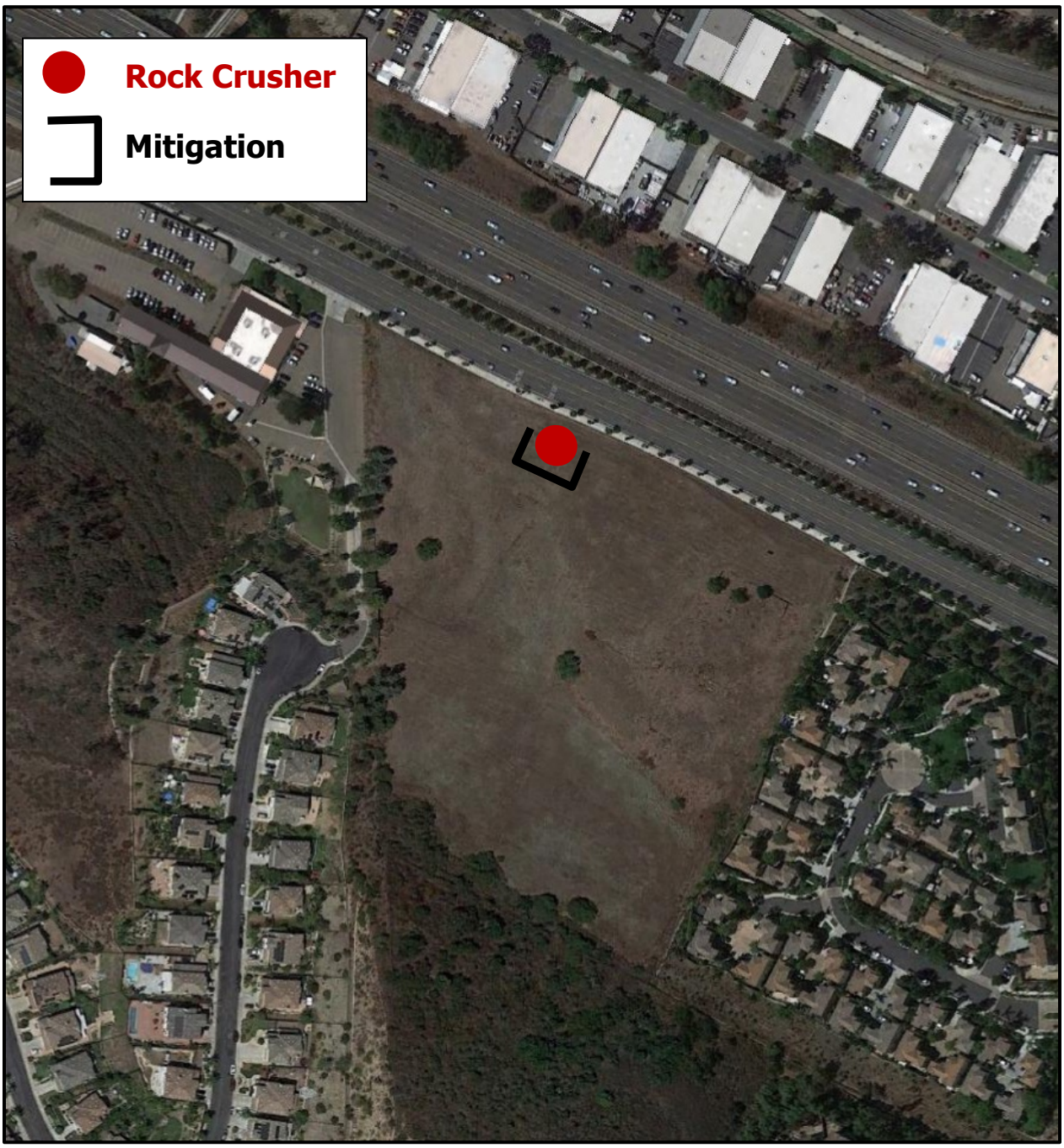


Figure 3.11-4. Ground Level Mitigation Measures

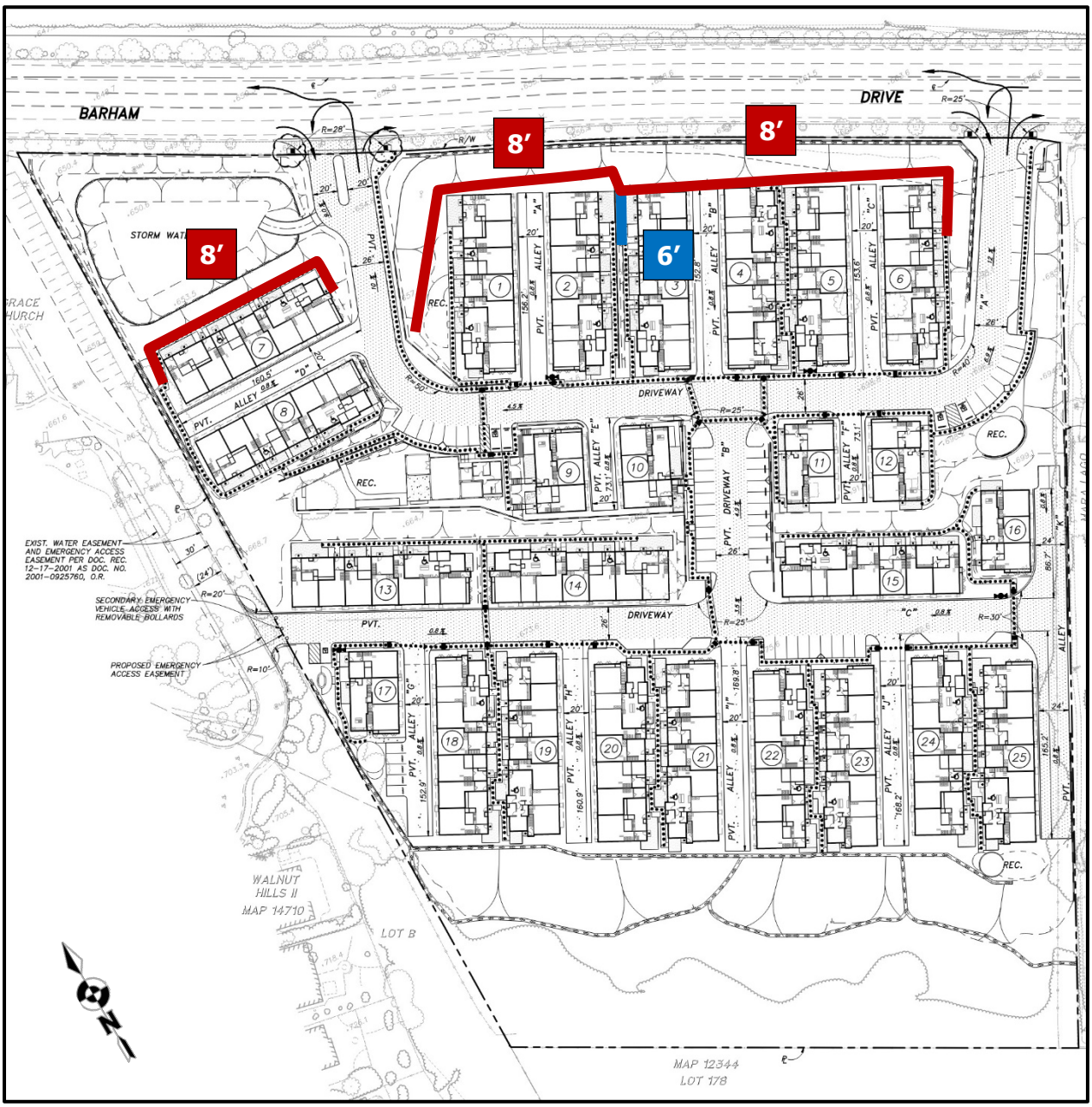
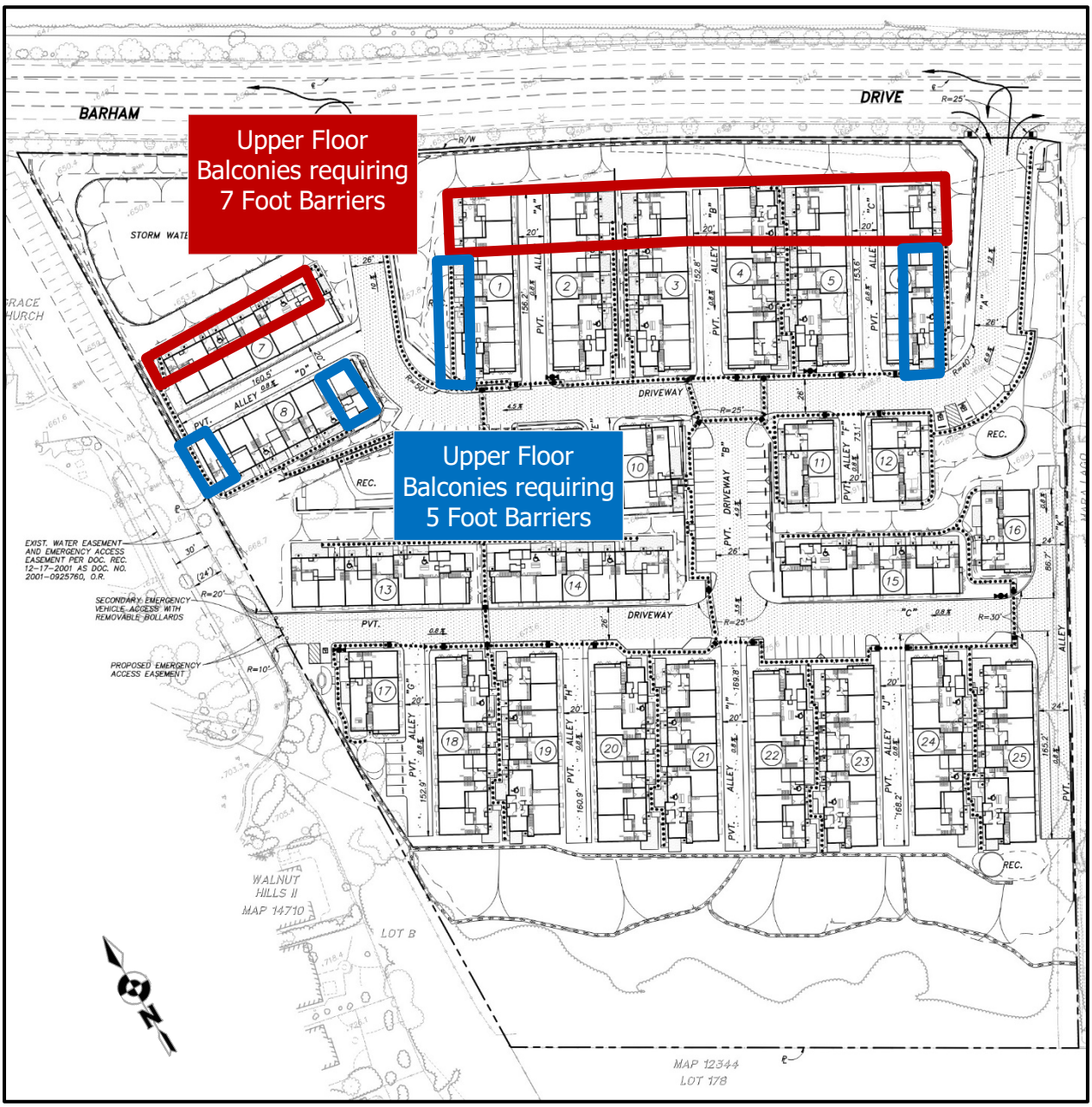


Figure 3.11-5. Upper Level Mitigation Measures



3.12 Population and Housing

This section analyzes the potential for impacts related to population and housing resulting from development of the proposed project. This section considers population and housing characteristics in the area and discusses project consistency with regional growth projections.

In the Initial Study prepared for the proposed project (**Appendix B.1**), implementation of the proposed project was determined to have no impacts related to the displacement of housing or people. There is no existing housing on the project site and the project site is vacant. A previous residential structure and associated outbuildings were removed in the 1980s. Therefore, the construction of the proposed project would not displace a substantial number of existing homes, necessitating the construction of replacement housing elsewhere, nor would it displace a substantial number of people. This issue is not discussed further in this section. Section 5.7, Environmental Effects Found Not to Be Significant – Population and Housing, of the Environmental Impact Report (EIR) provides additional information on this topic.

Table 3.12-1 summarizes the project- and cumulative-impact analysis by threshold for the proposed project.

Table 3.12-1. Population/Housing Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
Threshold #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).	Less than Significant	Less than Significant	Less than Significant

3.12.1 Existing Conditions

This section provides background information regarding population and housing forecasts for the City of San Marcos based upon demographic information from the San Diego Association of Governments (SANDAG).

Population

As of January 1, 2020, the California Department of Finance (DOF) estimates the population of the City is 97,209 (DOF 2020). Based on growth projections provided by the Series 13: 2050 Regional Growth Forecast prepared by SANDAG, it is estimated that the City's population growth will reach 109,095 persons by 2035, and 113,015 persons by 2050 (SANDAG 2013).

Housing

As of January 1, 2020, the City of San Marcos had 32,460 housing units. The housing stock is comprised of approximately 58.4 percent single-family detached and attached units, and approximately 31 percent multi-family units. Approximately 10.3 percent of the housing stock as of January 2020 consisted of mobile homes (DOF 2020). Based on the Series 13: 2050 Regional Growth Forecast, the City is expected to have 37,337 housing units by 2050 (SANDAG 2013).

3.12.2 Regulatory Setting

This section describes the local regulatory setting as it relates to population and housing for the proposed project.

State

California Planning and Zoning Law

The legal framework within which California counties and cities exercise local planning and land use functions is provided in the California Planning and Zoning Law (Sections 65000 through 66499.58 of the California Government Code). Under that law, each county and city must adopt a comprehensive, long-term general plan. The law gives counties and cities wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. The requirements include seven mandatory elements described in the Government Code. Each element must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals; diagrams and maps that incorporate data and analysis; and implementation measures.

Once the general plan of a county or city is adopted, it should be construed as a dynamic document, for which adaptability is a key component. Each jurisdiction frequently reviews its general plan for consistency and to ensure it addresses growth-related issues in a comprehensive manner. State law allows up to four general plan amendments per general plan element per year, so each jurisdiction can make changes as justified.

California Building Standards Code

In 2001, California consolidated the Uniform Building, Plumbing, Electrical, and Mechanical codes into the California Building Standards Code, which is contained in Title 24 of the California Code of Regulations. The California Building Standards Code contains 11 parts: Electrical Code, Plumbing Code, Administrative Code, Mechanical Code, Energy Code, Residential Building Code, Historical Building Code, Fire Code, Existing Building Code, Green Building Standards Code, and the Reference Standards Code. These codes promote public health and safety and ensure that safe and decent housing is constructed in the City.

Senate Bill 375

Senate Bill 375 (codified in the Government Code and Public Resources Code), took effect in 2008 and provides a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the greenhouse gas (GHG) reduction goals established in Assembly Bill 32. Senate Bill 375 requires metropolitan planning organizations to incorporate a Sustainable Communities Strategy (SCS) in their Regional Transportation Plans (RTPs) that will achieve GHG emissions reduction targets by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities.

Regional Housing Needs Assessment

A Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan. The RHNA quantifies the need for housing within each jurisdiction during specified planning periods. Communities use the RHNA in land use planning, prioritizing local resource allocation, and in deciding how to address identified existing and future housing needs resulting from population, employment, and household growth. The RHNA does not necessarily encourage or promote growth, but rather allows communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance quality of life, improve access to jobs, promotes transportation mobility, and addresses social equity, fair share housing needs.

Regional

San Diego Association of Governments

SANDAG is a public agency, composed of 18 cities and the County of San Diego, which builds strategic plans guiding the San Diego region in land use, growth, economics, and the environment. SANDAG also provides population and housing estimates for the region, which are based, in part, on local jurisdictional planning data and inform regional planning.

The SANDAG Regional Comprehensive Plan, adopted in 2004, provides a long-term planning framework for the San Diego region (SANDAG 2004). The Regional Comprehensive Plan identified smart growth and sustainable development as important strategies to direct the region's future growth toward compact, mixed-use development in urbanized communities that already have existing and planned infrastructure, and then connecting those communities with a variety of transportation choices.

In 2011, SANDAG approved the 2050 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). This approval marked the first time SANDAG's RTP included a sustainable communities strategy, consistent with the Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill 375. This RTP/SCS provided a blueprint to improve mobility, preserve open space, and create communities, all with transportation choices to reduce greenhouse gas emissions and meet specific targets set by the California Air Resources Board (CARB) as required by the 2008 Sustainable Communities and Climate Protection Act. In 2010, CARB established targets for each region in California governed by a metropolitan planning organization. SANDAG is the metropolitan planning organization for the San Diego region.

San Diego Forward: The Regional Plan

SANDAG is required by law to update its regional transportation plan every 4 years. In October 2015, SANDAG adopted the most recent update to its RTP/SCS. SANDAG's 2015 RTP/SCS, known as San Diego Forward: The Regional Plan (Regional Plan), integrates the elements of the prior Regional Comprehensive Plan and combines those elements with the Regional Plan. SANDAG is currently preparing the 2021 Regional Plan. While work is in progress on the 2021 Regional Plan, SANDAG prepared a 2019 Federal Regional Transportation Plan (2019 Federal RTP) that complied with federal requirements for the development of regional transportation plans, retains air quality conformity approval from the US Department of Transportation, and preserved funding for the region's transportation investment. The 2019 Federal RTP builds on the 2015 Regional Plan.

The Regional Plan updates growth forecasts and is based on the most recent planning assumptions considering currently adopted land use plans, including the City's General Plan and other factors from the cities in the region and the County. SANDAG's Regional Plan will change in response to the ongoing land use planning of the City and other jurisdictions. For example, the City's General Plan, and other local General Plans of cities, may change based on General Plan amendments initiated by the jurisdiction or landowner applicants. The General Plan amendments may result in increases in development densities by amending the regional category designations or zoning classifications. Accordingly, SANDAG's RTP/SCS latest forecasts of future development in the San Diego region, including location, must be coordinated closely with each jurisdiction's ongoing land use planning because that planning is not static, as recognized by the need for updates to SANDAG's RTP/SCS every 4 years.

Regional Growth Forecast

SANDAG estimates future population, housing, land use, and economic growth throughout San Diego County and its comprising cities, including the City of San Marcos. On October 13, 2013, SANDAG accepted the Series 13: 2050 Regional Growth Forecast. This forecast serves as the foundation for San Diego Forward: The Regional Plan and other planning documents across the region. SANDAG growth projections for the region and for the City of San Marcos are outlined in **Table 3.12-2** below.

Table 3.12-2. Forecasted Growth for the San Diego Region and the City of San Marcos

Jurisdiction	Year			Change 2020-2050	
	2020	2035	2050	Numeric	Percent
Population					
San Diego Regional	3,435,713	3,853,698	4,068,759	633,046	18.4%
City of San Marcos	98,915	109,095	113,015	14,100	14.3%
Housing					
San Diego Regional	1,249,654	1,394,688	1,491,804	242,150	19.4%
City of San Marcos	32,625	35,795	37,337	4,712	14.4%
Employment					
San Diego Regional	1,624,124	1,769,938	1,911,405	287,281	17.7%
City of San Marcos	45,783	54,902	64,328	18,545	40.5%

Source: SANDAG 2013

The City of San Marcos is expected to experience a slower growth rate for population and housing, and a higher employment growth rate when compared to the entire region of San Diego. It should also be noted that the 2050 Regional Growth Forecast is not intended to be an exact formula utilized to determine growth in the region and comprising jurisdictions; rather it should be utilized as a starting point for regional planning.

Regional Housing Needs Assessment

Based on a methodology that weighs a number of factors (i.e., projected population growth, employment, commute patterns, and available sites), SANDAG determined quantifiable needs for housing units in the region according to various income categories. In its final Regional Housing Needs Assessment figures, SANDAG allocated 3,116 housing units to the San Marcos area for the 2020–

2030 Housing Element Cycle, including 1,258 housing units for very low- and low-income households (SANDAG 2020). After credits for constructed units (546) and approved units (1.039) are taken into consideration, the City has a remaining 2021-2029 RHNA of 1,585, including 640 extremely/very low-income, 475 low-income, and 414 above moderate-income units (City of San Marcos 2021).

Local

City of San Marcos General Plan

The City's Housing Element identifies three goals and associated policies to provide a basis for housing and growth projections in the City. The following goals and policies from the City of San Marcos General Plan, Housing Element pertain to population and housing:

- Goal H-1: Provide a broad range of housing opportunities with emphasis on providing housing which meets the special needs of the community.
    - Policy 1.1: Designate land for a variety of residential densities sufficient to meet the housing needs for a variety of household sizes and income levels, with higher densities being focused in the vicinity of transit stops and in proximity to significant concentrations of employment opportunities.
- Goal H-2: Protect, encourage, and provide housing opportunities for persons of lower and moderate incomes.
- Goal H-4: Reduce or remove governmental constraints to the development, improvement, and maintenance of housing where feasible and legally permissible.
    - Policy 4.4: Balance the need to protect and preserve the natural environment with the need to provide additional housing and employment opportunities.

The proposed project's consistency with applicable General Plan goals and policies is discussed in Table 3.10-5 in Section 3.10, Land Use and Planning, of this EIR. As detailed in Section 3.10.4, the project is consistent with the applicable goals and policies pertaining to population and housing.

The City has prepared a draft of their 2021-29 Housing Element. At the time of publication of the draft 2021-29 Housing Element, the City had already constructed approximately 50 percent (approximately 1,585 units) of its RHNA allocation of 3,116 units with housing units constructed, under construction, or approved. Based on a sites inventory assessment, the City has the ability to adequately accommodate the remaining RHNA requirements within land that currently permits residential development (comprised of proposed applications, vacant residential sites, and vacant land in Specific Plan Areas). The project site is not identified within the City's draft 2021-29 Housing Element as a site that could contribute to the RHNA allocation (City of San Marcos 2021).

3.12.3 Thresholds of Significance

Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* provides thresholds for determining significant environmental impacts. A project may be deemed to have a significant impact to population and housing if it would:

- **Threshold #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).

3.12.4 Project Impact Analysis

Threshold #1: Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

Increases in population, housing, and employment are generally considered to be social or economic effects, as opposed to physical effects, which are the focus of CEQA analysis. There are circumstances where social and economic changes could indirectly cause physical environmental impacts or result in changes to environmental resources, such as air quality, traffic, or noise levels. In other situations, lead agencies may evaluate social or economic change related to a physical change in determining whether the physical change is significant (*CEQA Guidelines* Section 15131).

The approximately 10.56-acre project site is located entirely within the City of San Marcos. A General Plan Amendment is required to re-designate the project site from Mixed-Use 3 (MU3) to Specific Plan Area (SPA). A rezone is also required to re-designate the project site from Mixed-Use-3 to SPA. The General Plan Amendment and Rezone would allow the Specific Plan to provide rules and regulations for development of the project site.

Construction of the proposed project would represent a temporary increase in construction employment. Given the relatively common nature and scale of the construction associated with the proposed project, the demand for construction employment would likely be met within the existing and future labor market in the City and North County San Diego area. The size of the construction workforce would vary during the different stages of construction, but a substantial quantity of workers from outside the local area would not be expected to relocate permanently.

The proposed project would directly induce growth through the development of 151 multi-family residential dwelling units, resulting in a gross density of approximately 14.3 dwelling units per acre. Based on the population rate of 3.1 persons per dwelling unit, the proposed project would directly induce population growth to the area and would potentially add an estimated 469 people to the area. The proposed project would not, however, indirectly induce a growth in population as no extension of infrastructure is proposed beyond what is required to adequately serve the proposed project. Additionally, the majority of the surrounding area is developed. The SANDAG population growth forecasts rely, in part, on individual jurisdiction's planning documents, such as the City's General Plan. Because the project proposes a General Plan Amendment and Rezone, the estimated population of 469 people would not have been accounted for in SANDAG's projections. Therefore, the project's induced population would exceed these projections. However, determination of impacts related to population growth are based upon whether the induced growth would be considered substantial.

As shown in Table 3.12-2 above, the City's population is projected to grow from 98,915 people in 2020 to 109,095 people by 2035 (an increase of 10,180 people). The population increase of 469 people would account for 4.6% of SANDAG's projected population growth.

There is no hardline number or percentage available to determine whether or not this estimated introduction of 469 people (4.6% of projected growth) could be considered a substantial increase in population. However, SANDAG's 2050 Regional Growth Forecast is intended to be used as a starting point for regional planning as opposed to a prescribed growth pattern. Although the City determined that there are adequate sites available with appropriate designations/zoning to accommodate the remaining RHNA allocation for the current Housing Element planning period, the City has the discretion to adjust allocated housing units/sites as necessary to balance proposed plans for residential development with approved/constructed residential development (City of San Marcos 2021). Therefore, while the proposed project would directly induce growth beyond current estimates and

forecasts, it would not be considered substantially growth inducing, and impacts would be **less than significant**.

3.12.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect.

As discussed above, the proposed project would introduce an estimated 469 people resulting from the development of 151 residential units. Based upon regional projections, comparisons to current land use designations, and comparison with the RHNA planning periods, the introduction of the estimated 469 people would not be considered substantial. Impacts would be **less than significant**.

The cumulative projects listed in Table 2-3 would either directly or indirectly induce population growth. Projects that include residential development may increase population in the City similar to the proposed project. These cumulative projects include various residential and mixed-use development projects listed in Table 2-3, including single-family residential, multi-family (affordable and market rate) and student housing. In addition, commercial development is proposed or approved, which can indirectly lead to population growth in the City and surrounding areas. The introduction of a new population is not, in and of itself, a significant impact. As with a project level analysis, the significance of a cumulative population impact is determined by whether the population growth resulting from the combined cumulative projects would be considered substantial.

Further, the project would not result in the removal of a barrier of growth that would reasonably result in the intensification or development of land. All utility and infrastructure improvements would be sized to only adequately serve the proposed project (see Section 3.17, Utilities and Service Systems). Additionally, because the project is surrounded by existing development, it is unlikely that the approval and construction of the project would lead to an intensification of the land uses in the immediate vicinity of the site. Therefore, a cumulative impact would not occur.

3.12.6 Mitigation Measures

Based upon the analysis presented in sections 3.12.4 and 3.12.5, impacts were determined to be less than significant. No mitigation measures are required.

3.12.7 Conclusion

Physical impacts related to population growth associated with the proposed project are addressed throughout the topic-specific chapters of this EIR. See Sections 3.1, Aesthetics, through 3.18, Wildfire. When significant impacts were identified in the EIR, mitigation measures have been identified to reduce impacts to below a level of significance. The only impacts that will remain significant and unavoidable are a land use impact related to Mobility Element consistency (Year 2025 impact at Rancheros Drive/SR-78 WB) and a transportation impact related to vehicle miles traveled (VMT).

Construction of the proposed project would represent a temporary increase in construction employment. Given the relatively common nature and scale of the construction associated with the

proposed project, the demand for construction employment would likely be met within the existing and future labor market in the City and North County San Diego area. The size of the construction workforce would vary during the different stages of construction, but a substantial quantity of workers from outside the local area would not be expected to relocate permanently. Impacts would be less than significant.

As discussed above, the proposed project would introduce an estimated 469 people resulting from the development of 151 multi-family residential units. Based upon regional projections, comparisons to current land use designations, and comparison with the RHNA planning periods, the introduction of the estimated 469 people would not be considered substantial. Impacts would be **less than significant.**

3.13 Public Services

This section analyzes the potential impact of the proposed project on public services including fire protection services, police protection services, schools, parks, and libraries. Please see Section 3.16, Utilities and Service Systems, for an analysis of water, wastewater, energy, telecommunications, stormwater, and solid waste services. The analysis also considers the California Environmental Quality Act (CEQA) Guidelines Appendix G and applicable State and Local regulations, including the City of San Marcos General Plan. The General Plan is available on the City's web site.[14] Service provider letters are included in **Appendix M** of this document.

Table 3.13-1 summarizes the project- and cumulative-level public services analysis impact, by threshold of significance.

Table 3.13-1 Public Services Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
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:			
Fire protection services	Less than Significant	Less than Significant	Less than Significant
Police protection services	Less than Significant	Less than Significant	Less than Significant
Schools	Less than Significant	Less than Significant	Less than Significant
Parks	Less than Significant	Less than Significant	Less than Significant
Other public facilities	Less than Significant	Less than Significant	Less than Significant

3.13.1 Existing Conditions

This section details the existing service providers and resources related to fire protection, police protection, schools, parks, and libraries.

Fire Protection

The project site is located within the San Marcos Fire Protection District (SMFPD) boundary. The SMFD would provide fire protection and emergency medical services to the project. The SMFD has existing automatic mutual aid fire agreements in place with the Cities of Carlsbad, Vista, Escondido, Encinitas, and the Rancho Santa Fe Fire Protection District. The SMFD has an Insurance Service Office (ISO) Rating 1, on a scale of one to ten with one being superior service. There are four fire stations in the

14 http://www.san-marcos.net/work/economic-development/general-plan

City and their existing staffing resources are presented in **Table 3.13-2**. Fire station locations are presented in **Figure 3.13-1** (City of San Marcos 2021a).

The proposed project would be primarily served by Fire Station No.3 at 404 Woodland Parkway. According to correspondence with the San Marcos Fire Department, current staff levels and equipment at these stations are sufficient with average response time to the project site from Station 3 at approximately two minutes (SMFD 2021).

Table 3.13-2. San Marcos Fire Station Staffing

Station	Staffing
Fire Station No. 1 180 West Mission Road	• One paramedic engine company (3 personnel) • One paramedic truck company (3 personnel) • One paramedic rescue • One paramedic ambulance (2 personnel)
Fire Station No. 2 1250 South Rancho Santa Fe Road	• One paramedic engine company (3 personnel) • One paramedic ambulance (2 personnel)
Fire Station No. 3 404 Woodland Parkway	• One paramedic engine company (3 personnel) • One paramedic ambulance (2 personnel)
Fire Station No. 4 204 San Elijo Road	• One paramedic engine company (3 personnel) • One paramedic ambulance (2 personnel) • One battalion chief

Police Protection

Police protection services for the proposed project would be provided by the San Diego County Sheriff's Department under contract with the City. As shown in Figure 3.13-1, the proposed project would be served by the Sheriff's San Marcos Station, located at 182 Santar Place, located approximately 0.5 mile northwest of the project site.

The Sheriff's San Marcos Station provides law enforcement services to the City and unincorporated communities of Harmony Grove, Elfin Forest, Lake San Marcos, Hidden Meadows, Ivy Del, Del Dios, Lake Hodges, and the San Pasqual Valley. Law enforcement services include general patrol, criminal investigation, crime prevention, juvenile services, narcotics and gang investigations, communications and dispatch, and various management support services. Services are available 24 hours a day, 7 days a week. Over 100 deputies, volunteers, and professional staff members serve the residents of San Marcos. Additionally, Community Oriented Police and Problem Solving (COPPS) teams are assigned to investigate community quality of life issues (San Diego County Sheriff's Department 2021). Lastly, the Sheriff's San Marcos Station has the only ASTREA (Sheriff's Aviation) landing pad in the County, providing assistance to ground units and extending the range deputies can patrol.

Schools

The project site is located within the San Marcos Unified School District (SMUSD). SMUSD is 49 square miles in size and encompasses most of the City of San Marcos and portions of the cities of Vista, Escondido and Carlsbad, as well as unincorporated areas of the County of San Diego between these

cities. SMUSD provides kindergarten through 12th grade education in the City of San Marcos and operates ten elementary schools, three middle schools, two comprehensive high schools, one continuation high school, one independent study high school, one charter school, and one adult education school (SMUSD 2021). Schools that would serve the project include:

- Knob Hill Elementary School, 1825 Knob Hill Road, San Marcos
- Woodland Park Middle School, 1270 Rock Springs Rd, San Marcos
- Mission Hills High School, 1 Mission Hills Court, San Marcos

Parks

The purpose of the City's Parks, Recreation, and Community Health Element of the General Plan is to provide recreational opportunities, which contribute to the health and well-being of the residents of San Marcos and to provide goals and policies that outline the role recreational amenities plan in achieving the City's vision for the future (City of San Marcos 2012a).

There are 16 major community parks and 18 mini parks located throughout the City. The City residents in the project area are currently served by several nearby parks. The closest park to the project site is Alder Glen Tot Lot located at 608 Shelly Drive which contains play equipment, a trail connection, permanent restrooms and a kiosk. Jack's Pond Park located at 986 La Moree Road is also in the project vicinity. Jack's Pond Park consists of picnic shelter and picnic tables, a trail connection, play equipment, turf area, and permanent restrooms (City of San Marcos 2021b).

Libraries

The City is served by the San Diego County Library, San Marcos Branch located at 2 Civic Center Drive, approximately 1.4 miles northwest of the project site. The San Marcos Branch is 15,394 square feet (s.f.) (City of San Marcos 2012b), contains a MakerBot 3D printer, a 28-person capacity meeting room, and is Americans with Disabilities Act (ADA) accessible (San Diego County Library 2021a). Under normal circumstances, the library is open seven days a week, however hours of operation and library access is currently limited due to the COVID-19 pandemic. (San Diego County Library 2021a). The San Diego County Library system has 33 branches, and E-library, two bookmobiles, and four digital kiosks (San Diego County Library 2021b).

Additional library services are available in the County through the Serra Library System and community members can also access materials through the two colleges located in San Marcos. A resident may secure a Community Borrower card to obtain borrowing privileges at the California State University San Marcos (CSUSM) campus. Palomar Community College offers free "Community Patron" library access for residents with a valid picture identification and proof of current mailing address.

3.13.2 Regulatory Setting

Local

San Marcos General Plan

The following are applicable goals and policies from the City of San Marcos General, Land Use and Community Design Element related to public services:

Land Use and Community Design Element

- Goal LU-8: Ensure that existing and future development is adequately serviced by infrastructure and public services.
    - Policy LU-8.1: New development shall pay its fair share of required improvements to public facilities and services.
    - Policy LU-8.2: Promote development timing that is guided by the adequacy of existing and/or expandable infrastructure, services, and facilities.
- Goal LU-10: Fire protection, emergency services, and law enforcement: Provide effective, high-quality and responsive services.
    - Policy LU-10.1: Provide demand-based fire-fighting and emergency medical services infrastructure, equipment, and personnel to provide a high level of fire, emergency medical, and law enforcement service in San Marcos to meet existing and future demands.
    - Policy LU-10.2: Work closely with the County of San Diego Sherriff's Department to determine and meet the community needs for adequate personnel, equipment and state-of-the-art technology to effectively combat crime, and meet existing and projected service demands.
    - Policy LU-10.3: Continue to conduct public outreach and education regarding fire safety and crime prevention within San Marcos.
- Goal LU-11: Schools: Ensure all residents have access to high-quality education.
    - Policy LU-11.1: Collaborate with the local public school district (SMUSD), private schools, and institutions of higher learning to ensure a range of traditional and distance-learning educational opportunities are provided in superior, accessible facilities that complement the surrounding land uses.
    - Policy LU-11.2: Work with San Marcos Unified School District and developers to ensure adequate school facilities are funded as required by State law and through developer mitigation agreements between the school district and the developer. The City shall require a "will serve" letter substantiating that the developer has paid fees to the satisfaction of the school district prior to issuance of building permits.
    - Goal LU-12: Libraries: Provide library resources and services that meet the needs of the community.
    - Policy LU-12.1: Provide adequate library facilities and technological access that enhance San Marcos's quality of life and create a civic environment with vast opportunities for self-learning and academic enrichment.
    - Policy LU-12.2: Accommodate technology needs of the community and locate accessible technology in the library.

Safety Element

The following are applicable goals and policies from the City of San Marcos General Plan, Safety Element related to public services, including fire protection, police protection, parks and libraries:

- Goal S-3: Minimize injury, loss of life, and damage to property resulting from structural or wildland fire hazards.
    - Policy S-3.1: Require development to be located, designed and constructed to provide adequate defensibility and reduce the risk of structural loss and life resulting from wildland fires. Development will consider hazards relative to terrain, topography, accessibility and proximity to vegetation. One such provision for development to minimize the risk of structural loss and life shall be the inclusion of overhead fire sprinklers.
    - Policy S-3.2: Provide sufficient level of fire protection service to reduce risk from urban and wildland fire. Advocate and support regional coordination among fire protection and emergency service providers.
    - Policy S-3.3: Require development to provide additional access roads when necessary, to provide for safe access of emergency equipment and civilian evacuation concurrently.
    - Policy S-3.4: Coordinate with fire protection and emergency service providers to assess fire hazards before and after wildfire events to adjust fire prevention and suppression needs, as necessary, commensurate with both short- and long-term fire prevention needs.
- Goal S-6: Provide neighborhood safety through effective law enforcement.
    - Policy S-6.1: Continue to maintain demand-based law enforcement service levels to reduce the risk of criminal activity.
    - Policy S-6.2: Continue public education efforts and community outreach programs to promote community involvement in crime and drug prevention.
    - Policy S-6.3: Use Crime Prevention through Environmental Design (CPTED) principles in the design or redevelopment of projects and buildings.

San Marcos General Plan – Parks, Recreation, and Community Health Element

Parks, Recreation, and Community Health Element

The following are applicable goals and policies from the City of San Marcos General Plan, Parks, Recreation and Community Health Element related to parks:

- Goal PR-1: Plan for, acquire, develop, and maintain a system of local parks connected through an integrated network of trails and high-quality recreational facilities.
    - Policy PR-1.1: Develop and maintain a complete system of public parks and recreational amenities that provide opportunities for passive and active recreation at a minimum standard of 5 acres per 1,000 residents. Parks, trails, and recreational facilities will enhance community livability, public health, and safety; should be equitably distributed throughout the City; and be responsive to the needs and interests of residents, employees, and visitors.
    - Policy PR-1.2: Update and maintain a Master Parks Plan and a Master Trails Plan that implement the City's long-term vision for a complete system of parks, trails, and recreation facilities.
    - Policy PR-1.3: Ensure that the development of parks, trails, and recreation facilities and services keeps pace with development and growth within the City.

- Policy PR-1.4: Promote increased access to parks and open spaces, pedestrian- and bike-oriented routes to parks and open space, greening of public rights-of-way, and a variety of active and passive uses of parks and open space.
- Policy PR-1.5: Require new development to be designed and constructed in accordance with the approved Parks Master Plan to meet or exceed the City's parkland standard of 5 acres per 1,000 residents.
- Policy PR-1.6: Require new infill development to provide plazas, mini parks, or other civic spaces as part of their parkland requirement.
- Policy PR-1.7: Promote park and facility design that discourages vandalism, deters crime, provides natural surveillance, and creates a safe and comfortable environment.
- Policy PR-2.2: Implement the trail network per the Master Trails Plan to increase opportunities for physical activity (e.g., walking, biking), healthy lifestyles, and to reduce reliance on cars.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with all applicable goals and policies.

3.13.3 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:

Threshold #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:

- Fire protection.
- Police protection.
- Schools.
- Parks.
- Other public facilities.

3.13.4 Project Impact Analysis

Threshold #1: 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

Fire protection services in the City are provided by the San Marcos Fire Department (SMFD). SMFD is a full-service department responsive to the City and the San Marcos Fire Protection District, which covers an area of 33 square miles and a population of approximately 95,000 residents. SMFD provides the following services within its service area: fire suppression, rescue, emergency medical service, fire prevention services, vegetation management, public education, emergency preparedness and trauma support (City of San Marcos 2021a).

The proposed project would increase the demand on SMFD resources as a result of the development of residential uses and the associated population increase. Additional residents on the project site would increase the need for fire protection services through routine fire and emergency medical calls. As a condition of project approval, prior to the issuance of a grading permit, the applicant/developer/property owner shall submit an executed version of petition to annex into and establish, with respect to the property, the special taxes levied by the following Community Facility District: CFD 2001-01 (Fire and Paramedic). This would offset the project's increase in demand for fire protection services.

SMFD was contacted for their input on the project, including for information regarding stations serving the project, current staffing, response times, and other items related to fire protection services. The response from the Fire Marshal is included in Appendix M. According to SMFD Battalion Chief/Fire Marshal Jason Nailon, the project would be served by Fire Station No. 3 at 404 Woodland Parkway. This station is staffed with one fire engine company (3 personnel) and one ambulance (2 personnel).

The average response time for the SMFD to the project site from Station #4 would be two minutes. SMFD has indicated that there is capacity to serve the project (SMFD 2021). The project would not 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 fire services. The project design includes a 150-foot onsite fire fuel modification buffer Impacts would be **less than significant.**

Police Protection

As discussed in Section 3.13.1, above, the San Diego County Sheriff's Department provides law enforcement services to the City. More specifically, the project would be served by the San Marcos Station, located approximately 0.5 miles from the project site. The project would introduce approximately 469 residents on-site, resulting in an increased demand on existing police protection resources. The increased density of development on the project site would be expected to increase the frequency of emergency and non-emergency calls to the Sherriff's Department. However, as discussed in Section 3.13.1, above, over 100 deputies, volunteers, and professional staff serve the residents of the City. Law enforcement services include general patrol, criminal investigation, crime prevention, juvenile services, narcotics and gang investigations, communications and dispatch, and various management support services. Unlike fire services, which respond solely to emergencies, law enforcement services consist of patrolling large areas 24 hours a day, 365 days a year. Police units are continuously mobile, and service calls are responded to by the nearest available mobile unit. At the San Marcos Station, patrol deputies are assigned to a geographical "beat" area, allowing deputies

to become familiar with citizens and problems within their "beats". As such, the location of the proposed project relative to the nearest station would not affect police protection. Further, in an effort to minimize the increased demand for police protection services, the project has been designed to improve the safety for future residents and visiting guests. Safety features proposed for the project includes walls and fencing. Lastly, lighting would be implemented throughout the site to provide safety as described in Section 2.2.2.3 (Chapter 2, Project Description).

Additionally, the project would participate in an existing Community Facilities District (CFD 98-01, Improvement Area No. 1) for police protection. Thus, while new development places increased demand on police protection services, it is not anticipated that the proposed project would result in the need for construction or expansion of existing police facilities. Therefore, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered facilities. Impacts resulting from the proposed project would be **less than significant**.

Schools

The project site is located within the service boundary of the San Marcos Unified School District (SMUSD). Per SMUSD the following schools would serve the project:

- Knob Hill Elementary School, 1825 Knob Hill Road, San Marcos
- Woodland Park Middle School, 1270 Rock Springs Rd, San Marcos
- Mission Hills High School, 1 Mission Hills Court, San Marcos

Table 3.13-3 summarizes the enrollment and capacity at each of these schools.

Table 13. Enrollment and Capacity by School

School	Grade Level	2019-20 Enrollment(1)	2019-20 Capacity(2)
Knob Hill Elementary	K-5	838	964
Woodland Park Middle	6-8	1,229	1,384
Mission Hills High	9-12	2,864	2,692

Source: SMUSD 2021
Notes: (1) Enrollment as of October 3, 2020
(2) Capacity is based on building utilization for the 2019-20 school year.

Using the student generation rate for multifamily residential units provided in the SMUSD's 2021 School Facilities Needs Assessment (SFNA) of 0.3072 students per multi-family unit, the construction of 151 multifamily units on the project site will generate approximately 47 students. While there is current capacity at the elementary school and middle school that would serve the project, the high school is over capacity. Additionally, SMUSD has indicated that, at the District-level they are overcrowded. Based on the District's 2021 SFNA, the District's 2020/2021 capacity was 19,022 and its enrollment was 20,898, leaving the District with a capacity shortage of 1,876 students. Additionally, recently approved projects in SMUSD's service area which have not yet been constructed, will add additional students to the schools that will serve the project (SMUSD 2021).

While there is some capacity at the elementary school and middle school that would serve the project, the high school that is identified to serve the project is over capacity. Further, the addition of these students would contribute to the District-wide capacity issues. The project applicant shall pay school mitigation fees pursuant to California Education Code Section 17620 et seq. and Government Code Sections 65995(h) and 65996(b) in effect at the time of building permit issuance. Current Level II school fees are $4.38/s.f. for residential development (SMUSD 2020). Further, consistent with General Plan Policy LU-11.2, the applicant shall provide a letter from the school district(s) to the City prior to the issuance of building permits confirming these fees have been paid.

Payment of these fees would assist in funding SMUSD's long-range plans. State Bill (SB) 50 states that the fees imposed by school districts shall constitute the exclusive method of considering and mitigating impacts on school facilities caused by a development project. Such payment shall provide "full and complete mitigation of the impacts of any legislative or adjudicative act…on the provision of adequate school facilities" (Government Code Section 65995(h)). As such, with contribution of required development fees, impacts to schools would be **less than significant**.

Parks

Buildout of the proposed project is estimated to add an additional 469 residents to the City. Assuming five acres of park space per 1,000 residents, this equates to a demand of approximately 2.38 acres of park space generated by project residents.

The project applicant would be required to pay the City's Public Facility Fees (PFF), required by all projects that increase the demand for park and recreation needs in the City. The PFF money would go towards the acquisition and development of local and community park facilities throughout the City, to offset the demand on public park space generated by the project, as described in Municipal Code Chapter 17.36 and 17.44. Payment of the PFF shall be made prior to City issuance of the first building permit for the proposed project. Therefore, payment, which would ultimately contribute to development of new parks and recreational facilities, would offset the increase in demand of parks and recreational facilities generated by the proposed project, such that existing facilities would not substantially deteriorate. Impacts to existing neighborhood and regional parks would be less than significant.

In addition, the project would provide 82,419 s.f. (1.89 acres) of common usable open space area including open space areas with grades less than 10 percent and five recreational areas that would include amenities such as multi-age play areas, tot lots, seating areas, barbeque stations, open turf areas, and patio areas. These areas will be maintained by the Home Owners Association. Additionally, the project provides for 26,390 s.f.(0.61 acre) of private open space. The proposed project would meet and exceed the common useable and private open space requirements per the City's Municipal Code. As such, with payment of the required PFF in combination with provision of on-site common and private open space, the project would meet and exceed the anticipated demand for neighborhood and regional parks or other recreational facilities. Project residents would have access to adequate on-site recreational facilities, which will offset increased use of existing parks and recreational facilities. Therefore, project residents would not cause or result in the overuse of existing parks and recreational facilities such that substantial physical deterioration would occur. Impacts to parks and park services would be **less than significant**.

Other Public Facilities

Development of the project would add an additional 469 residents to the City. This would increase the demands on library services and resources. However, additional library services are available in the

County through a cooperation of County libraries, independent city libraries, and the Imperial County Library, which collectively form the Serra Library System. This system enables County library cardholders to check out library materials from the other Serra member libraries (Serra Cooperative Library System 2016). In addition, community members can purchase a community borrower card to obtain borrowing privileges at the California State University San Marcos (CSUSM) campus (CSUSM 2021). Community members can also borrow materials at Palomar Community College with a valid picture ID and proof of current mailing address (Palomar College 2021). These additional library resources are located in the San Marcos community and provide over 200,000 square feet of additional library space. Therefore, a **less than significant impact** is identified for this issue area.

3.13.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to public services, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts related to public services (see Table 2-3, Cumulative Projects).

Fire Protection Services

The geographic area for the cumulative analysis of fire protection and emergency services is those areas that are serviced by the SMFPD. The cumulative projects that fall within this geographic area would add to the increase in demand for fire protection and emergency services. The SMFPD provides service to the City of San Marcos and has existing automatic mutual aid fire agreements in place with the Cities of Carlsbad, Vista, Escondido, Encinitas, and the Rancho Santa Fe Fire Protection District. As discussed in Section 3.13.4, above, although the proposed project would introduce approximately 469 residents on-site, the project is not expected to cause a decline in SMFD response times. Nonetheless, the cumulative projects listed in Table 2-3 would result in additional demand of fire protection services, and the potential need for additional fire protection resources. However, all cumulative projects would be required to participate in existing Community Facilities Districts as determined necessary. Future projects would be required to offset the increase in demand caused by their respective project. Development fee payments would go towards providing the additional staff and equipment that would be needed by SMFD in the future to provide fire protection services, including potential new fire stations. Similarly, to offset any potential cumulative impacts to fire protection services, the project would pay all required development impact fees. Thus, cumulative impacts to fire protection services would be **less than significant.**

Police Protection Services

The geographic area for the cumulative analysis of police protection is those areas that are serviced by the San Marcos Sheriff's Department. All cumulative projects listed in Table 2-3 would result in an increase in demand for police protection services from the San Marcos Sheriff's Department. The project site would be served by the San Marcos Station, located approximately 1.2 miles from the project site. As discussed in Section 3.13.4, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered facilities. However,

the cumulative projects listed in Table 2-3 would result in additional demand of police protection services, and the potential need for additional police protection resources. Nonetheless, all cumulative projects would be required to offset increased demand to police protection services, through the payment of fees. These fees would provide for additional staff and equipment to assist in the provision of law enforcement services. In order to offset any potential cumulative impacts to fire protection services, the proposed project would also be required to contribute toward the future police protection resources through the payment of fees. As such, with payment of fees, cumulative impacts to police protection services would be **less than significant.**

Schools

While there is some capacity at the elementary school and middle school that would serve the project, the high school that is identified to serve the project is over capacity. Based on the District's 2021 SFNA, the District's 2020/2021 capacity was 19,022 and its enrollment was 20,898, leaving the District with a capacity shortage of 1,876 students. Additionally, recently approved projects in the City which have not yet been constructed and the cumulative projects included on Table 2-3 that have a residential component and would generate students that need to be accommodated by either SMUSD or another school district in the area.

As discussed in Section 3.13.4, the project applicant would be required to contribute development fees to SMUSD, pursuant to California Education Code Section 17620 et seq. and Government Code Sections 65995(h) and 65996(b) as well as the City's Municipal Code Section 17.52.050. The applicant shall pay the school mitigation fees that are in effect at the time of building permit issuance.

The current school fee for residential development required by SMUSD is $4.38 per square foot; however, this fee amount could change between the drafting of this EIR and the time of building permit issuance (SMUSD 2021). Further, consistent with General Plan Policy LU-11.2, the applicant shall provide a letter from the school district(s) to the City prior to the issuance of building permits confirming these fees have been paid. All of the cumulative projects included in Table 2-3 that include residential development would result in increased demand for school services, and would be required to pay school fees to offset the increase demand, similar to the proposed project. Additionally, non-residential projects are also required to pay school fees consistent with SMUSD's developer fee schedule. As such, with contribution of required development fees by the proposed project and related projects, cumulative impacts to schools would be **less than significant.**

Parks

The proposed project as well as the cumulative projects that are in the City of San Marcos (as identified in Table 2-3) would add to the cumulative demand for park and recreation facilities in the City. All residential projects that increase the demand for park and recreation needs in the City are required to provide park space and/or pay park in lieu-fees. The environmental documentation prepared for each project would analyze impacts associated with the construction of any parks within each overall development footprint. As discussed in Section 3.13.4, the proposed project would be required to pay the City's PFF, which is required for all projects that increase the demand for park and recreation needs in the City. The PFF would be used for developing neighborhood and regional parks. It is expected that all cumulative projects that increase demand for parks and recreation needs would also be required to pay these fees. As such, cumulative impacts on recreational facilities in the City would be **less than significant.**

Libraries

Cumulative projects within the services area of the San Marcos Branch Library would result in an increase in demand for library services. Aside from the San Marcos Branch, additional library services are available in the County through the Serra Library System, which allows library cardholders to check out materials from the other Serra member libraries. In addition, community members can get borrowing privileges at the CSUSM campus and the Palomar Community College. These additional library resources are located in the San Marcos community and provide over 200,000 square feet of additional library space. Cumulative impacts to library services would be **less than significant.**

3.13.6 Mitigation Measures

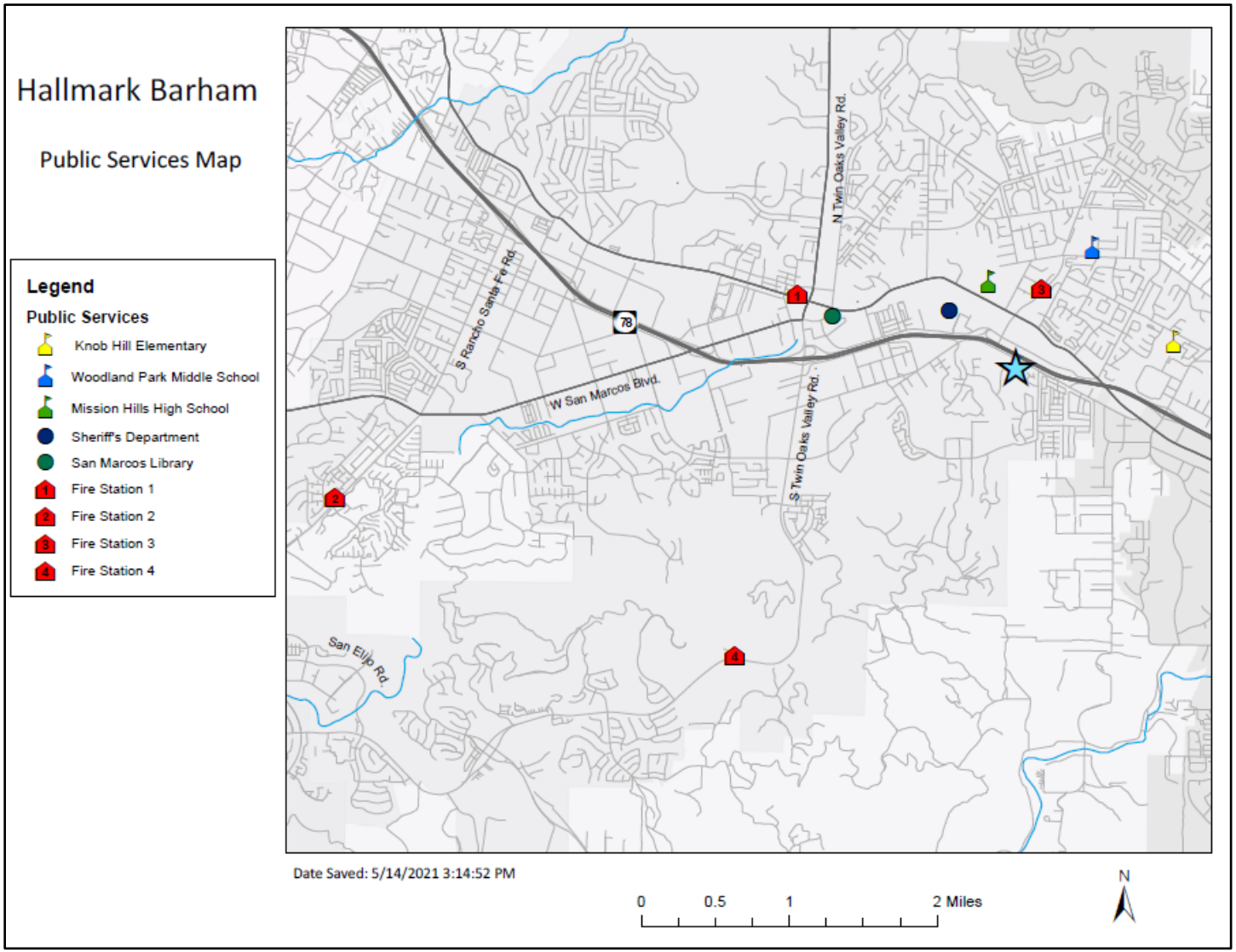
No significant impacts to public services were identified; thus, no mitigation measures are required.

3.13.7 Conclusion

Development of the proposed project would result in an increase in demand for fire protection, emergency medical services, police protection, school services, and library facilities. However, the project applicant would be required to pay all applicable development fees including payment of school mitigation fees, pursuant to California Education Code Section 17620 et seq. and Government Code Sections 65995(h) and 65996(b) as well as the City's Municipal Code Section 17.52.050, and payment of the City's PFF, required by all projects that increase the demand for park and recreation needs in the City, in order to avoid direct and cumulative impacts to schools and parks.

Although the project, on its own, is not expected to result in impacts to fire and police protection services, with the additional demand on fire and police services to be added by the cumulative projects listed in Table 2-3, potential need for additional fire and police protection resources could occur. As such, the project applicant would be required to pay all required development fees to fire and police services to offset any potential cumulative impacts. The project applicant will also annex into CFD 2001-01 for fire and paramedic and CFD 98-01, Improvement Area No. 1 for police protection and this would offset and minimize potential impacts. As such, with payment of fees towards schools, parks, fire, and police, impacts to public services would be **less than significant.**

Figure 3.13-1 Public Services in Project Vicinity



3.14 Recreation

Introduction

This section analyzes the potential impacts of the proposed project to existing recreational facilities. The analysis also considers the California Environmental Quality Act (CEQA) Guidelines Appendix G and applicable State and Local regulations, including the City of San Marcos General Plan. The General Plan is available on the City's web site.[15]

Table 3.14-1 summarizes the project- and cumulative-impact analysis by threshold for the proposed project.

Table 3.14-1. Recreation Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
Threshold #1: The project increases 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	Less than Significant	Less than Significant
Threshold #2: The project includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	Less than Significant	Less than Significant	Less than Significant

3.14.1 Existing Conditions

This section describes existing park, recreation facilities, and trails on the project site and in the project vicinity.

Parks and Recreation Facilities

According to the City's General Plan, San Marcos has nearly 270 acres of developed parkland, consisting of 149 acres of neighborhood parks, 98 acres of community parks, 20 acres of smaller parks, and three acres of other recreational facilities (City of San Marcos 2012).

The San Marcos General Plan park acreage standard calls for five acres of parkland for every 1,000 residents. As of January 1, 2020, the California Department of Finance (DOF) estimates the population of the City is 97,209 (DOF 2020). Based on growth projections provided by the Series 13: 2050

15 http://www.san-marcos.net/work/economic-development/general-plan

Regional Growth Forecast prepared by SANDAG, it is estimated that the City's population growth will reach 109,095 persons by 2035 (SANDAG 2013). Using 2020 population figures, approximately 486 acres of parkland is required to meet the General Plan park standard. Using 2035 population figures, approximately 546 acres of parkland would be necessary.

There are 16 major community parks and 18 mini parks located throughout the City. The City residents in the project area are currently served by several nearby parks. The closest park to the project site is Alder Glen Tot Lot located at 608 Shelly Drive which contains play equipment, a trail connection, permanent restrooms and a kiosk. Jack's Pond Park located at 986 La Moree Road is also in the project vicinity. Jack's Pond Park consists of picnic shelter and picnic tables, a trail connection, play equipment, turf area, and permanent restrooms (City of San Marcos 2021).

Trails

The City of San Marcos has 63 miles of completed trails with plans to expand the trail network to 72 miles (City of San Marcos 2017). The goal of the trail system is two-fold: (1) to serve as a recreational amenity and (2) provide an alternative means of circulation for non-motorized travelers through an inter-linked citywide system of trails connecting residential neighborhoods to parks, schools, colleges, stores, restaurants, movie theaters, other important destinations within the City, and with the wider regional trails system in adjacent cities.

3.14.2 Regulatory Setting

This section describes the state and local laws and regulations that are applicable to the proposed project.

State

Quimby Act

Since the passage of the 1975 Quimby Act (California Government Code Section 66477), cities and counties have been authorized to pass ordinances requiring that developers set aside land, donate conservation easements or pay fees for park improvements. Revenues generated by the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act was to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties.

The Landscape and Lighting Act of 1972

The Landscape and Lighting Act of 1972 enables cities, counties and special districts to acquire land for parks, recreation and open space. A local government may also use the assessments to pay for improvements and maintenance in these areas.

The Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act (Government Code [GC] section 53311 et seq.) is a tax-based financing method available to cities, counties, and special districts. It authorizes local governments to establish community facilities districts (CFDs) within which they may levy special taxes and issue bonds to finance open space acquisition, maintenance, and other programs. Approval of the special tax and any related bond issue requires approval by two-thirds of the district electorate.

Local

City's Municipal Code Chapter 17.36 – Park and Recreational Development Construction Fee

As described in Chapter 17.36 in the City's Municipal Code, the continued increase in the development of dwelling units and population within the City has created the need for planning, acquisition, improvement, expansion and operation of public parks, playgrounds, recreational facilities in the City, and thus the need for additional revenues with which to finance such facilities. This chapter of the Municipal Code requires that each builder of each dwelling unit to be constructed within the City of San Marcos shall, prior to the construction, pay a fee, as adopted by Resolution by the City Council.

City's Municipal Code Chapter 17.44 – Development Services and Public Facilities, Exaction, Fees and/or Costs

The City recognizes that the continued development of property within the City's jurisdictional boundaries has resulted in an increased demand on existing public services, facilities and infrastructure; the need for expansion of public services, facilities and infrastructure; and/or the need for the installation of new public services, facilities, and infrastructure. It is the intent of the City that each applicant for a grading, construction, building and/or development permit or entitlement shall, prior to the issuance of such permit or entitlement, pay Public Facilities Fees. The funds generated by the payment of fees described Chapter 17.44 shall be deposited into separate accounts established for the purposes of maintaining, expanding, and installing public infrastructure. Such public infrastructure includes active or passive open space and parks.

San Marcos General Plan – Parks, Recreation, and Community Health Element

The following are applicable goals and policies from the City of San Marcos General Plan, Parks, Recreation, and Community Health Element:

- Goal PR-1: Plan for, acquire, develop, and maintain a system of local parks connected through an integrated network of trails and high-quality recreational facilities.
    - Policy PR-1.1: Develop and maintain a complete system of public parks and recreational amenities that provide opportunities for passive and active recreation at a minimum standard of 5 acres per 1,000 residents. Parks, trails, and recreational facilities will enhance community livability, public health, and safety; should be equitably distributed throughout the City; and be responsive to the needs and interests of residents, employees, and visitors.
    - Policy PR-1.2: Update and maintain a Master Parks Plan and a Master Trails Plan that implement the City's long-term vision for a complete system of parks, trails, and recreation facilities.
    - Policy PR-1.3: Ensure that the development of parks, trails, and recreation facilities and services keeps pace with development and growth within the City.
    - Policy PR-1.4: Promote increased access to parks and open spaces, pedestrian- and bike-oriented routes to parks and open space, greening of public rights-of-way, and a variety of active and passive uses of parks and open space.
    - Policy PR-1.5: Require new development to be designed and constructed in accordance with the approved Parks Master Plan to meet or exceed the City's parkland standard of 5 acres per 1,000 residents.

- Policy PR-1.6: Require new infill development to provide plazas, mini parks, or other civic spaces as part of their parkland requirement.
- Policy PR-1.7: Promote park and facility design that discourages vandalism, deters crime, provides natural surveillance, and creates a safe and comfortable environment.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies.

Parks Master Plan

The City adopted its Parks Master Plan in 1990, which presents a vision of parks and recreation facilities for the City. Since that time, the City has changed significantly so a Master Plan Update was adopted in 2017. The goal of the Parks Master Plan Update is to identify potential improvement to the park system and, as funding becomes available, suggest additional amenities for new parks and improvements at existing park facilities (City of San Marcos 2017).

Master Trails Plan

The City's Master Trails Plan, adopted in 1991, details a trails implementation strategy and description of each proposed trail segment. The plan envisions a system of connectivity through trail corridors networked across the City. To meet this goal, the Master Trails Plan recommends creation of 72 miles of trails that will provide an alternative means of circulation and recreational opportunities to San Marcos residents and visitors. These trails will include 21 miles of urban trails, 36 miles of multiuse trails, and 15 miles of soft-surface trails that connect neighborhoods to parks, schools and workplaces as well as to the trails systems of neighboring cities and the County of San Diego (City of San Marcos 2017). The City's Master Trail Plan identifies an Urban Trail along the project's Barham Drive frontage, which is already constructed.

3.14.3 Thresholds of Significance

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

- **Threshold #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.
- **Threshold #2:** Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.14.4 Project Impact Analysis

As discussed in Section 2.2.2.1 of this EIR, there are two main categories of open space proposed for the project – common open space and private open space. Common open space will total approximately 5.35 acres and includes open space with grades 10 percent and greater, common open space with grades less than ten percent, the water quality basin and recreational areas.

Private open space is associated with private patio and deck areas on the residential units. The open space concept plan is included as Figure 2-3 and **Table 3.14-1** summarizes the proposed open space areas.

Table 3.14-1. Proposed Open Space Summary

Open Space Description	Amount Provided (square feet)
Common Open Space	
Common Open Space (Grades 10 percent or greater)	134,776(1)
Common Open Space (Grades less than 10 percent)	64,913(2)
Water Quality Basin/Bio-retention Area	6,764(1)
Recreational Areas	10,742(2)
Private Open Space	
Private Open Space (Patios/Decks)	26,390

Notes: (1) Per the Zoning Ordinance, open space areas with grades of 10 percent or greater and the water quality basin/bioretention areas do not counted as usable open space.
(2) Open space with grades of less than 10 percent and recreational areas count towards the project's usable open space calculation.

Common Open Space

Common open space is divided into: 1) common open space area with grades 10 percent or greater; 2) common open space area with grades less than 10 percent; 3) the water quality basin/bioretention area; and 4) recreational areas.

Common Open Space – Grades 10 Percent or Greater

The first category is common open space with grades of 10 percent or greater. According to the City of San Marcos Zoning Ordinance, open space of 10 percent grade or greater cannot be counted as usable open space. This category includes open space features such as landscaping and slopes and encompasses 134,776 s.f.

Common Open Space – Grades Less than 10 Percent

Common open space areas with grades less than 10 percent are considered to be usable open space. These areas which encourage relaxation activities such as observing nature, bird watching, painting, photography, and picnicking as well as recreational open space areas such as open turf areas. This encompasses 64,913 s.f.

Common Open Space – Water Quality Basin/Bioretention Area

The project includes a 6,764-s.f. water quality basin area. This is a passive open space area located in the northwest corner of the project site which is used to direct water during rain events to control

for flooding and to treat water before it is discharged from the site. The water quality basin/bioretention area does not count towards usable common open space.

Common Open Space – Recreational Areas

The proposed project includes five recreational open space areas totaling 10,742 s.f. inclusive of multi-age play areas, tot lots, seating, barbeque stations, open turf areas, and patio areas. These areas will be maintained by the Home Owners Association and include:

- A 3,564 s.f. primary recreation area will provide residents with amenities such as a barbeque counter and patio space, a bocce ball court, and a tot lot with seating and open turf area. Excluding the tot lot, other recreational amenities within the primary recreation area may be substituted to make room for a pool.
- A 2,345 s.f. multi-age recreation area has been established adjacent to Building 12 and includes a multi-age play structure, open turf area, and bench seating.
- An 1,805 s.f. amenity space adjacent to Building 1 will include an enhanced paved patio area, tables with seating, open turf areas and a dog wash station.
- A 1,552 s.f. overlook tot lot area provided adjacent to Building 17 includes features such bench seating, a fire pit with seating, walkways, and a tot lot.
- A 1,476 s.f. amenity space adjacent to Building 25 includes a dog wash and open turf area.

Private Open Space

Private open space within the proposed project consists of private patio space and private balcony/deck space. The City requires that each unit with ground floor living must provide 250 s.f. of private open space. Units with living space on the second floor and above must provide 50 s.f. of private open space in the form of decks or balconies. There is a total of 88 units within the proposed project that include ground floor living space and 63 units with living area on the second floor or above. Therefore, according to the City of San Marcos Zoning Ordinance, the units with ground floor living would be required to provide 22,000 s.f. of private patio space and the units with living space on the second floor and above would be required to provide approximately 3,150 s.f. of balcony/deck space. Combined, the minimum private open space required for the proposed project equates to 25,150 s.f. The proposed project provides a total of 26,390 s.f. of outdoor private space and will exceed the City's requirement.

Threshold #1: 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?

Based on the population rate of 3.1 persons per housing unit in San Marcos, buildout of the proposed project is estimated to add an additional 469 residents to the City. This increase in residents would increase demand for neighborhood and regional parks and other recreational facilities. Assuming five acres of park space per 1,000 residents (the minimum standard goal of the City's General Plan discussed in Section 3.14.2), the addition of residents on site equates to a demand of approximately 2.35 acres of public park space generated by project residents.

The project applicant would be required to pay the City's Public Facility Fees (PFF), which is required by all projects that increase the demand for park and recreation needs in the City. The PFF money

would go towards the acquisition and development of local and community park facilities throughout the City, to offset the demand on public park space generated by the project, as described in Municipal Code Chapter 17.36 and 17.44. Payment of the PFF shall be made prior to City issuance of the first building permit for the proposed project. The PFF payment would ultimately contribute to development of new parks and recreational facilities and would offset the increase in demand of parks and recreational facilities generated by the proposed project, such that existing facilities would not substantially deteriorate. Impacts to existing neighborhood and regional parks would be **less than significant.**

In addition, as discussed above, the project would provide 82,419 s.f. (1.89 acres) of common usable open space area including open space areas with grades less than 10 percent and five recreational areas that would include amenities such as multi-age play areas, tot lots, seating areas, barbeque stations, open turf areas, and patio areas. These areas will be maintained by the Home Owners Association. Additionally, the project provides for 26,390 s.f. of private open space. The proposed project would meet and exceed the common useable and private open space requirements per the City's Municipal Code. As such, with payment of the required PFF in combination with provision of on-site common and private open space, the project would meet and exceed the anticipated demand for neighborhood and regional parks or other recreational facilities. Project residents would have access to adequate on-site recreational facilities, which will offset increased use of existing parks and recreational facilities. Therefore, project residents would not cause or result in the overuse of existing parks and recreational facilities such that substantial physical deterioration would occur. Impacts to neighborhood and regional parks would be less than significant.

Threshold #2: 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?

Impacts associated with construction of the proposed project's public and private open space are considered within the overall development footprint for the proposed project. Impacts from the development of proposed recreational facilities have been considered in the project impact analysis and mitigation measures for the proposed project as a whole are discussed in the various sections of this EIR.

As stated under Threshold #1, the project applicant would be required to pay the City's PFF that would go towards the acquisition and development of local and community park facilities throughout the City. As such, the project applicant may contribute to the construction or expansion of recreational facilities offsite that may have an adverse physical effect on the environment. Future expansion or development of new recreational facilities would be subject to CEQA environmental review as appropriate, which would identify and address any site-specific impacts. Therefore, impacts due to the construction or expansion of recreational facilities are considered less than significant.

3.14.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to recreation, the cumulative analysis is based upon a list approach to determine

the proposed project's contributing effect on potential cumulative impacts related to recreation. All of the cumulative projects within the City identified in Table 2-3 are considered in this cumulative analysis.

The proposed project as well as the cumulative projects that are in the City of San Marcos (as identified in Table 2-3) would add to the cumulative demand for park and recreation facilities in the City. The proposed project would provide 82,419 s.f. (1.89 acres) of common useable open space area defined as common open space area with grades of 10% or less and recreational areas. Further, private open space totaling 26,390 s.f. (0.61 acre) would be provided. The project applicant would be required to pay the City's PFF which helps pay for the acquisition and development of local and community park facilities throughout the City.

All cumulative projects that increase the demand for park and recreation needs in the City would be required to provide park space and/or pay the City's PFF. Furthermore, any substantial expansion or development of new recreational facilities would be subject to the appropriate CEQA environmental review prepared by the City, which would identify and address any site-specific impacts. Therefore, implementation of City policies, such as the collection of PFF, along with compliance with CEQA requirements would ensure that cumulative impacts to recreational facilities would be properly addressed and mitigated. Therefore, cumulative impacts to recreational facilities are considered **less than significant.**

3.14.6 Mitigation Measures

No significant impacts to recreation were identified; thus, no mitigation is required.

3.14.7 Conclusion

The proposed project would result in an increase in the City of San Marcos population by approximately 469 residents. The additional residents would require approximately 2.35 acres of new park space to fulfill the City's General Plan requirement of five acres of park space per every 1,000 residents. The proposed project would be required to pay the City's PFF, to go towards the acquisition and development of local and community park facilities throughout the City in addition to what is provided on-site. The project includes 82,419 s.f. (1.89 acres) of common useable open space and 26,390 s.f. (0.61 acres) of private open space. With payment of the PFF and provision of on-site common open space and recreational amenities, impacts would be **less than significant**.

Lastly, any impacts associated with the development of proposed open space have been considered in the project impact analysis and mitigation for the proposed project as a whole and are discussed in the various sections of this EIR. Therefore, impacts resulting from construction of new park facilities would be **less than significant**.

3.15 Transportation

This section provides a transportation impact analysis for the proposed project related to transit, roadway, bicycle and pedestrian facilities, vehicle miles traveled, design feature hazards and emergency access. The section is based on the following report:

- Transportation Impact Analysis & Local Transportation Analysis, Hallmark Barham Specific Plan, San Marcos, California, prepared by Linscott Law & Greenspan (LLG) (May 2021).

The complete report is included as **Appendix K.**

Section 3.10 Land Use and Planning, includes a description of existing traffic conditions, methodology, baseline conditions and trip generation for the local transportation analysis/level of service (LOS). Section 3.10 analyzes the project's consistency with the Mobility Element of the General Plan. **Table 3.15-1** summarizes the project- and cumulative-level traffic impact analysis, by threshold.

Table 3.15-1. Transportation/Traffic Summary of Impacts

Thresholds of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities	Significant Impact	Significant Impact	Significant and Unavoidable
#2: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Significant Impact	Significant Impact	Significant and Unavoidable
#3 - Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than Significant	Less than Significant	Less than Significant
#4: Result in inadequate emergency access	Less than Significant	Less than Significant	Less than Significant

3.15.1 Existing Conditions

The City has strived to create a robust, city-wide system of bicycle and pedestrian paths and routes, which provide residents with alternative modes of travel as well as recreational opportunities. The project site is located near the Barham Park & Ride.

Existing Pedestrian Connections

Pedestrian facilities are intermittently provided within the project study area. Paved sidewalks are provided along the south side of E. Barham Drive, on the east side of Woodland Parkway, and on both sides of La Moree Road. However, no sidewalks are currently provided along Rancheros Drive.

Existing Transit Service

The project site is located within one mile of the Cal State San Marcos SPRINTER light rail station and within 0.9 mile of the Nordahl Road SPRINTER light rail station. Bus stops serving the North County Transit District (NCTD) Routes 305 and Route 347 are located approximately 0.7 mile from the project site. Residents will be able to utilize these public transit opportunities. A summary of the available transit service routes is provided below.

The SPRINTER hybrid rail line spans 22-miles and connects Oceanside, Vista, San Marcos, and Escondido – serving 15 stations along Highway 78 corridor. The SPRINTER runs every 30 minutes in each direction Monday through Friday from approximately 4:00 AM to 9:00 PM. Saturday, Sunday, and holiday trains operate every 30 minutes between 10:00 AM and 6:00 PM and hourly before 10:00 AM and after 6:00 PM.

NCTD Bus Route 305 runs from the Vista Transit Center to the Escondido Transit Center with destinations to Palomar College, San Marcos Civic Center, Mission Hills High School, San Marcos Middle School, Vista Transit Center Escondido Transit Center, Arc Enterprises, and DMV. There are 33 stops along this route. Route 305 currently operates Monday through Friday from 4:32 AM through 11:02 PM departing from the Vista Transit Center and from 4:19 AM through 10:16 PM departing from the Escondido Transit Center. Weekend route schedule begins at 5:32 AM through 11:02 PM departing from Vista Transit Center and begins at 5:15 AM to 10:18 PM departing from the Escondido Transit Center. Route 305 travels at 30-minute headways on weekdays, and 30-minute headways on weekends.

NCTD Bus Route 347 runs from Cal State San Marcos to Palomar College with destinations to Cal State University San Marcos, Palomar College, Restaurant Row, Cal State San Marcos SPRINTER Station, and Edwards Cinemas. There are 24 stops along this route. Route 347 currently operates Monday through Friday from 5:20 AM through 7:12 PM departing from the CSUSM Sprinter Station and from 5:45 AM through 7:36 PM departing from Palomar College Transit Center. Saturday route schedule begins at 7:51 AM through 7:12 PM departing from CSUSM Sprinter Station and begins at 7:14 AM to 6:35 PM departing from Palomar College Transit Center. Route 347 does not operate on Sundays. Route 305 travels at 30-minute headways on weekdays, and 60-minute headways on Saturdays.

Existing Bicycle Conditions

There are currently Class II bike lanes in each direction of travel on E. Barham Drive, Woodland Parkway, and La Moree Road in the vicinity of the project site, consistent with the *City of San Marcos Bicycle and Pedestrian Plan* (City of San Marcos 2012).

Table 3.15-2 summarizes the existing and future bicycle facility classifications along E. Barham Drive within the study area.

Table 3.15-2. Bicycle Mobility

Street Segment	Existing Condition	Future Classification
Barham Drive		
Woodland Parkway to Project Driveway (West)	Class II Bicycle Lane	Class II Bicycle Lane
Project Driveway (West) to Project Driveway (East)	Class II Bicycle Lane	Class II Bicycle Lane
Project Driveway (East) to La Moree Road	Class II Bicycle Lane	Class II Bicycle Lane
East of La Moree Road	Class II Bicycle Lane	Class II Bicycle Lane

Source: City of San Marcos Bicycle and Pedestrian Master Plan. (San Marcos 2012)

3.15.2 Regulatory Setting

The following provides a general description of the applicable regulatory requirements and guidelines for the project area.

State Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) is the primary state agency responsible for transportation issues. One of its duties is the construction and maintenance of the state highway system. Caltrans has established standards for roadway traffic flow and has developed procedures to determine if intersections require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities, but may influence traffic flow and levels of services at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects.

AB 1358 – California Complete Streets Act of 2008

The California Complete Streets Act of 2008 (Assembly Bill [AB] 1358) requires circulation elements as of January 1, 2011 to accommodate the transportation system from a multi-modal perspective, including public transit, walking and biking, which have traditionally been marginalized in comparison to autos in contemporary American urban planning.

SB 743, CEQA Guidelines Update

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, which included the California Natural Resources Agency Guidelines for the Implementation of CEQA. As a result, the California Governor's Office of Planning and Research (OPR) updated and released the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018. According to the updated guidelines, lead agencies had until July 1, 2020 to comply with the updated CEQA revision. The City of San Marcos has adopted VMT thresholds as part of their Transportation Impact Analysis Guidelines (City of San Marcos 2020).

While VMT is the preferred quantitative metric for assessing potentially significant transportation impacts under CEQA, it should be noted that SB 743 does not prevent a city or county from using metrics such as LOS as part of the application of local general plan policies, municipal and zoning codes, conditions of approval, or any other planning requirements through a city's planning approval

process; cities can still ensure adequate operation of the transportation system in terms of transportation congestion measures related to vehicular delay and roadway capacity. As such, the City can continue to require congestion-related transportation analysis and mitigation projects through planning approval processes outside CEQA. Section 3.10 Land Use and Planning includes results of the LOS analysis prepared for the project.

Local Plans and Policies

SANDAG San Diego Forward: The Regional Plan

The Regional Comprehensive Plan (RCP), adopted in 2004 by the San Diego Association of Governments (SANDAG), laid out key principles for managing the region's growth while preserving natural resources and limiting urban sprawl. The plan covered eight policy areas, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, our borders, and social equity.

In 2011, SANDAG approved the 2050 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). This approval marked the first time SANDAG's RTP included a sustainable communities strategy, consistent with the Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill 375. This RTP/SCS provided a blueprint to improve mobility, preserve open space, and create communities, all with transportation choices to reduce greenhouse gas emissions and meet specific targets set by the California Air Resources Board (CARB) as required by the 2008 Sustainable Communities Act. In 2010, CARB established targets for each region in California governed by a metropolitan planning organization. SANDAG is the metropolitan planning organization for the San Diego region.

The SANDAG target, as set by CARB, is to reduce the region's per capita emissions of greenhouse gas emissions from cars and light-duty trucks by 7% by 2020, compared with a 2005 baseline. By 2035, the target is a 13% per capita reduction. There is no target set beyond 2035. To achieve the 2020 and 2035 targets, SANDAG and other metropolitan planning organizations are required to develop a Sustainable Communities Strategy (SCS) as an element of its RTP. The SANDAG SCS integrates land use and transportation plans to achieve reductions in greenhouse gas emissions and meet the CARB-required targets.

On October 9, 2015, the SANDAG Board of Directors adopted San Diego Forward: The Regional Plan (Regional Plan). The Regional Plan combines the two previously described existing regional planning documents: the RCP and the RTP/SCS. The Regional Plan updates growth forecasts and is based on the most recent planning assumptions considering currently adopted land use plans, including the City's General Plan and other factors from the cities in the region and the County. SANDAG's Regional Plan will change in response to the ongoing land use planning of the City and other jurisdictions. For example, the City's General Plan, and other local General Plans of cities, may change based on General Plan amendments initiated by the jurisdiction or landowner applicants. The General Plan amendments may result in increases in development densities by amending the regional category designations or zoning classifications. Accordingly, SANDAG's RTP/SCS latest forecasts of future development in the San Diego region, including location, must be coordinated closely with each jurisdiction's ongoing land use planning because that planning is not static, as recognized by the need for updates to SANDAG's RTP/SCS every 4 years.

In 2019, the SANDAG Board of Directors adopted the San Diego Forward: The 2019 Federal Regional Transportation Plan. It combines the big-picture vision for how the region will grow by 2050 with an implementation program to help make that vision a reality.

SANDAG is in the processing of developing San Diego Forward: The 2021 Regional Plan. The Regional Plan is updated every four years and combines three planning documents that SANDAG must complete per state and federal laws: The Regional Transportation Plan, Sustainable Communities Strategy, and Regional Comprehensive Plan. The Regional Plan also supports other regional transportation planning and programming efforts, including overseeing which projects are funded under the Regional Transportation Improvement Program and the TransNet program. SANDAG is applying data-driven strategies, innovative technologies, and stakeholder input to create a future system that is faster, fairer, and cleaner. Part of this data-driven approach includes the implementation of five key transportation strategies referred to as the 5 Big Moves. These strategies provide the framework for the Regional Plan and consider policies and programs, changes in land use and infrastructure, take advantage of the existing transportation highway and transit networks, and leverage trends in technology to optimize use of the transportation system. Together, these initiatives will create a fully integrated, world-class transportation system that offers efficient and equitable transportation choices, meets state climate targets, and supports local jurisdictions' achievements of Climate Action Plan goals.

Congestion Management Program (CMP)

The 2008 Congestion Management Program (CMP) for San Diego County was developed to meet the requirements of Section 65089 of the California Government Code. Since that time, the local agencies within San Diego County approved to opt out of the CMP requirements, as allowed within the Government Code. As such, there are no CMP-specific requirements associated with this project. However, to ensure the region's continued compliance with the federal congestion management process, SANDAG has prepared San Diego Forward: The Regional Plan in compliance with 23 Code of Federal Regulations 450.320. The Regional Plan incorporates performance monitoring and measurement of the regional transportation system, multimodal alternatives to single-occupancy vehicles, land use impact analysis, congestion management tools, and Integration with the Regional Transportation Improvement Program process.

City of San Marcos Transportation Impact Analysis Guidelines

The City of San Marcos approved Transportation Impact Analysis Guidelines (TIAG) on November 16, 2020 (City of San Marcos 2020). TIAG provide screening criteria for determining whether a land development project should conduct a Vehicle Miles Traveled (VMT) analysis. These thresholds are based on the project's consistency with the General Plan, estimated daily trips, project location, and other project characteristics. A VMT analysis applies to all land development projects except for those that meet at least one of the provided screening criteria.

City of San Marcos Bikeway Master Plan

The 2005 Bikeway Master Plan is an update to the City's original master plan adopted in 2001. Goals of the master plan were to obtain State Bicycle Transportation Account (BTA) grant funds and improve bicycle facilities throughout the city for safer routes to school, connections to adjacent cities and incorporate an environmental inventory analysis. One of the goals of the master plan was to connect the City's trails to bicycle facilities to complete a safe and enjoyable trail and bikeway system.

San Marcos General Plan

The Land Use and Community Design Element of the General Plan identifies specific policies related to congestion management. Those that are applicable to the proposed project are identified below.

- Policy LU-3.7: Require new development to prepare traffic demand management programs.

- Policy LU-3.8: Require new development and discretionary actions to annex into a Congestion Management Community Facilities District.

The Mobility Element of the General Plan identifies specific goals and policies related to an efficient circulation system, traffic calming and safety, and alternative modes of travel. Those that are applicable to the transportation analysis for the proposed project are identified below. Policy M-1.4, which addresses LOS is analyzed in Section 3.10-4, Land Use.

- Goal M-1: Provide a comprehensive multimodal circulation system that serves the City land uses and provides for the safe and effective movement of people and goods.
    - Policy M-1.1: Safely and efficiently accommodate traffic generated by development and redevelopment associated with implementation of the General Plan Land Use Policy Map
    - Policy M-1.2: Require new development to finance and construct internal adjacent roadway circulation and City-wide improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian and bicycle facilities.
    - Policy M-1.3: Require new developments to prepare and implement Transportation Demand Management (TDM) programs to minimize vehicle trip generation and promote alternative modes of travel within the city.
    - Policy M-1.4: Utilize multi-modal LOS techniques to evaluate transportation facilities. For identified prioritized modes (based on facility typology), provide the following minimum LOS as shown in Table 3-4 of the Mobility Element:
        - LOS D or better for Vehicles as a prioritized mode
            - Generally, provides facilities that have minimum vehicle congestion during peak periods. Most motorists are delayed less than 55 seconds at a signal (or less than one signalized cycle).
        - The City shall allow for flexible LOS where warranted (e.g., accepting a lower LOS than identified above).
    - Policy M-1.6: Work to improve connectivity within the City by closing gaps in the existing bicycle, pedestrian, trail, transit, and roadway network. Work with new development to provide connectivity and redundancy in the mobility network.
    - Policy M-1.7: Strive to ensure that streets within San Marcos shall be complete streets where feasible; thereby providing accessibility, safety, connectivity, and comfort for all modes and users of the system. Appropriate new local streets and Main Streets will prioritize pedestrian and bicycle users through the corridor.
- Goal M-2: Protect neighborhoods by improving safety for all modes of travel and calming traffic where appropriate.
    - Policy M-2.1: Work with new development to design roadways that minimize traffic volumes and/or speed, as appropriate within residential neighborhoods; while maintaining the City's desire to provide connectivity on the roadway network.
    - Policy M-2.3: Consider roundabouts, as appropriate, as an intersection control device with demonstrated air quality, traffic efficiency, and safety benefits.

- Goal M-3: Promote and encourage use of alternative transportation modes, including transit, bicycles, neighborhood electric vehicles (NEVs), and walking, within the City.
    - Policy M-3.1: Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.
    - Policy M-3.2: Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians through design, maintenance and law enforcement. Install wider sidewalks and curb extensions at pedestrian crossings (bulb outs) where appropriate.
    - Policy M-3.3: Provide a pedestrian and bicycle network in existing and new neighborhoods that facilitates convenient and continuous pedestrian and bicycle travel free of major impediments and obstacles.
    - Policy M-3.5: Ensure that streets in areas with high levels of pedestrian activity (such as employment centers, residential areas, mixed use areas, and schools) support safe pedestrian travel by providing detached sidewalks, bulb-outs, enhanced pedestrian crossings, pedestrian bridges, and medians.
    - Policy M-3.9: Create a pleasant walking environment for roadway typologies where pedestrian travel is prioritized. This includes providing shade trees, landscaping, benches, pedestrian-scale lighting, way finding signage, transit shelters, and other appropriate amenities.

The proposed project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As presented in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies with the exception of Policies M1.1 and M-1.4, which relate to level of service. As detailed in Section 3.10.4, Land Use, the project will have a significant and unavoidable impact at the Rancheros/SR 78 Westbound (WB) ramp.

3.15.3 Thresholds of Significance

Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* provides thresholds for determining significant environmental impacts. A project may be deemed to have a significant impact on transportation/traffic if it would:

- **Threshold #1:** Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; or
- **Threshold #2:** Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b); or
- **Threshold #3:** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- **Threshold #4:** Result in inadequate emergency access.

3.15.4 Project Impact Analysis

Threshold #1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities

The project would not result in any conflicts related to plans or policies addressing transit, bicycle and pedestrian facilities. The project would not result in any impact to existing built out pedestrian and bicycle facilities along the project frontage. The project's internal pedestrian circulation network would connect to the existing sidewalk on E. Barham. The closest bus stops are 0.7 mile from the project site and would not be impacted by the project. No impact related to a conflict with a program plan, ordinance, or policy addressing transit, bicycle and pedestrian facilities is identified for the project.

However, based upon the analysis presented in Section 3.10.4, the project will result in an inconsistency with the Mobility Element of the City's General Plan. Specifically, Mobility Element Policies M-1.1 and M-1.4 identify preferred level of service for roadways and intersections. The Local Mobility Analysis/Level of Service analysis presented in Section 3.10.4 of determined that all study intersections and street segments are calculated to operate acceptably at LOS D or better with the addition of project traffic, with the exception of three intersections. Northbound left-turn movements out of both the western and eastern project driveways would result in unacceptable LOS under Near Term 2025 and Horizon Year 2050 conditions. However, Mitigation Measures LU-2 and LU-3 were identified that restrict left-turns out of these driveways between 4 PM and 6 PM. Those measures would reduce impacts to below a level of significance.

Project traffic will also impact the Rancheros Drive / SR-78 WB Ramp which is calculated to operate at LOS F under both "without project" and "with project" in the Near Term 2025 conditions. Mitigation Measure MM-LU-1 would reduce this impact to below a level of significance but because MM-LU-1 includes funding for improvements at a facility that is under Caltrans control, not the City's control, it was concluded that the impact would be determined to be **significant and unavoidable.**

This represents a conflict with the LOS goals of the Mobility Element and represents a **significant impact (Impact TR-1)**.

- **Impact TR-1** Project-related traffic results in a significant increase in delay (greater than 2.0 seconds) at the Rancheros Drive/ SR- 78 WB intersection in the AM and PM peak hours under Near Term 2025 With Project condition.

Threshold #2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b).

The *City's Transportation Impact Analysis Guidelines* (San Marcos 2020b) provide several screening approaches to identify when a project should be expected to cause a less-than-significant impact related to VMT. The project does not meet any of the screening criteria therefore a transportation VMT analysis using the SANDAG Regional Travel Demand Model is required. The recommended tools to estimate VMT are outlined below.

- **SANDAG Travel Demand Model**: The SANDAG regional travel demand model can be used to estimate VMT and traffic volumes in the City. This tool can be used to estimate VMT efficiency metrics specific to a project, as well as total citywide VMT.

- **SANDAG Online VMT Tool:** SANDAG has prepared an online VMT estimating tool to estimate VMT efficiency metrics for residential and employment projects. This tool maps VMT by census tract in San Diego County.

The use of the SANDAG online VMT mapping tool should be limited to individual land-use projects where an efficiency metric (such as VMT per capita or per employee) is being estimated. In addition, the use of the online tool should be limited to projects generating fewer than 2,400 daily vehicle trips, with trip generation estimated using SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (April 2002).

VMT Significant Impact Thresholds

Based on the City's *Transportation Impact Analysis Guidelines,* the transportation VMT thresholds of significance are shown in **Table 3.15-2**. Since the project proposes a residential use, a significant impact would occur if the project generates VMT per resident that exceeds a level of 15 percent below the existing countywide average.

Table 3.15-2. VMT Impact Threshold by Land Use

Land Use Type	Impact Threshold
Residential Uses	A significant impact will occur if the project generates VMT per resident exceeding a level of 15 percent below the existing countywide average.
Employment Projects (including office and industrial)	A significant impact will occur if the project generates VMT per employee exceeding a level of 15 percent below the existing countywide average.
Retail Uses	A significant impact will occur if the project would result in a net increase in existing total citywide VMT.
Mixed-Use Projects	Evaluate each component of a mixed-use project independently and apply the significance threshold for each land use type, incorporating internalization reductions.
Redevelopment Projects (replaces existing uses)	If the project results in a net increase in VMT, apply the appropriate significance threshold for the project land use type(s).

Source: City of San Marcos Transportation Impact Analysis Guidelines (November 2020)

VMT Analysis

A detailed transportation VMT per resident analysis was conducted using the SANDAG Series 13 Year 2020 Travel Demand Model (LLG 2021). The model generates a land use-specific average trip length as well as an average daily volume, which ultimately calculates the total VMT per resident. The SANDAG Series 13 Year 2020 Travel Demand Model results are included in Appendix K of this document.

Table 3.15-3 summarizes the regional average baseline VMT results provided by SANDAG. As shown in Table 3.15-3, the regional average baseline VMT per resident is 17.6 miles per resident. For the purpose of determining the significance of VMT impacts, the project VMT per capita would need to be 15% below the Regional average, which equates to 14.96 VMT per resident.

Table 3.15-3. Project VMT Findings

Scenario	Regional Baseline VMT per Capita	Significance Threshold(1)	Project VMT per Capita	Transportation Impact? (Over Threshold)
VMT per Resident	17.6	14.96	18.2	Yes

Source: SANDAG, October, 2020
Note: (1) 85% of the Regional baseline VMT per capita

Similar to the regional average baseline calculations, the project VMT per resident was calculated. The project site is located in Traffic Analysis Zone (TAZ) 1026. As shown in 3.15-3, the average VMT per resident for TAZ 1026 is calculated at 18.2 VMT per resident. The results of the project VMT comparison indicate that the project would exceed the VMT significance threshold by 21.66%. This would require mitigation of 21.66% or more to reduce the VMT impact to less-than-significant.

When a project results in a significant impact, CEQA requires mitigation measures to be implemented to reduce or mitigate impacts. With the shift away from LOS, delay, and vehicular capacity metrics and impact thresholds to VMT thresholds, mitigating significant transportation impacts now requires focusing on measures to shorten vehicle trip distances or reduce single-occupancy vehicle trips (in favor of carpooling, taking public transit, bicycling, walking, and other modes), since VMT in essence is a function of the number of vehicle trips and their associated trip lengths. Whereas previous LOS-related mitigation measures focused on expanding roadway facilities primarily for vehicles, VMT-reducing mitigation measures can include modifying project characteristics, implementing on- or off-site improvements to transit, pedestrian and bicycle facilities, parking management strategies, and TDM strategies to either reduce or shorten vehicular trips.

Specific VMT mitigation strategies applicable to projects in the City have been developed based on a review of relevant literature and research. The selected strategies, as well as the applicable VMT reduction percentages and other attributes, included in Appendix K of this document, are primarily based on a review of the guidance published by the California Air Pollution Control Officers Association (CAPCOA) in August 2010 (*Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*).

Based on the VMT analysis presented above, a significant transportation impact is calculated. The results of the project VMT comparison indicate that the project would exceed the significance threshold by 21.66%. This would require mitigation of 21.66% or more to reduce the VMT impact to less-than-significant.

It should be noted that there is a limit to the amount of VMT reduction that can be applied to a development project. Within the City, with its suburban land use and transportation context, CAPCOA indicates that the maximum feasible total reduction combining all measures is 15%. All City-suggested off-site improvements are not applicable or not feasible for the project to install. Project design features that would contribute to additional VMT reductions include: 1) provision of bicycle racks; 2) the CC&Rs will include a requirement that the HOA inform community members about public transit and carpool options; and 3) a telecommute workspace will be available in the community room building. There are no other feasible mitigation measures to reduce VMT for the project. Even if all feasible mitigation measures were implemented, the project would still be unable to reduce impacts to below a level of significance.

However, the CAPCOA measure LUT-1 (Increase Density) was identified as a design measure that would reduce the project's VMT as calculated using the SANDAG Series 13 Year 2020 Travel Demand Model. This design measure was selected since the project's features meet the measure's description and applicability criteria. Per LUT-1, designing the project with increased densities (i.e., dwellings per unit area) affects the distance people travel and provides greater options for the mode of travel they choose. This measure is applicable for residential projects in a suburban area.

To calculate the VMT reduction for this design measure, a comparative VMT calculation was conducted between the residential density in TAZ 1026 and in the project site. The residential density for TAZ 1026 was calculated by taking the total number of dwelling units contained in the TAZ and dividing it by the total acreage on which the dwelling units lay. Based on the weighted average of the data, the residential density for TAZ 1026 is 7.03 dwelling units per acre. The average residential density of the project site is 14.3 dwelling units per acre. The calculations are included in Appendix K of this EIR.

Using the residential densities determined for TAZ 1026 and the project site, the corresponding VMT reductions were calculated using the CAPCOA methodology for LUT 1. The VMT reduction utilized for LUT-1 is the difference between the project site VMT reduction and the total TAZ VMT reduction.

The project's net-VMT reduction associated with LUT-1 is calculated to be 6.2%. This 6.2% reduction in the project's unadjusted VMT per capita of 18.2 results in a project VMT per capita of 17.07. Even with this adjustment, the project still exceeds the 14.96 VMT per capita significance threshold and results in a VMT-related **significant impact** (**Impact TR-2**).

- **Impact TR-2** The project's per capita VMT is 17.07, which exceeds the threshold of 14.96 VMT per capita.

Threshold #3: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Access to the project site will be via two unsignalized driveways on E. Barham Drive. The western driveway will be 40-feet wide and serve as the primary entry to the project site and provide full access. The eastern driveway will be 26-feet wide and will also provide full access. Based upon mitigation measures identified in Section 3.10, Land Use (MM-LU-2 and MM-LU-3), the project will be required to limit left turns out of both driveways between the PM Peak Hour (4:00 PM to 6:00 PM).

A secondary emergency-only access is provided through the western boundary of the project site at the western terminus of Street "C". This access will connect to an existing emergency access driveway on the adjacent property which connects to Saddleback Way and then to E. Barham Drive. This access point is for emergency vehicles only and bollards would be put in place. A vehicle queuing analysis was prepared for the project and is discussed later in this section.

The internal circulation network does not include any hazardous design features or propose any incompatible uses. As described in EIR Section 2.2.2.4, the proposed project's internal roadways are designed to provide safe movement of bicycle, pedestrian, and vehicle traffic through the project site. Vehicular circulation through the project will be via three private 26-foot-wide internal streets, Driveways "A", "B" and "C". These streets provide access to private alleys (Alleys A through K). In addition, the proposed project provides an accessible path of travel through the site and to each residence via pedestrian pathways that also connect to the sidewalk on E. Barham Drive.

Internal private driveways and alleys proposed within the project site are neighborhood streets designed to accommodate the level of traffic generated by the proposed project. Internal roadways

are designed to provide the safe and quiet movement of bicycle, pedestrian, and vehicle traffic through the project site and to provide attractive frontages to residential lots.

Vehicle Queuing

Access to the project site will be via two unsignalized, full access driveways on E. Barham Drive as described above. A two-way left-turn lane along the project frontage on E. Barham Drive currently exists and will help facilitate left-turns into and out of the project site at the western driveway. The eastern driveway will also be full access. However, Per MM-LU-2 and MM-LU-3, left turns will not be permitted at either driveway during the PM Peak hour (4 PM to 6 PM).

In order to ensure the vehicle queue turning left into and out of the project site won't exceed the available storage length, resulting in potential congestion and backups along E. Barham Drive and within the project site, an assessment of the potential left-turn queues at the project's western driveway was conducted using the Synchro analysis software. An assessment of the potential eastbound right-turn / thru lane queue at the intersection of E. Barham Drive / La Moree Road was also conducted at the City's request.

Under Near-Term + Project conditions, the 95th percentile queues at the locations listed above were calculated to be much less than the available storage during the AM and PM peak hours, as shown in **Table 3.15-4**. The 95th-percentile queue is defined to be the queue length that has only a 5-percent probability of being exceeded during the analysis time period. Therefore, the available storage is expected to contain the vehicular queues and no impact is identified.

Table 3.15-4. Vehicle Queue Summary

Intersection	Movement	Peak Hour	Available Storage (feet)	Year 2025 with Project Queue (feet)
E. Barham Drive / Project Driveway (West)	WBL	AM	>500	<25
		PM		<25
	NBL	AM	100	<25
		PM		<25
E. Barham Drive / Project Driveway (East)	WBL	AM	>500	<25
		PM		<25
	NBL	AM	100	<25
		PM		<25
E. Barham Drive / La Moree Road	EBR/Thru	AM	>500	51
		PM		116

Source: LLG 2021
General Note: 95th percentile queues reported.

Line of Sight Analysis

A line-of-sight assessment was conducted to determine if there is adequate sight distance for vehicles exiting the project site (LLG 2021). Sight distance is the length of roadway visible to a driver. The driver

of a vehicle departing a driveway should have an unobstructed view of oncoming traffic to anticipate and avoid potential collisions.

Two outbound maneuvers can be completed at the western driveway: the left-turn maneuver and the right-turn maneuver. The outbound left-turn maneuver requires first clearing eastbound thru traffic, then entering the westbound stream of traffic. The required sight distance for this maneuver is affected by the amount of time it takes the stopped vehicle to turn left, clear the eastbound traffic and reach average running speed of the westbound traffic without affecting the speed of approaching vehicles.

The outbound right-turn maneuver must have sufficient distance to permit entrance onto the intersection roadway and then accelerate to the posted speed limit without being overtaken by approaching vehicles.

Table 1 of the Intersection Sight Distance Guidelines (San Marcos 2020b) lists the minimum sight distance requirements for the left and right-turn maneuvers based on design speeds. The design speed of E. Barham Drive Barham is 50 miles per hour (mph), and therefore based on the Intersection Sight Distance Guidelines, 550 feet of sight distance for the left-turn maneuver (looking eastbound) and 480 feet of stopping sight distance for the right-turn maneuver (looking westbound) should be provided.

Based on the Sight Visibility Triangle exhibit prepared for the project (included in Appendix J of Appendix K of this EIR), an adequate amount of unobstructed sight distance is provided looking both to the east and west from both of the proposed driveways.

As such, because the proposed project would not include any hazardous design features or any incompatible uses, and because the project would be designed to provide safe movement throughout and around the project site, impacts would be **less than significant.**

Threshold #4: Result in inadequate emergency access.

The project has been designed to incorporate a secondary emergency access point, in addition to the two project driveways. A secondary emergency-only access is provided through the western boundary of the project site to connect to an existing emergency access driveway on the adjacent property which connects to Saddleback Way and then to E. Barham Drive. This access point is for emergency vehicles only and bollards would be put in place. Driveways and alleys within the project site will be private.

Fire truck templates were run for the project to ensure acceptable access and operation. The fire truck templates are included in Appendix K of this document. There is adequate space for fire truck ingress, egress and turning movements within the project. Additionally, the project design has also been reviewed by the Fire Marshal and no issues related to inadequate emergency access were identified. Impacts will be **less than significant**.

3.15.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative

impact with respect to transportation, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts related to hazards. All of the cumulative projects identified in Table 2-3 are considered in this cumulative analysis.

Cumulative VMT Analysis

According to the City's Transportation Impact Analysis Guidelines (San Marcos 2020b) if a land use project (or a component of a mixed-use project) is screened out of requiring a detailed existing VMT analysis or if it falls below the existing VMT thresholds outlined in Table 2 of the Transportation Impact Analysis Guidelines, it would also result in a less than significant cumulative impact.

For the proposed project, which proposes a residential use, a significant impact would occur if the project generates VMT per resident exceeding a level of 15 percent below the existing countywide average. As detailed in Section 3.15.4, the project will have a VMT per resident that exceeds this amount. A significant and unavoidable impact was identified.

Per the City's Transportation Impact Analysis Guidelines, if a project does not screen out, or exceeds the threshold, the project must demonstrate consistency with the City's General Plan to result in a less than significant cumulative impact. If City staff determines consistency with the General Plan, then the project would result in less than significant cumulative impacts. If the City determines inconsistency (due to proposed land uses and/or densities), a cumulative impact analysis would be required to determine if the project would result in a net increase in regional VMT.

Based upon the analysis presented in Section 3.10, Land Use, the proposed project was determined to be inconsistent with two policies of the Mobility Element of the General Plan. Further, because the proposed project results in a significant and unavoidable project-level VMT impact, it is also concluded that the project results in a **significant and unavoidable cumulative VMT impact.** As a condition of project approval, the applicant/developer/property owner shall submit an executed version of petition to annex into and establish, with respect to the property, the special taxes levied by the following Community Facility District: CFD2011-01 (Congestion Management).

Hazards Due to Design and Emergency Access

Site design hazards and emergency access are analyzed and addressed on a project-by-project basis. Impacts for the project in these two topical areas were determined to be less than significant. Each of the projects in Table 2-3 that included development would be reviewed to ensure that the site design does not include any traffic related hazards and that there is adequate emergency access or required mitigation measures to reduce impacts. **Therefore, no cumulative impact is identified.**

3.15.6 Mitigation Measures

Impact TR-1 Conflict with Policies Addressing Roadways

Implementation of mitigation measures LU-1, LU-2 and LU-3, which were identified in Section 3.10, Land Use, are applicable to this impact:

MM-LU-1 Prior to the issuance of the first building permit, the Project Developer shall pay the local and regional Public Facility Fees (PFF) development fees assessed to address the impact to the City of San Marcos' SR-78 Interchanges.

MM-LU-2 The project shall restrict left-turns out of the western project driveway between the hours of 4 PM and 6 PM. Signage shall be placed at the western project driveway identifying the turning movement timing restriction. The signage requirement shall be noted on the final project plans and shall be put in place prior to project operation.

MM-LU-3 The project shall restrict left-turns out of the eastern project driveway between the hours of 4 PM and 6 PM. Signage shall be placed at the eastern project driveway identifying the turning movement timing restriction. The signage requirement shall be noted on the final project plans and shall be put in place prior to project operation.

Impact TR-2 Vehicle Miles Traveled

There are no applicable or feasible mitigation measures to reduce the project's VMT impact. The impact remains significant and unavoidable.

3.15.7 Conclusion

Based upon the analysis presented in Section 3.15.4, the project will not have an impact related to a conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The project will result in a significant and unavoidable impact related to consistency with policies related to roadways. Based upon the analysis presented in Section 3.10.4, the project will result in an inconsistency with the Mobility Element of the City's General Plan. Specifically, Mobility Element Policies M-1.1 and M-1.4 identify preferred level of service for roadways and intersections. Mitigation measures MM-LU-1, MM-LU-2 and MM-LU-3 would reduce this impact to below a level of significance. However, because the mitigation measure MM-LU-1 includes funding for improvements at a facility that is under Caltrans control, not the City's control, it was concluded that the impact would be determined to be **significant and unavoidable.**

Project impacts related to hazards due to a design feature or incompatible use or inadequate emergency access were determined to be **less than significant.**

The project will have a significant and unavoidable impact related to VMT. While the project represents an increase in residential density on the project site compared to the residential density in TAZ 1026, this is not enough to offset the project's increase in VMT in light of the City's threshold. The project's net VMT per capita is 17.07, which exceeds the 14.96 VMT per capita significance threshold.

VMT-reducing mitigation measures can include modifying project characteristics, implementing on- or off-site improvements to transit, pedestrian and bicycle facilities, parking management strategies, and TDM strategies to either reduce or shorten vehicular trips. Specific VMT mitigation strategies applicable to projects in the City have been developed based on a review of relevant literature and research. The selected strategies, as well as the applicable VMT reduction percentages and other attributes are included in Appendix K of this document. Of the various mitigation strategies that are presented in the VMT Mitigation Measures Memorandum (Kittelson & Associates 2020) as option for projects in the City, the majority are not applicable to the project based upon the type of use proposed and/or the location of the project. Each of the possible mitigation options was reviewed by the project applicant and were determine to not be applicable to the project or not feasible.

It should be noted that there is a limit to the amount of VMT reduction that can be applied to a development project. Within the City, with its suburban land use and transportation context, CAPCOA indicates that the maximum feasible total reduction combining all measures is 15%. So even if there were feasible mitigation measures and all were implemented, the project would still be unable to reduce impacts to below a level of significance.

As such, there are no mitigation measures identified to reduce the project's VMT. VMT impacts remain **significant and unavoidable**.

3.16 Tribal Cultural Resources

Introduction

This section analyzes the potential impacts of the proposed project on tribal cultural resources. As defined by Public Resources Code Section 21074, a tribal cultural resource is 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 1) either on or eligible for the California Register of Historic Resources (CRHR) or a local historic register, or 2) determined by the City, at its discretion to treat the resources as a tribal cultural resource (Public Resources Code Section 5024.1). Cultural resources are further analyzed in Section 3.4, Cultural Resources, of the Environmental Impact Report (EIR).

The analysis in this section is based upon the following report prepared by ASM Affiliates (ASM) as on-site well as specific outreach and consultation with appropriate Tribes:

- *Cultural Resources Inventory for the Barham Residential Project*, San Marcos, California, November 3, 2020 (ASM 2020)

The analysis also considers the California Environmental Quality Act (CEQA) Guidelines Appendix G and applicable State and Local regulations, including the City of San Marcos General Plan. The cultural resources study is included as **Appendix F.1** of the EIR and the General Plan is available on the City's web site.[16] **Table 3.16-1** summarizes the cultural resources project- and cumulative- level impacts, by threshold.

Table 3.16-1. Tribal Cultural Resources Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#1 – 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 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).	Potentially Significant	No Impact	Mitigated to Less Than Significant
#2 – 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	Potentially Significant	No Impact	Mitigated to Less Than Significant

16 http://www.san-marcos.net/work/economic-development/general-plan

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
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 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			

3.16.1 Existing Conditions

This section provides information on the archeological context of the project site. It also provides information on the outreach and consultation efforts with local Tribes, as required by existing regulations.

Natural Setting

As discussed in Section 2, Project Description, of this EIR, the project site is generally undeveloped but appears to have been disturbed historically based on the presence of non-native grassland distinct from adjacent habitats and visible in historical aerial photographs of the area. Remains of an early twentieth-century agricultural homestead and surrounding orchard in existence as early as 1947 are present on the site and have been evaluated for historical significance. The majority of the project site supports non-native grassland, with Diegan coastal sage scrub habitat occurring along the southern project site boundary. A smaller area of Diegan coastal sage scrub – Baccharis dominated habitat occurs along the eastern project boundary, and disturbed land and ornamental vegetation occur scattered throughout the non-native grassland across the majority of the site. Developed, ruderal, and ornamental land border the north, east, and west project boundaries.

Historical Context

Native Americans have occupied San Diego County for the past 10,000 years. The Archaic Period extends back at least 7,200 years, possibly to as early as 9,000 years ago. Early Archaic occupations in San Diego County are most apparent along the coast and major drainage systems extending inland from the coastal plains. Coastal Archaic sites are generally characterized by cobble tools, basin metates, manos, discoidals, dart points, and flexed burials. Together, these elements typify the La Jolla complex, which appears as the early coastal manifestation of a more diversified way of life.

Around 2,000 years ago, people from the Colorado River region began migrating into southern California in what is known at the Late Prehistoric period. Late Prehistoric sites are generally characterized by small, pressure-flaked projectile points, ceramics, an emphasis on collecting,

processing, and storing plant food, and cremations. Villages became increasingly permanent, providing opportunity for the creation of stationary milling stations and the use of mortars for acorn processing.

In more recent times, two main cultural groups occupied San Diego County: the Luiseño in the north and the Kumeyaay (or Diegueño) in the south.

Records Search

A records search was undertaken at the South Coastal Information Center (SCIC) of the California Historical Resources Information System on September 16, 2020 by ASM. The records search encompassed a search radius of one mile around the project site. A total of 55 previous cultural resources reports have been conducted within a mile radius of the project area. Six of these reports address areas that intersect or overlap with the project area. California Historical Resources Information System (CHRIS) records indicate the presence of 24 previously recorded cultural resources within a one-mile radius of the project site. No cultural resources have been previously recorded within the project area.

In general, the sites that were previously recorded within a one-mile radius of the project site consist predominantly of prehistoric resources. Most of these prehistoric sites are lithic scatters and bedrock milling features. Two prehistoric sites were noted to contain habitation debris, and one site was noted to contain burials, indicating a more intensive use of those locations during the prehistoric period. Several remnants of historic period features associated with single family properties, including foundations, privies, trash scatters, walls, fences, and associated historic debris scatters have been recorded within one mile of the project site. Many of these sites were previously disturbed or destroyed by modern construction and development activities and are now characterized by sparse surficial, as well as sparse or relatively shallow subsurface deposits.

Tribal Coordination

A Sacred Lands File (SLF) search at the Native American Heritage Commission (NAHC) by ASM on September 25, 2020. ASM received a response letter from the NAHC on October 5, 2020 stating that a search of the Sacred Lands File was negative.

A list of 31 Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project was also provided by the NAHC. A project notification letter was sent to each of the Native American contacts provided by the NAHC on October 7, 2020 by ASM Affiliates. Three responses were received, including from the Viejas Band of Kumeyaay Indians (Viejas Band) on October 9, 2020, the Rincon Band of Luiseño Indians (Rincon Band) on October 13, 2020, and the Jamul Indian Village of California on October 19, 2020.

The Viejas Band letter indicated that the site does have cultural significance or ties to the Kumeyaay Nation and they recommended contacting the San Pasqual Band of Mission Indians (San Pasqual Band) and also requested that the City follow all National Environmental Policy Act, CEQA, and Native American Grave Protection and Repatriation Act laws and that City immediately contact San Pasqual of any changes or inadvertent discoveries. The San Pasqual Band was contacted as part of ASM's project notification letter process.

The Rincon Band letter indicated that they do not have knowledge of cultural resources within the proposed project area but that does not mean that none exist. They also requested that a cultural resources report be prepared and a Sacred Lands File search be conducted. The cultural resources

report prepared for the project (ASM 2020) included a Sacred Lands File search and the results of the search and report have been provided to the Rincon Band.

The Jamul Indian Village of California letter defers to the wishes of a closer tribe for the proposed project. They defer to the Iipay Nation of Santa Ysabel or the Mesa Grande Band of Mission Indians. The City has included the Iipay Nation of Santa Ysabel or the Mesa Grande Band of Mission Indians on its distribution list for all project notices.

The City sent out notices to Tribes consistent with the requirements of AB 52. The Rincon Band and the San Luis Rey band requested consultation.:

The City consulted with the Rincon Band and the Tribe requested the City's standard cultural resources mitigation measures be applied to the project. These measures are included for the project (MM-CR-1a through MM-CR-1c). On May 19, 2021 the Rincon Band submitted a letter saying they had no further comments and requested to conclude consultation.

The City provided the San Luis Rey Band the proposed mitigation measures for cultural resources. On June 8, 2021, the San Luis Rey Band submitted a letter to the City stating they had reviewed the measures and indicated that they adequately address the Tribe's concerns. The Tribe also requested to conclude consultation.

On-site Resources

As detailed in Section 3.4, Cultural Resources, of the EIR, ASM conducted a pedestrian survey of the project site in October 2020. No prehistoric cultural material was identified on the ground surface of the project site. All rodent burrows and back dirt, and other portions of exposed ground were carefully examined but provided no evidence for the presence of prehistoric cultural resources in those areas. However, the majority of the project site is covered with vegetation, and the vegetation density effectively limited ground surface visibility in the majority of the project site during the pedestrian survey. Therefore, it is possible that prehistoric cultural materials are present on the ground surface within the project site that were not visible during the survey.

As identified in Section 3.4.4, while historical resources (Barham-2020-ASM-HD-01) were identified on the project site, including several concrete and rock foundation remains, concrete rubble, historic debris scatters, and metal t-post and wire fencing remnants, the site was determined to be ineligible for listing in the California Register of Historical Resources (CRHR) under any of the four criteria.

3.16.2 Regulatory Setting

The following section provides a general description of the applicable regulatory requirements pertaining to tribal cultural resources. The analysis of tribal cultural resources is a State requirement under CEQA, as required by Assembly Bill (AB) 52, described below. The City also has goals and policies in the General Plan Conservation and Open Space Element related to cultural resources, as described below.

Federal

Please see Section 3.4.2, Cultural Resources – Regulatory Setting, for a description of Federal regulations pertaining to cultural resources. There are no specific federal regulations that pertain, specifically, to tribal cultural resources.

State

Senate Bill 18

SB 18, approved in 2004, amends the California Civil Code and the California Government Code, requiring cities and counties to contact and consult with California Native American tribes prior to adopting or amending any general plan or specific plan, or designating land as open space in order to preserve or mitigate impacts to specified Native American places, features and objects that are located within the city's or county's jurisdiction. SB 18 also requires cities and counties to hold in strict confidence any information about the specific identity, location, character or use of these resources. In 2005, OPR published Tribal Consultation Guidelines to guide cities and counties on the process of engaging in consultation in accordance with SB 18. The Native American Heritage Commission (NAHC) maintains a list of California Native American Tribes with whom cities and counties must consult pursuant to SB 18.

Assembly Bill 52

AB 52 was approved in 2014 and adds new requirements regarding consultation with California Native American Tribes and consideration of tribal cultural resources. The law went into effect on July 1, 2015 and after that date, if requested by a California Native American Tribe, lead agencies must consult prior to the release of a Negative Declaration, Mitigated Negative Declaration or Draft EIR.

Local

San Marcos General Plan Conservation and Open Space Element

The Conservation and Open Space Element of the City's General Plan does not contain any specific policies that address tribal cultural resources; however, it does contain several policies pertaining to the protection of archaeological resources. The following goal and policies apply to the project:

- Policy COS-2.5: Continue to review future development proposals to ensure that cultural resources (including prehistoric, historic, paleontological, and SB 18 Tribal resources) are analyzed and conserved in compliance with CEQA requirements.

- Goal COS-11: Continue to identify and evaluate cultural, historic, archaeological, paleontological and architectural resources for protection from demolition and inappropriate actions.

    - Policy COS-11.1: Identify and protect historic and cultural resources including individual properties, districts and sites (e.g., archaeological sites) in compliance with CEQA.

The project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-1, the project is consistent with the applicable General Plan goals and policies pertaining to cultural resources.

3.16.3 Thresholds of Significance

The determination of significance for tribal cultural resources is based on *CEQA Guidelines Appendix G*. Impacts to tribal cultural resources would be significant if the proposed project would:

- **Threshold #1:** Cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or

in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or

- **Threshold #2:** Cause a substantial adverse change in the significance of a tribal cultural resource that is 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.16.4 Project Impact Analysis

Project grading activities will result in ground disturbance in those areas of the project site proposed for development. Ground disturbing activities can result in impacts to tribal cultural resources if they are present on the project site. Mitigation measures have been identified in Section 3.4, Cultural Resources, to reduce the potential to impacts to unknown cultural resources to below a level of significance (MM CR-1a through MM-CR-1c and MM-CR-2). The following analysis discusses the potential for the project to have on tribal cultural resources.

Threshold #1: Cause a substantial adverse change in the significance of a tribal cultural resource that is 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).

Based upon the cultural resources study prepared for the project (ASM 2020)[17] and consultation with local tribes, the project site does not contain any known tribal cultural resources that are listed or eligible for listing in the CRHR or in a local register of historical resources. No prehistoric cultural material was identified on the ground surface of the project site. All rodent burrows and back dirt, and other portions of exposed ground were carefully examined but provided no evidence for the presence of prehistoric cultural resources in those areas. However, the majority of the project site is covered with vegetation, and the vegetation density effectively limited ground surface visibility in the majority of the project site during the pedestrian survey. Therefore, it is possible that prehistoric cultural materials are present on the ground surface within the project site that were not visible during the survey (Impact CR-1). Mitigation is required to reduce potential impacts to unknown subsurface resources. MM-CR-1a through MM-CR-1c provide for the presence of archaeological and Native American monitors during ground disturbing activities that would be able to identify any previously unidentified cultural resources, to prevent inadvertent disturbance of any intact cultural deposits that may be present. Should any resources be identified, implementation of MM-CR-1a through MM-CR-1c would ensure proper handling and treatment of such resources by providing for a proper evaluation to determine whether additional archaeological work is necessary. To further ensure impacts to Native American archaeological resources are protected, implementation of MM-CR-1a through MM-CR-1c and MM-CR-2 provides additional protections for significant resources, and describes the process for proper treatment and handling to ensure impacts are minimized. Implementation of this mitigation would reduce potential project-level impacts to tribal cultural resources to **below a level of significance**.

ASM identified several historic features on a slightly elevated knoll in the northeastern portion of the project site, including several concrete and rock foundation remains, concrete rubble, historic debris scatters, and metal t-post and wire fencing remnants. The cultural materials identified in association with the historic site would not be considered tribal cultural resources. A review of historic aerial photos

17 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.

indicated that the historic site appears to represent the remains of an early twentieth-century agricultural homestead and surrounding orchard in existence as early as 1947. In accordance with CEQA and the cultural resource management requirements of the City of San Marcos, ASM prepared an archaeological significance evaluation to determine eligibility for listing in the CRHR. As discussed in Section 3.4 Cultural Resources, ASM determined that the site was not eligible for listing in the CRHR under any of the four criteria.

Threshold #2: Cause a substantial adverse change in the significance of a tribal cultural resource that is 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The City has not identified any cultural resources to be present on the project site pursuant to Public Resources Code Section 5024.1. Based upon the cultural resources study prepared for the project (ASM 2020) and consultation with local tribes, the project site does not contain any known tribal cultural resource that are significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1**.** However, as described in Section 3.4, Cultural Resources, and as identified above, impacts to unknown subsurface archaeological resources may occur on the project site. Therefore, the project has the potential to disturb unidentified archeological resources during project grading (Impact CR-1). MM-CR-1a through MM-CR-1c provide for the presence of archaeological and Native American monitors during ground disturbing activities that would be able to identify any previously unidentified cultural resources, to prevent inadvertent disturbance of any intact cultural deposits that may be present. Should any resources be identified, implementation of MM-CR-1a through MM-CR-1c would ensure proper handling and treatment of such resources by providing for a proper evaluation to determine whether additional archaeological work is necessary. To further ensure impacts to Native American archaeological resources are protected, implementation of MM-CR-1a through MM-CR-1c and MM-CR-2 provides additional protections for significant resources, and describes the process for proper treatment and handling to ensure impacts are minimized. Implementation of this mitigation would reduce potential project-level impacts to tribal cultural resources to below a level of significance.

3.16.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to tribal cultural resources, the cumulative analysis is based upon a list approach to determine the proposed project's contributing effect on potential cumulative impacts on tribal cultural resources.

While no resources were identified on the project site during the cultural resources reconnaissance, it was determined that there could be a potential for unidentified resources to be encountered subsurface during project grading. Other cumulative projects would be required to assess the potential for impact to archaeological resources and provide mitigation measures or avoidance measures to reduce significant impacts to cultural resources consistent with the requirements of CEQA and the City.

Additionally, the lead agency is required to consult with tribes pursuant to the requirements of SB 18 and/or AB 52. The City requires standard conditions of approval related to construction monitoring by an archeologist to ensure there are no inadvertent impacts to archeological resources. Cumulative impacts would be **less than significant**.

3.16.6 Mitigation Measures

Mitigation measures MM-CR-1-a through MM-CR-1b and MM-CR-2 identified in Section 3.4, Cultural Resources, would reduce potential tribal cultural resources impacts to below a level of significance.

MM-CR-1a **Pre-Excavation Agreement.** Prior to the issuance of a Grading Permit, or ground disturbing activities, the Applicant/Owner shall enter into a Tribal Cultural Resources Treatment and Repatriation Agreement (Pre-Excavation Agreement) with a Traditionally and Culturally Affiliated Native American Tribe (TCA Tribe), identified in consultation with the City. The purpose of the Pre-Excavation Agreement shall be to formalize protocols and procedures between the Applicant/Owner and the TCA Tribe for the protection, treatment, and repatriation of Native American human remains, funerary objects, cultural and/or religious landscapes, ceremonial items, traditional gathering areas, and other tribal cultural resources. Such resources may be located within and/or discovered during ground disturbing and/or construction activities for the proposed project, including any additional culturally appropriate archaeological studies, excavations, geotechnical investigations, grading, preparation for wet and dry infrastructure, and other ground disturbing activities. Any project-specific Monitoring Plans and/or excavation plans prepared by the project archaeologist shall include the TCA Tribe requirements for protocols and protection of tribal cultural resources that were agreed to during the tribal consultation.

The landowner shall relinquish ownership of all non-burial related tribal cultural resources collected during construction monitoring and from any previous archaeological studies or excavations on the project site to the TCA Tribe for proper treatment and disposition per the Pre-Excavation Agreement, unless ordered to do otherwise by responsible agency or court of competent jurisdiction. The requirement and timing of such release of ownership, and the recipient thereof, shall be reflected in the Pre-Excavation Agreement. If the TCA Tribe does not accept the return of the cultural resources, then the cultural resources will be subject to curation.

MM-CR-1b **Construction Monitoring.** Prior to the issuance of a Grading Permit or ground disturbing activities, the Applicant/Owner or Grading Contractor shall provide written documentation (either as signed letters, contracts, or emails) to the City's Planning Division stating that a Qualified Archaeologist and Traditionally and Culturally Affiliated Native American monitor (TCA Native American monitor) have been retained at the Applicant/Owner or Grading Contractor's expense to implement the construction monitoring program, as described in the Pre-Excavation Agreement.

The Qualified Archaeologist and TCA Native American monitor shall be invited to attend all applicable pre-construction meetings with the General Contractor and/or associated subcontractors to present the construction monitoring program. The

Qualified Archaeologist and TCA Native American monitor shall be present on site during grubbing, grading, trenching, and/or other ground disturbing activities that occur in areas of native soil or other permeable natural surfaces that have the potential to unearth any evidence of potential archaeological resources or tribal cultural resources. In areas of artificial paving, the Qualified Archaeologist and TCA Native American monitor shall be present on the site during grubbing, grading, trenching, and/or other ground disturbing activities that have the potential to disturb more than six inches below the original pre-project ground surface to identify any evidence of potential archaeological or tribal cultural resources. No monitoring of fill material, existing or imported, will be required if the General Contractor or developer can provide documentation to the satisfaction of the City that all fill materials being utilized at the site are either: 1) from existing commercial (previously permitted) sources of materials; or 2) are from private or other non-commercial sources that have been determined to be absent of tribal cultural resources by the Qualified Archaeologist and TCA Native American monitor.

The Qualified Archaeologist and TCA Native American monitor shall maintain ongoing collaborative coordination with one another during all ground disturbing activities. The requirement for the construction monitoring program shall be noted on all applicable construction documents, including demolition plans, grading plans, etc. The Applicant/Owner or Grading Contractor shall provide written notice to the Planning Division and the TCA Tribe, preferably through e-mail, of the start and end of all ground disturbing activities.

Prior to the release of any grading bonds, or prior to the issuance of any project Certificate of Occupancy, an archaeological monitoring report, which describes the results, analysis, and conclusions of the construction monitoring shall be submitted by the Qualified Archaeologist, along with any TCA Native American monitor's notes and comments received by the Qualified Archaeologist, to the Planning Division Manager for approval. Once approved, a final copy of the archaeological monitoring report shall be retained in a confidential City project file and may be released, as a formal condition of Assembly Bill (AB) 52 consultation, to the Rincon Band, the San Luis Rey Band, or any parties involved in the project specific monitoring or consultation process. A final copy of the report, with all confidential site records and appendices, will also be submitted to the South Coastal Information Center after approval by the City.

MM-CR-1c **Unanticipated Discovery Procedures.** Both the Qualified Archaeologist and the TCA Native American monitor may temporarily halt or divert ground disturbing activities if potential archaeological resources or tribal cultural resources are discovered during construction activities. Ground disturbing activities shall be temporarily directed away from the area of discovery for a reasonable amount of time to allow a determination of the resource's potential significance. Isolates and clearly non-significant archaeological resources (as determined by the Qualified Archaeologist, in consultation with the TCA Native American monitor) will be minimally documented in the field. All unearthed archaeological resources or tribal cultural resources will be collected, temporarily stored in a secure location (or as otherwise agreed upon by the Qualified Archaeologist and the TCA Tribe), and repatriated according to the terms of the Pre-Excavation Agreement, unless ordered to do otherwise by responsible agency or court of competent jurisdiction.

If a determination is made that the archaeological resources or tribal cultural resources are considered potentially significant by the Qualified Archaeologist, the TCA Tribe, and the TCA Native American monitor, then the City and the TCA Tribe shall determine, in consultation with the Applicant/Owner and the Qualified Archaeologist, the culturally appropriate treatment of those resources.

If the Qualified Archaeologist, the TCA Tribe, and the TCA Native American monitor cannot agree on the significance or mitigation for such resources, these issues will be presented to the Planning Division Manager for decision. The Planning Division Manager shall make a determination based upon the provisions of CEQA and California Public Resources Code Section 21083.2(b) with respect to archaeological resources and California Public Resources Section 21704 and 21084.3 with respect to tribal cultural resources, and shall take into account the religious beliefs, cultural beliefs, customs, and practices of the TCA Tribe.

All sacred sites, significant tribal cultural resources, and/or unique archaeological resources encountered within the project area shall be avoided and preserved as the preferred mitigation. If avoidance of the resource is determined to be infeasible by the City as the Lead Agency, then the City shall require additional culturally appropriate mitigation to address the negative impact to the resource, such as, but not limited to, the funding of an ethnographic study and/or a data recovery plan, as determined by the City in consultation with the Qualified Archaeologist and the TCA Tribe. The TCA Tribe shall be notified and consulted regarding the determination and implementation of culturally appropriate mitigation and the drafting and finalization of any ethnographic study and/or data recovery plan, and/or other culturally appropriate mitigation. Any archaeological isolates or other cultural materials that cannot be avoided or preserved in place as the preferred mitigation shall be temporarily stored in a secure location on site (or as otherwise agreed upon by the Qualified Archaeologist and TCA Tribe), and repatriated according to the terms of the Pre-Excavation Agreement, unless ordered to do otherwise by responsible agency or court of competent jurisdiction. The removal of any artifacts from the project site will be inventoried with oversight by the TCA Native American monitor.

If a data recovery plan is authorized as indicated above and the TCA Tribe does not object, then an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. If the Qualified Archaeologist collects such resources, the TCA Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologist does not collect the cultural resources that are unearthed during the ground disturbing activities, the TCA Native American monitor may, at their discretion, collect said resources for later reburial or storage at a local curation facility, as described in the Pre-Excavation Agreement.

In the event that curation of archaeological resources or tribal cultural resources is required by a superseding regulatory agency, curation shall be conducted by an approved local facility within San Diego County and the curation shall be guided by California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections. The City shall provide the Applicant/Owner final

curation language and guidance on the project grading plans prior to issuance of the grading permit, if applicable, during project construction. The Applicant/Owner shall be responsible for all repatriation and curation costs and provide to the City written documentation from the TCA Tribe or the curation facility, whichever is most applicable, that the repatriation and/or curation have been completed.

Human Remains

MM-CR-2 **Human Remains.** As specified by California Health and Safety Code Section 7050.5, if human remains, or remains that are potentially human, are found on the project site during ground disturbing activities or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Medical Examiner's Office by telephone. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie adjacent remains (as determined by the Qualified Archaeologist and/or the TCA Native American monitor) shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98.

If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the Qualified Archaeologist and/or the TCA Native American monitor), and consultation and treatment could occur as prescribed by law. As further defined by State law, the Medical Examiner will determine within two working days of being notified if the remains are subject to his or her authority. If the Medical Examiner recognizes the remains to be Native American, and not under his or her jurisdiction, then he or she shall contact the Native American Heritage Commission by telephone within 24 hours. The Native American Heritage Commission will make a determination as to the Most Likely Descendent, who shall be afforded 48 hours from the time access is granted to the discovery site to make recommendations regarding culturally appropriate treatment.

If suspected Native American remains are discovered, the remains shall be kept in situ (in place) until after the Medical Examiner makes its determination and notifications, and until after the Most Likely Descendent is identified, at which time the archaeological examination of the remains shall only occur on site in the presence of the Most Likely Descendent. The specific locations of Native American burials and reburials will be proprietary and not disclosed to the general public. According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). In the event that the Applicant/Owner and the Most Likely Descendant are in disagreement regarding the disposition of the remains, State law will apply, and the mediation process will occur with the NAHC. In the event that mediation is not successful, the landowner shall rebury the remains at a location free from future disturbance (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

3.16.7 Conclusion

Based upon the cultural resources study prepared for the project (ASM 2020) and consultation with local tribes pursuant to SB 18 and AB 52, the project site does not contain any known tribal cultural resource that are listed or eligible for listing in the CRHR or in a local register of historical resources. However, as described in impacts to unknown subsurface archaeological resources may occur on the project site. Therefore, the proposed project has the potential to disturb unidentified archeological resources during project grading. Mitigation is required to reduce potential impacts to unknown subsurface resources. MM-CR-1a through MM-CR-1c provide for the presence of archaeological and Native American monitors during ground disturbing activities that would be able to identify any previously unidentified cultural resources, to prevent inadvertent disturbance of any intact cultural deposits that may be present. Should any resources be identified, implementation of MM-CR-1a through MM-CR-1c would ensure proper handling and treatment of such resources by providing for a proper evaluation to determine whether additional archaeological work is necessary. To further ensure impacts to Native American archaeological resources are protected, implementation of MM-CR-1a through MM-CR-1c and MM-CR-2 provides additional protections for significant resources, and describes the process for proper treatment and handling to ensure impacts are minimized. Implementation of this mitigation would reduce potential project-level impacts to tribal cultural resources to below a level of significance.

3.17 Utilities and Service Systems

Introduction

This section identifies the existing service providers for utilities and service systems, including water, wastewater, stormwater drainage, electric power, natural gas and telecommunications facilities and analyzes the ability of these providers to serve the proposed project based upon current utility infrastructure. A detailed energy consumption analysis is included in Section 3.5, Energy, of this EIR.

The analysis in this section relies on the following documents, which are included as **Appendices N.1 and N.2 of the EIR**[18]:

- Hallmark-Barham Water and Sewer Study, Final Technical Memorandum, prepared by Vallecitos Water District, October 23, 2020.
- *Request for Comments on the 943 E. Barham Drive Project*, a letter from Karen Falk, Engineering Manager at RDDMWD, April 6, 2021.

The sewer study technical memorandum considered sewage generation increases due to proposed densification from the proposed project. The Vallecitos Water District (VWD) study also analyzed the ability of VWD's infrastructure to serve the proposed project and made recommendations for the capital improvements for demand generated by the proposed project.

Table 3.17-1 summarizes the utilities and service system analysis, by threshold.

Table 3.17-1. Utilities and Service Systems Summary of Impacts

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
#1 - Require or result in the relocation of reconstruction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	Less than Significant	Less than Significant
#2 - Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less than Significant	Less than Significant	Less than Significant
#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	Less than Significant	Less than Significant	Less than Significant

18 Full references for documents cited in this section are included in Chapter 7, References, of this EIR.

Threshold of Significance	Project-Level Impact	Cumulative-Level Impact	Impact After Mitigation
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?	Less than Significant	Less than Significant	Less than Significant
#5 – Comply with federal, state, and local management and reduction statues and regulations related to solid waste?	Less than Significant	Less than Significant	Less than Significant

3.17.1 Existing Conditions

The following provides background information about the water, wastewater, solid waste and other utility service providers that will serve the proposed project. It references applicable water and wastewater agency planning documents.

Water Service Area

The project site lies within Rincon Del Diablo Municipal Water District (RDDMWD) Improvement District 1 service area and will be served by RDDMWD for potable water and for water for fire protection. RDDMWD supplies potable and recycled water to a population of 30,000 people through nearly 8,000 connections representing residential, agricultural, landscape, and commercial/industrial water uses. RDDMWD's service area includes the Cities of Escondido, San Marcos, and San Diego, and various unincorporated areas of San Diego County.

RDDMWD serves two distinct geographical areas, both of which have different potable water portfolios. These geographical areas are delineated as Improvement District 1 (ID 1) and Improvement District A (ID A). The project site is located within ID 1 (RDDMWD 2020). ID-1 is by far the largest of the two improvement districts, containing approximately 85 percent of the District's total active service land area (7,945 acres), and approximately 90 percent of its population. The land area of ID-1 is approximately evenly split between the City of Escondido and unincorporated County areas, and is dominated by residential, rural residential and agricultural land uses (RDDMWD 2014). In fiscal year 2015, there were 6,814 municipal connections and 4,72-acre feet (AF) supplied.

Although RDDMWD provides recycled water to its customers for landscape and irrigation use, RDDMWD does not currently operate a wastewater collection or treatment system but rather purchases treated water from the City of Escondido's Hale Avenue Resource Recovery Facility (HARRF) (RDDMWD 2016).

Water Supply

RDDMWD is a member of the San Diego County Water Authority (SDCWA), thus eligible to purchase water transported into San Diego County via the massive aqueducts of SDCWA and its wholesaler, Metropolitan Water District (MWD) of Southern California. To understand water supply availability for the proposed project, it is important to begin with MWD and follow the water supply through these agencies.

MWD was formed in 1928 to develop, store and distribute supplemental water to southern California for domestic and municipal purposes. MWD consists of 26-member agencies and has a service area covering six counties, 5,200 square miles, and 19 million people. MWD obtains water from local sources as well as the Colorado River (via the Colorado River Aqueduct) and the Sacramento-San Joaquin Delta (via the State Water Project). MWD's 2015 Urban Water Management Plan (UWMP) documents the availability of these supplies to meet future demands. With a projected annual water demand of 5,234,000 acre feet per year (AFY) for 2020, the MWD 2015 UWMP concludes that, with implementation of required conservation measures, MWD has supply capabilities sufficient to meet expected demands through 2040 under normal, single dry, and multiple dry water years (MWD 2016). The 2020 UWMP is being developed as part of the 2020 Integrated Resources Plan planning process and has not yet been approved. The Draft 2020 UWMP identifies a projected annual water demand of 4,605,500 AFY for 2025 and concludes that MWD has supply capabilities sufficient to meet expected demands from 2025 through 2045 under normal, single dry, and multiple dry water years (MWD 2021).

SDCWA is the largest member agency of MWD. SDCWA was established in 1943, and, according to its 2015 UWMP, supplies 75 to 95 percent of the water needs in San Diego County through five major pipelines (SDCWA 2016). SDCWA's service area covers 1,486 square miles and a population of 3.2 million. Annual water demand as of 2015 was 539,361 AFY. By 2040, total normal water demands are projected to reach 718,773 AF (including future conservation, demand associated with projected near-term annexations, and accelerated forecasted growth), which represents a 29 percent increase from the average 557,241 AF of demand that occurred over the period 2010-2015. Despite MWD records demonstrating sufficient supply exists to meet anticipated demand, for its analysis SDCWA assumed MWD would allocate available supply in multiple dry water years to ration emergency supply. Incorporating this assumption, SDCWA projects reliable water supply for its member agencies in normal and single dry water years but potential water shortages in multiple dry water years. This prudent planning and water supply allocation would ensure reserve supply is not completely depleted and instead remains available for future dry water years or very severe shortage situations.

RDDMWD currently imports most of its potable, treated water from SDCWA, particularly from the SDCWA First Aqueduct (which just completed major rehabilitation in January 2021), and all of its recycled water from the City of Escondido's HARRF. In previous years, the Rincon ID 1 water delivery system consisted only of 100% imported water purchased from the SDCWA. Since 2016, ID 1 water supplies are augmented from time-to-time with water originating from the Twin Oaks Valley Water Treatment Plant (TOVWTP). TOVWTP water is a blend of treated SDCWA water and desalinated sea water from the Claude "Bud" Lewis Carlsbad Desalination Plant (Lewis Desal Plant). Originating from the Carlsbad Agua Hedionda Lagoon, the desalinated water is a superior quality water – free of salt as well as biological and organic compounds (RDDMWD 2020).

Per the RDDMWD 2015 UWMP, in 2015 total demand for potable water was 5,744 AFY. It should be noted water demands for FY 2015 were significantly less than those projected in the 2010 UWMP. This variance was due to mandatory water use restrictions in effect in response to the State Water

Resources Control Board's (SWRCB) emergency drought regulations, depressed economic conditions, and increased water prices. Additionally, RDDMWD was able to convert an SDG&E power plant cooling tower to recycled water in 2007, significantly reducing potable demand (RDDMWD 2016).

RDDMWD has estimated that future demands will increase at the same rate as the SANDAG-projected population growth rate for RDDMWD's service area. RDDMWD expects to use additional recycled water beginning in 2025. Some of this recycled water will offset current potable demands for landscape irrigation. **Table 3.17-2** below shows projected water demands for the years 2020-2040 as reported in the 2015 UWMP.

Table 3.17-2. RDDMWD Projected Water Demands in Acre Feet Per year

Water Use Sectors	2020	2025	2030	2035	2040
Single Family	4,618	4,859	5,002	4,995	4,975
Multi-Family	763	803	827	825	822
Commercial	1,424	1,499	1,543	1,543	1,535
Landscape Irrigation	545	100	100	100	100
Agricultural Irrigation	65	68	70	70	70
Potential Near-Term Annexations	0	417	417	417	417
Losses	252	263	271	270	269
Potable Subtotal	**7,668**	**8,009**	**8,229**	**8,219**	**8,188**
Recycled- Cooling Tower	2,800	2,800	2,800	2,800	2,800
Recycled – Landscape	350	1,200	1,200	1,200	1,200
Recycled Water Subtotal	3,150	4,000	4,000	4,000	4,000
Total	**10,818**	**12,009**	**12,229**	**12,219**	**12,188**

Source: 2015 Urban Water Management Plan (RDDMWD 2016)

As shown in Table 3.17-2, reliable quantities of projected water supply for Years 2025 and 2030 are 8,009 acre-feet per year and 8,229 acre-feet per year, respectively. RDDMWD projects that with supplies provided by SDCWA and compliance with the Water Conservation Bill of 2009, no water shortages would occur in a normal year through 2040 (RDDMWD 2016). The 2020 UWMP is currently under development.

Water Shortage Contingency Planning

History of Drought in California

California has the nation's most variable climate, and droughts are a recurring feature. Very wet and very dry years are both common, while "normal" years—widely used to describe average precipitation—are rare. Yet one dry year does not constitute a drought. Water stored in the state's reservoirs and

groundwater basins protect against individual dry years. Droughts occur when two or more successive years are very dry, and reservoirs and groundwater reserves are depleted (PPIC 2021).

Climate change is making droughts more intense. The past two decades have been exceptionally warm and dry, and included the hottest drought (2011–17) in the state's recorded history. Warming is making droughts more intense. A "thirstier" atmosphere—a direct consequence of warming—increases evaporation, which reduces water availability for ecosystems and human uses. Warming is also decreasing the proportion of precipitation that falls as snow. Snowpack is an important part of the state's water storage system, accounting for about 30% of water supply. "Snow droughts" make it harder to manage reservoirs for water supply and hydropower generation (PPIC 2021).

Significant recent droughts in California occurred in 1976-77, 1987-92, 2007-09, and most recently, December 2011 through March 2017 (PPIC 2021). In March 2015, during the last drought, California Governor Jerry Brown ordered mandatory water use reductions for the first time in California's history, saying the state's four-year drought had reached near-crisis proportions after a winter of record-low snowfalls. Governor Brown, in an executive order, directed the SWRCB to impose a 25 percent reduction on the state's 400 local water supply agencies, which serve 90 percent of California residents. The specifics for how to accomplish this reduction were left to the water agencies. (Nagourney 2015). On April 7, 2017, Governor Brown issued Executive Order B-40-17 rescinding emergency drought regulations in the state. RDDMWD customers cumulatively saved almost 29% since June 2015. RDDMWD lifted emergency regulations but remained in Level 1 promoting voluntary actions for water conservation (Thomas and Murtland 2017).

In April 2021, Governor Newsom declared another drought emergency. The declaration was originally limited to two counties in northern California, Sonoma and Mendocino. No mandatory water restrictions have been imposed (Kasler and Bollag 2021). On May 10, 2021, Governor Newsom expanded his drought emergency proclamation to include 39 more counties, but not San Diego County (State of California Office of Governor Newsom May 2021a). On October 19, 2021, Governor Newsom issued a proclamation extending the drought emergency statewide and encouraged Californians to increase their water conservation efforts as the western U.S. faces a potential third dry year. The proclamation added the eight counties not previously included in the drought state of emergency: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Francisco and Ventura. (State of California Office of Governor Newsom October 2021b).

According to Governor Newsom's Office (May 2021), extraordinarily warm temperatures in April and early May 2021 separate this critically dry year from all others on California record. California experienced an accelerated rate of snow melt in the Sacramento, Feather and American River watersheds, which feed the major reservoirs of the state and federal water projects. This was exacerbated when much of the snowpack, sitting on very dry ground, seeped into the earth rather than flowing into rivers and streams and into these reservoirs. Warming temperatures also prompted water diverters below the dams to withdraw their water much earlier and in greater volumes than typical even in other recent critically dry years. These factors reduced expected water supplies by more than 500,000 AF, enough to supply up to one million households with water for a year. The drastic reduction in water supplies means these reservoirs are extremely low for water users, including farmers, and fish and wildlife in the counties the drought proclamation covers (State of California Office of Governor Newsom May 2021a).

The Governor's May 2021 proclamation directed the State Water Board to consider modifying requirements for reservoir releases and diversion limitations to conserve water upstream later in the year to maintain water supply, improve water quality and protect cold water pools for salmon and

steelhead. The state of emergency also enables flexibilities in regulatory requirements and procurement processes to mitigate drought impacts and directs state water officials to expedite the review and processing of voluntary transfers of water from one water right holder to another, enabling available water to flow where it is needed most (State of California Office of Governor Newsom May 2021a).

According to the October 2021 proclamation, California is experiencing its worst drought since the late 1800s, as measured by both lack of precipitation and high temperatures. August 2021 was the driest and hottest August on record since reporting began and the water year that ended in September 2021, was the second driest on record. The October 2021 proclamation authorizes the Governor's Office of Emergency Services to provide assistance and funding under the California Disaster Assistance Act to support the emergency response and delivery of drinking water and water for public health and safety. In addition, the proclamation requires local water suppliers to implement water shortage contingency plans that are responsive to local conditions and prepare for the possibility of a third dry year (State of California Office of Governor Newsom October 2021b).

MWD Drought Response

In March 2021, MWD reported that it expects to receive less than one month's usual supply of water in 2021 from the state water project, which on average provides about 30 percent of Southern California's water supply. MWD is managing through this by taking advantages of wet years, like 2017 and 2019, to move as much water into storage as possible. The agency has increased its total storage capacity by 13 times since 1990, investing in surface and groundwater storage across the southwest. Not only has MWD built vital infrastructure, such as Diamond Valley Lake and the Inland Feeder pipeline, which allow surplus water to quickly be stored in local reservoirs, it also has forged partnerships with water agencies across California for groundwater banking and exchanges. And it collaborated with partners along the Colorado River to establish a program to store water in Lake Mead, known as Intentionally Created Surplus, to enable MWD to provide a full Colorado River Aqueduct supply in dry years like 2021. Taken together, MWD now has more water in these storage accounts than it ever has before – a total of 3.2 million acre-feet. An acre-foot is the amount used by three typical Southern California households in a year (Business Wire 2021).

On August 17, 2021, in response to the extreme drought conditions impacting Southern California, MWD's Board of Directors declared a Water Supply Alert, calling for consumers and businesses to voluntarily reduce their water use and help preserve the region's storage reserves. The board's action urges residents, businesses and agencies in MWD's service area to lower the region's water demand to stave off more severe actions in the future, which could include restricting water supplies to MWD's 26 member agencies. The declaration comes a day after the Bureau of Reclamation declared a first-ever shortage on the Colorado River, which typically provides about 25 percent of Southern California's water needs.

Rincon Drought Response

RDDMWD Drought Response Plan was updated and adopted in May of 2015 as Ordinance No. 15-120.2 (RDDMWD 2015). The response plan was developed to provide a response strategy as required by the California Water Code, by establishing methods and procedures to ensure that, in a time of shortage, available water resources are put to maximum beneficial use, and that the unreasonable method of use is prevented. The Response Plan contains four levels, and is consistent with current regional messaging (RDDMWD 2016). RDDMWD's response plan includes four stages of response. These stages are shown in **Table 3.17-3.**

Table 3.17-3. RDDMWD Water Shortage Contingency Plan

Stage	Description	Percent Supply Reduction	Water Supply Conditions
1	Drought Watch	10	Voluntary 10% Reduction
2	Drought Alert	20	Mandatory 11-20 % Reduction
3	Drought Critical	30	Mandatory 21-30 % Reduction
4	Drought Emergency	50	Mandatory 31% or More Reduction

Source: 2015 Urban Water Management Plan (RDDMWD 2016)

RDDMWD is able to monitor water consumption and several currently state-mandated water use restriction violations using existing meters. All water use in the RDDMWD District is metered using advanced metering infrastructure (RDDMWD 2016).

RDDMWD has adopted a Water Conservation Ethic which is supported by its Administration Code 4000 – Water Conservation and supported by Ordinance 15-120.2, An Ordinance of the Rincon del Diablo Municipal Water District Finding the Necessity for and Adopting a Drought Response Plan (RDDMWD 2015). As responsible stewards of a natural resource, the District's Board of Directors acknowledges that its service area is located within an inland region that is subject to wide variations in annual precipitation and desert-like climatic conditions. Dependent largely on water imported from North California and the Colorado River, the District maintains a "No Water Wasting" ethic on a daily basis regardless of drought conditions (RDDMWD 2016).

RDDMWD discourages the use of commercial single-pass laundry systems, single-pass decorative fountains, or any other device or action that wastes water or uses water unreasonably. Under non-drought conditions, customers are required to repair leaks within five days of notification by the District and to use recycled water for construction purposes where available. Prohibitions include (RDDMWD 2016):

- Allowing irrigation runoff to flow across paved surfaces such as driveways and streets
- Using a hose without a positive shutoff nozzle/device to wash a vehicle
- Hosing off hard surfaces such as driveways and sidewalks
- Applying irrigation during or within 48 hours after measurable rainfall
- Serving drinking water other than upon request in eating or drinking establishments
- Irrigating ornamental turf on public medians with potable water
- Providing hotel/motel guest with the option of not receiving daily laundered linens
- Irrigating landscapes after 8 PM and before 9 AM
- Washing vehicles in hot weather conditions during times of high levels of evaporation

Water Infrastructure

The project site is currently undeveloped. Potable water is delivered to the project area by an existing 8-inch waterline that currently terminates within the Mira Lago Community east of the project site.

Existing facilities throughout RDDMWD's service area include various reservoirs, pipes, and pump stations. According to RDDMWD's Water Master Plan, future water system and reliability projects over the next five to ten years will primarily occur within the Harmony Grove Village development, a residential development within the County of San Diego and development to the immediate north and south. New storage and transmission mains will be constructed as the system expands and serves new development. These expansions would also strengthen the reliability of existing water systems to access available water storage, enhance fire flow capabilities and provide increased redundancy (RDDMWD 2014).

RDDMWD's potable water distribution system includes 117 miles of water main (8-inches or larger in diameter), ten reservoirs with a total storage capacity of 25.7 million gallons (MG), and four pump stations. Average distribution is calculated at 10 million gallons per day (MGD). RDDMWD's recycled water system consists of 6.7 miles of water mains (8-inch or larger in diameter), two pump stations, and 75 service connections (RDDMWD 2016).

Per the Master Plan, ID-1 is supplied by the First Aqueduct from two flow control facilities (RDDMWD 2014). The storage reservoirs in ID-1 North serve to provide hydraulic control for the Aqueduct water supply. A smaller booster pressure zone (Rockhoff Zone), with storage, is located in the far north. In this area RDDMWD has the ability, in emergencies, to take water from the Vista Irrigation District (VID) Vista Flume through an 8-inch connection. A small triangular piece in the northeast corner of the District (known as the Laurashawn area) is served by Valley Center Municipal Water District (VCMWD), but will soon be converted to RDDMWD through an extension of a new RDDMWD water main. RDDMWD will maintain an emergency intertie with VCMWD to supply ID-1 North by gravity. Overall, ID-1 North performs well under normal operating water conditions. ID-1 North and South are operated at slightly different hydraulic gradients, an important hydraulic distinction for operations. This allows for better flow control from the Aqueduct system and actually simplifies operations. In order to hydraulically separate the areas, a flow control valve, known as the Metcalf Flow Control Valve (a 20-inch plug valve) is throttled to hydraulically separate the system. By throttling and adjusting the valve position (number of turns) the District can also supply excess SDCWA water ordered in ID-1 North to ID-1 South (RDDMWD 2014).

First San Diego Aqueduct

The backbones of the SDCWA system are the First and Second San Diego Aqueducts with two branch lines. The First Aqueduct consists of Pipelines 1 and 2, which extend from the MWD's Colorado River Aqueduct near San Jacinto, California, to the City of San Diego`s San Vicente Reservoir, approximately 15 miles northeast of the city. Pipeline 1, designed by the Bureau of Reclamation, was constructed by the Navy Department to relieve the water supply emergency in San Diego County. Pipeline 2, roughly paralleling the first, was designed and constructed by the Bureau of Reclamation. The two pipelines share common tunnels and inverted siphons. They are operated as single units. The 12.5-mile Fallbrook-Ocean Branch originates from the First Aqueduct at Rainbow and extends to Morrow Reservoir. The La Mesa-Sweetwater Branch also originates from the First Aqueduct at Slaughterhouse Canyon, and extends through Lakeside and El Cajon to Sweetwater Reservoir. A number of connecting pipelines have been constructed to provide flexibility in operating the system. One pipeline runs from the Second Aqueduct at Twin Oaks Valley to refill the First Aqueduct north of Escondido with untreated

water after the agencies to the north have utilized the original capacity of the aqueduct (U.S. Bureau of Reclamation [USBR] 2021).

The First San Diego Aqueduct is about 70 miles long and water flows by gravity from an intake at an elevation of 1500 feet (ft) to the San Vicente Reservoir at an elevation of 760 ft. The first two miles, the tunnels, and certain other sections not readily accessible were built to full capacity during construction of the first pipeline. The remaining sections, approximately 60 miles, compose a double pipeline. The separate pipelines are precast concrete pipe. The design capacity of the First San Diego Aqueduct is 196 cubic feet per second. There are seven tunnels ranging in length from 500 to 5,700 feet. These tunnels, together with the diversion line to the regulating reservoir and the short reaches of full capacity pipeline, total about 14 percent of the length of the aqueduct (USBR 2021).

The SDCWA completed a major rehabilitation project on the First Aqueduct in January 2021. The project renovated and replaced dozens of structures on two large-diameter pipelines, including Pipeline 1, which delivered the first imported water to the San Diego region in 1947 and remains a vital part of the regional water delivery system (SDCWA 2021a).

The timely rehabilitation of the First Aqueduct is part of the Water Authority's proactive asset management program. A key element of providing safe and reliable water supplies is continually assessing the agency's 310 miles of large-diameter pipeline and making the upgrades necessary to continue serving the region. The First Aqueduct project began in early 2019 and was one of the most complicated pipeline retrofits in the Water Authority's history. The upgrades included replacing 14,500 linear feet of lining on the steel pipe sections of Pipeline 1, removing 16 associated structures and retrofitting 46 structures, all while ensuring regional water service remained safe and reliable. In addition, redundant connections to six flow control facilities were added between the two pipelines to improve the aqueduct's operational flexibility (SDCWA 2021a).

Twin Oaks Valley Treatment Plan (TOVWTP)

Since 2016, Rincon ID 1 water supplies are augmented from time-to-time with water originating from the Twin Oaks Valley Water Treatment Plant (TOVWTP). TOVWTP water is a blend of treated SDCWA water and desalinated sea water from the Claude "Bud" Lewis Carlsbad Desalination Plant (Lewis Desal Plant). Originating from the Carlsbad Agua Hedionda Lagoon, the desalinated water is a superior quality water – free of salt as well as biological and organic compounds.

The TOVWTP is a submerged membrane water treatment plant providing high-quality drinking water for San Diego County. When completed in 2008, it was the largest plant of its kind in the world. Located next to the SDCWA's aqueduct in a semirural area north of San Marcos, the high-capacity treatment plant can provide enough water to serve up to 220,000 households per year. Before construction of the TOVWTP, nearly half of San Diego County's drinking water was purified by MWD. Growth in San Diego and Riverside counties increased the need for treated water, particularly during warm periods when water use is highest. Completion of the Twin Oaks facility has avoided treated water shortfalls when temperatures rise. SDCWA's water treatment plant increases the amount of treated water produced in and for San Diego County. It allows more local control of the county's treated water supply and increases water reliability for the region (SDCWA 2020).

Conventional water treatment plants rely on gravity filters and chemical coagulants to remove the suspended solids and organic material in untreated water from rivers or lakes. In submerged membrane treatment, untreated water is filtered through membrane fibers. Pores in the membranes are large enough for water molecules to pass through, but small enough to filter out the vast majority

of bacteria and viruses. Contaminants that do pass through are eliminated by a disinfection process similar to conventional treatment (SDCWA 2020).

Claude "Bud" Lewis Carlsbad Desalination Plant

In November 2012, the SDCWA approved a 30-year Water Purchase Agreement with Poseidon Water for the purchase of up to 56,000 AF of desalinated seawater per year, which is approximately 10 percent of the San Diego region's water demand. Poseidon is a private, investor-owned company that develops water and wastewater infrastructure. Under the Water Purchase Agreement, Poseidon built the Claude "Bud" Lewis Carlsbad Desalination Plant, and a 10-mile conveyance pipeline to deliver desalinated seawater to the SDCWA's aqueduct system. This new, drought-proof supply reduces the region's dependence on supplies that are vulnerable to droughts, natural disasters and regulatory restrictions (SDCWA 2021b).

Desalination uses reverse osmosis technology to separate water molecules from seawater. Water from the ocean is forced through thousands of tightly-wrapped, semipermeable membranes under very high pressure. The membranes allow the smaller water molecules to pass through, leaving salt and other impurities behind (SDCWA 2021b).

Wastewater Service Area

Vallecitos Water District (VWD or District) provides potable water and wastewater services within northern San Diego County, including service to the City of San Marcos; parts of the cities of Carlsbad, Escondido, and Vista; and unincorporated areas within the County of San Diego. In addition, The District wholesales recycled water to the City of Carlsbad and the Olivenhain Municipal Water District. provides wastewater and reclamation services to a 23-square mile area serving approximately 93,000 people within their service area, as well as commercial, light industrial, institutional, construction, landscape irrigation, and agricultural customers. Within the study area there are some rural areas that still use septic systems for sewage disposal, thus the District's current 23-square mile sewer service area is much smaller in size than its water service area, although the District's sphere of influence is equal in size for both. The District has over 20,600 sewer service connections with 4 lift stations and approximately 270 miles of pipeline (VWD 2016).

VWD would also provide the proposed project's wastewater service. The project site is located in VWD's Sewer Improvement District "A" for sewer service only. The site lies completely within VWD sewer shed 26C (VWD 2020).

Wastewater Infrastructure

VWD's sewer service area is divided between two principal drainage basins which are named based on the treatment facility which serves it. The treatment facilities used by VWD are the Meadowlark Water Reclamation Facility (MRF) and the Encina Water Pollution Control Facility (EWPCF). A third drainage basin, referred to as the Northern Tributary Area (NTA), is located in the northern part of the VWD which naturally drains away from the District's existing collection system. The NTA is entirely made up of rural residential and agricultural land uses and is served by on-site septic systems or by a neighboring agency. Land uses within the NTA are not planned to change and as such it is assumed that on-site septic systems will continue to service this area in the future. The existing wastewater collection system includes treatment facilities, major conveyance facilities, gravity mains, trunk sewers, lift stations, siphons and force mains.

Meadowlark Water Reclamation Facility (MRF)

In 1958, an improvement district was formed to finance the construction of a wastewater collection system. A second improvement district was formed that same year to finance the construction of a wastewater treatment plant, which was completed in 1961. The MRF was retrofitted in the early 1980's with upgraded treatment technologies and a wastewater treatment and recycled water production capacity of up to 2 MGD. Expansion of MRF was completed in 2008 to expand and improve the biological processes, which allowed the plant to increase capacity and more efficiently treat the wastewater while using less treatment chemicals. It also increasing its recycled water production capacity to 5 MGD, leading to VWD now being able to recycle up to 74% of the wastewater generated in the service area. MRF is located within the southwestern portion of VWD's service area in Carlsbad.

MRF is essentially a scalping plant that extracts water for projection of recycled water. MRF treats wastewater to meet the stringent standards of California Title 22 and Waste Discharge Permit R9-2007-0018 issued by the Regional Water Quality Control Board (RWQCB) Region 9. The MRF has a capacity of 5 MGD for liquids treatment. Wastewater that is not rerouted to MRF flows directly to the Encina Water Pollution Control Facility (discussed below) in the City of Carlsbad for both liquids and solids treatment via a 24-inch recycled water pipeline. MRF does not treat for solids; instead, solids are pumped from MRF to the EWPCF for treatment (VWD 2018).

Encina Water Pollution Control Facility

The Encina Wastewater Authority (EWA) is the primary wastewater treatment provider utilized by VWD. The Encina Water Pollution Control Facility (EWPCF) also serves the City of Carlsbad, City of Encinitas (Encinitas Sanitary Division), Leucadia Wastewater District and Buena Sanitation District (City of Vista). The EWA was established to provide for the day-to-day operation of the EWPCF (VWD 2018). Built in the mid-1960s and expanded through the years to increase quality of treated water, improve odor control, add a cogeneration facility that generates electricity, upgrade the solids treatment process to produce a high-quality fertilizer project, the EWPCF now has an increased treatment capacity of 43.3 MGD. EWPCF provides secondary wastewater treatment to approximately 379,000 residents.

<u>EWPCF (Ocean) Outfall</u>

EWMPCF's ocean outfall consists of approximately 1,000 feet on land and extends approximately 7,900 feet into the Pacific Ocean. The outfall components include:

- Surge tower and an effluent pump station (required for high flows or high tides), located at the west side of the EWPCF near the main entrance along Avenida Encinas.
- 200 feet of 84-inch diameter reinforced concrete pipeline (RCP) from the surge tower to just east of the railroad tracks.
- 6,400 feet of 48-inch diameter RCP. This original outfall segment was built in 1965 and starts at the 84-inch pipeline and continues west to a depth of approximately 80-feet in the Pacific Ocean.
- 2,300 feet of 72-inch diameter RCP. This outfall extension was constructed in 1974. It includes an 800-foot, 138-point diffuser located at depths ranging from 135 feet to 168 feet below mean lower low water (MLLW) levels (VWD 2018).

EWPCF Peak Flow Management

Managing peak flows is an important operational consideration. The EWPCF employs peak flow management procedures and has constructed facilities to manage peak flows. The EWPCF peak flow facilities include an existing 8 million gallon (MG) open, rectangular storage tank for holding secondary effluent and a pump station allowing the secondary effluent to be diverted to the basin. The plant has provisions to incrementally increase capacity by adding two more 8 MG basins in the future, for a maximum storage capacity of 24 MG. The member agencies' ability to manage inflow and infiltration into the sewer system is a major factor in deferring additional peak flow facilities or future outfall upgrades at the EWPCF (VWD 2018).

EWPCF Capacity Rights

The District's Unit I capacity rights were set forth in the 1998 Revised Basic Agreement and included 7.54 MGD of liquids treatment capacity and 7.54 MGD of solids treatment capacity. The most recently completed Phase V Expansion of the EWPCF was primarily solids driven. With that expansion, VWD maintained its 7.54 MGD of liquids treatment capacity, and increased its solids treatment capacity to 10.47 MGD. In 2014, EWA re-rated the EWPCF capacity and a "true-up" calculation was performed, which adjusted the District's liquid capacity to 7.67 MGD (VWD 2018).

Wastewater Outfall Facilities

Recycled Water Failsafe Pipeline

A recycled water failsafe pipeline, ranging in diameter from 12-inches to 24-inches in diameter, extends from MRF to the EWPCF ocean outfall. The failsafe pipeline is primarily used to dispose of either secondary or tertiary effluent from MRF that is not pumped to the Mahr Reservoir or treated effluent that cannot be sold as tertiary. Westerly portions of the failsafe line have been oversized to accommodate Buena Sanitation District (BSD) and Carlsbad Municipal Water District (CMWD) flows from existing and planned reclamation plants in their service areas. The BSD's Shadowridge Water Reclamation Plan also connects to this pipeline. Capacity rights in the failsafe pipeline were defined in the "San Marcos County Water District, Buena Sanitation District, and The City of Carlsbad Agreement for the Operation and Maintenance of an Ocean Failsafe Treated Effluent Outfall Pipeline," dated October 26, 1981. The agreement divided the failsafe pipeline into three reaches, (VWD, Buena and Carlsbad) for the purposes of allocating capacity rights.

In the 2003 Recycled Water Agreement with CMWD, it is acknowledged that under certain operational scenarios, the full production of MRF may exceed the failsafe pipeline capacity of 3 MGD, and the Mahr Reservoir may be at capacity with no additional storage available. To accommodate this event, CMWD will provide adequate facilities and operational flexibility to allow the District to dispose of additional flow into the Carlsbad recycled water distribution system. Disposal is subject to the availability of adequate capacity at the EWPCF flow equalization facility (VWD 2018).

Land Outfall

A majority of VWD's wastewater is conveyed to the EWPCF using VWD's maintained Land Outfall. The Land Outfall is approximately 8 miles long and conveys flow by gravity as well as pressure through siphon sections. These sections are numbered alphabetically from east to west. The eastern portions of the Land Outfall (Gravity Section A and Siphon Section A) are owned and operated wholly by VWD (VWD 2018). Per the sewer study prepared for the proposed project, the land outfall capacity controlled by VWD is 12.10 MGD (VWD 2020). The westerly facilities (Gravity Section B, Siphon Section

B, Gravity Section C, Siphon Section C, Gravity Section D, and Siphon Section D) are owned by the VWD with shared capacity with the City of Vista and the City of Carlsbad (VWD 2018).

With the expanded production of recycled water at MRF from 2 MGD to 5 MGD, VWD is reducing the amount of wastewater that flows through its land outfall to the EWPCF. Solids from the MRF are conveyed back to the EWPCF (VWD 2018).

As stated above, the MRF has a capacity of 5.0 MGD with a peak wet weather capacity of 8.0 MGD. Combined with the 12.10 MGD capacity of the land outfall controlled by VWD, VWD has a combined peak wet weather wastewater collection capacity of 20.10 MGD (12.10 MGD + 8.0 MGD). According to the water and sewer study technical memorandum prepared for the proposed project, average daily wastewater flow through the land outfall was approximately 7.5 MGD in 2014. This corresponds to a peak wet weather flow of 17.5 MGD, which falls within VWD's combined peak wet weather collection capacity (VWD 2020).

Collection System Facilities

Sewer Gravity Mains

VWD has approximately 1.35 million feet (255 miles) of gravity sewer mains ranging in size from 4-inches to 42-inches in diameter (VWD 2018).

Lift Stations

There are currently four wastewater lift stations in operation.

Lift Station 1 is located in the Encina Basin along San Marcos Boulevard. Lift Station 1 is designed to divert wastewater from entering the land outfall by pumping to the MRF. The station includes two grinders, four variable speed pumps, and a chemical feed system. The facility currently operates at a capacity of 3,100 gallons per minute (GPM) (VWD 2018).

The Lake San Marcos Lift Station is located in the Meadowlark Basin and serves the Lake San Marcos community area. This facility serves the natural drainage areas of Lake San Marcos and must reliably convey all flows from the lake-front community (VWD 2018).

The Questhaven Lift Station is located in the Meadowlark Basin adjacent to the San Elijo Hills Development and is the newest lift station in the VWD service area. The facility was built to serve a small development east of San Elijo Hills and eventually the southeast portion of the District (VWD 2018).

Montiel Lift Station is located in the Encina Basin along State Route 78 just east of Nordahl Road. The Montiel Lift Station pumps flows via an 1,850 foot, 6-inch diameter DIP force main in Montiel Road to Nordahl Road where flows are then conveyed via gravity to Lift Station 1. Removal of this pump station may be feasible if tributary flows are diverted to the City of Escondido via a new pipeline under Highway 78 (VWD 2018).

Flow Meters

VWD currently meters its wastewater collection system at 20 locations distributed throughout the collection system. Sewer flow meters provide critical data on wastewater flows and help pinpoint sources of inflow and infiltration within individual sewer basins. The flow meters also assist with hydraulic modeling, calibration of the hydraulic model and development of CIP projects. All the VWD flow meters are connected to its SCADA system, which allows VWD to be alerted when high flows or

depths are being experienced. This allows VWD to determine blockages and avoid sanitary sewer overflows. The flow meters are also being used by VWD to aid in their smoke testing program by assisting in identifying locations of high inflow and infiltration, or "hot-spots." If the flow meter shows signs of significant inflow, the area of influence or concern can be determined and scheduled for smoke testing. In general, the VWD's metering program provides sufficient coverage of the sewer collection system. VWD generally observes a residential- type flow pattern with low flows occurring in the early hours of the day, peak flows occurring in the early morning, average flows occurring in the mid-afternoon and peaking again in the evening. The historical flow meter data was utilized in the VWD sewer model calibration (VWD 2018).

Existing and Future VWD Wastewater Flows

The VWD 2018 Master Plan includes a wastewater system analysis assessing existing and projected wastewater flows, existing and projected capacity and needed capital improvements.

Existing Wastewater Flows

From 2010 through 2014 the District conveyed average annual wastewater flows of approximately 3.42 MGD to the EWPCF (including solids from the MRF) and 3.65 MGD to the MRF. The total average annual (2010-2014) wastewater flow amounts to 6.76 MGD. This average annual total is nearly identical (slightly higher) than the 6.71 MGD cited in the previous master plan, indicating that growth has been offset by conservation and water use efficiency. The wet weather maximum day flow for the Encina Basin between 2010 and June 2014 occurred during a series of storms culminating on December 22, 2010. This storm event resulted in a flow of 13.92 MGD to the EWPCF (including 0.60 MGD of solids from the MRF) and a peak flow at the MRF of 5.83 MGD. The total wet weather maximum day flow was 19.15 MGD. Table **3.17-3** summarizes the average annual and peak wet weather wastewater flows for VWD (VWD 2018).

Table 3.17-3 Existing (2010-2014) Wastewater Flow Summary

Tributary	Average Annual Flow (MGD)	Wet Weather Maximum Day Flow (MGD) (2010 Storm)
Peroxide Meter	3.42	13.92
Less Solids from Meadowlark	(0.32)	(0.60)
Subtotal Encina Basins (without solids)	**3.11**	**13.32**
Lift Station 1 & Lake San Marcos LS	2.74	4.00
Meadowlark Gravity	0.91	1.83
Subtotal Meadowlark Basin	**3.65**	**5.83**
Total District	**6.76**	**19.15**

Source: VWD 2018 Master Plan, page 7-16

Notes: Average flows are based on District's January 2010 to June 2014 metered flow data.
Peak Wet Weather based on December 22,2010 storm event and is the peak hour flow during the storm event.

Lift Station 1 and Lake San Marcos LS flows are combined since they operate together to divert flows to MRF.

Wet Weather Considerations

Peak (instantaneous) flows within a wastewater collection system occur under two general conditions: dry weather and wet weather. Dry weather peak flows are defined as peak instantaneous wastewater flows that occur on a daily basis without the influence of a storm event. Peak wet weather flows are defined as peak instantaneous wastewater flows that occur as a result of inflow and/or infiltration occurring during one or multiple storm events during the rainy season. Inflows include large flows over a short duration coming from specific point sources (such as illicit connections to the sewer system from storm drains or roof drains). Infiltration includes flows coming from seepage into the sewer system (such as cracked sewer pipes or seepage at pipeline joints). Controlling wet weather peaking is important to avoid costly sewer system oversizing (VWD 2018).

Existing (2014) and Future Wastewater Flow Projections

Table 3.17-4 presents the existing and projected future average wastewater flows for the District at 5-year increments from the basis year of 2014 to 2035 and ultimate buildout conditions. These interim flow projections were estimated based upon SANDAG's growth forecasts for the District (VWD 2018). As shown, VWD's 2014 average daily wastewater flow was 7.5 MGD. The average annual flow projection for the ultimate condition is 14.4 MGD. This total is greater than the 2008 Master Plan's ultimate flow projection of 13.3 MGD. This is due primarily to recently approved densification projects within the City of San Marcos. This total represents the maximum potential flow based on allowable land uses and existing flows. While the ultimate flow is potentially higher, continued conservation and water use efficiency would delay reaching ultimate conditions.

Table 3.17-4. Projected Wastewater Flows within VWD Service Area

Year	Average Annual Flows (MGD)	Peak Dry Weather Flows (MGD) (1)	Peak Wet Weather Flows (MGD) (1)
Existing 2014	7.5	11.7	17.5
2020	8.7	13.2	20.0
2025	9.5	14.2	21.6
2030	9.6	14.4	21.9
2035	9.6	14.4	22.0
Ultimate	14.4	20.2	31.7
Ultimate w/ NTA (2)	15.2	21.2	33.4

Source: VWD 2018 Master Plan, page 7-19

Notes: (1) Peak flows were estimated by applying District Peaking Curves as presented in Chapter 6 of the 2018 Master Plan.

(2) NTA is the Northern Tributary Area, a separate drainage basin located in the northern part of VWD's service area that drains away from the wastewater collection system. NTA flows were estimated and would need further evaluation if this area is to be connected into VWD/s sewer system.

VWD Planned System-wide Wastewater Improvements

VWD's 2018 Master Plan analyzed the existing wastewater system to determine size of pipeline replacements and extensions utilizing a hydraulic model developed by collecting the system's physical data, estimating existing wastewater flows, and calibrating the model using actual meter data. The 2018 Master Plan does not include developments that were not approved prior to June 30, 2014. As development projects are proposed, the project proponents will be required to prepare a study that will, at a minimum, define the location and size of the sewer facilities required to serve the development, including the necessary regional collection, transfer and treatment infrastructure (VWD 2018).

The 2018 Master Plan describes planned improvements to VWD's existing wastewater facilities. Projects are divided into phases of five-year increments through 2036 - Ultimate. According to the water and sewer study technical memorandum prepared for the proposed project, there are existing system deficiencies in pipe segments HB-29 through HB-31 under the peak wet weather flows during ultimate build-out conditions. The 2018 Master Plan identified pipe segments HB-29 through HB-31 for upsizing from 18-inch and 24-inch as CIP #SP-25, a Phase 3 project. Phase 3 projects are planned for construction in the 2026-2030 timeframe (VWD 2020).

Solid Waste

Solid waste disposal in the City is provided by a private franchise hauler, EDCO Waste and Recycling (EDCO), a private waste collection and recycling company which handles all residential, commercial, and industrial collections within the City. Waste collected by EDCO is hauled to the Escondido Transfer Station where it is then transported to the Sycamore Sanitary Landfill in Santee. Recyclable materials are processed at the Escondido Resource Recovery Transfer Station. The Escondido Transfer Station has a daily capacity of 2,500 tons. Solid waste is consolidated here and then trucked to a landfill for disposal. The site is permitted to allow operations seven days per week, 24 hours per day (County of San Diego 2008). The Sycamore Sanitary Landfill has a daily permitted throughput of 5,000 tons/day of solid waste (CalRecycle 2019a) with an anticipated closure date of 2054. (County of San Diego 2018).

Electricity and Natural Gas

Electricity and natural gas would be provided by San Diego Gas & Electric (SDG&E). There is an existing 69-kilovolt (kV) electrical transmission line at the project frontage with E. Barham Drive. SDG&E also maintains a gas distribution system within E. Barham Drive. If the project utilizes gas utilities, the gas line will be extended to the project site through the same joint trench alignment as electrical, cable and telephone facilities.

3.17.2 Regulatory Setting

Existing federal, state, and local regulations related to water, wastewater, and solid waste that are applicable to the proposed project are summarized below.

Federal

Clean Water Act

The federal Clean Water Act (CWA) establishes regulatory requirements for potable water supplies including raw and treated water quality criteria. The City of San Marcos is required to monitor water quality and conform to regulatory requirements of the CWA.

Resource Recovery and Conservation Act

The Resource Recovery and Conservation Act Subtitle D focuses on state and local governments as the primary planning, regulating, and implementing entities for the management of non-hazardous solid waste, such as household solid waste and nonhazardous industrial solid waste. Subtitle D provides regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes.

State

California Green Building Standards Code (CCR, Title 24, Part 11 – CALGreen)

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 (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 CALGreen 2019 standards became effective on January 1, 2020 (International Code Council [ICC] 2019). The nonresidential mandatory standards require the following measures that relate to utilities and service systems (24 CCR Part 11):

- Mandatory reduction in indoor water usage through installation of separate submeters or metering devices, and compliance with specified flow rates for plumbing fixtures and fittings and faucets and fountains.
- Mandatory reduction in outdoor water usage through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance and installation for recycled water supply systems where available/applicable.
- 65% of construction and demolition waste must be diverted from landfills and 100% of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- Provide readily accessible areas for recycling that serve the entire building.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. These voluntary measures call for indoor and outdoor water use reduction, higher diversion of construction and demolition waste, further improvement in energy requirements, stricter water conservation, Increased percentage of recycled content in building materials, increase in permeable paving, cement reduction and cool/solar-reflective roofs.

Assembly Bill 939 and 341

In 1989, Assembly Bill (AB) 939, known as the Integrated Waste Management Act (California Public Resources Code, Section 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 (CIWBM), 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 (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 has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020.

Senate Bill 221

Signed into law on October 8, 2001, SB 221 established a process whereby sufficient water supply must be identified and available for new development for any residential development of 500 homes or more, or, in the case wherein a water supplier has fewer than 5,000 service connections or the proposed development would increase the number of connections by at least 10 percent, unless there is proof of adequate water over at least the next 20 years, including long periods of drought. Due to the size of the proposed project, a water supply assessment and verification report pursuant to SB 221 and SB 610, described below, are not required.

Senate Bill 610

Signed into law October 9, 2001, SB 610 resulted in amendments to the Public Resources Code and the Water Code. Revising provisions established by SB 901, SB 610 requires that the planning agency determine whether a proposed project, subject to CEQA, meets any of the thresholds for requiring preparation of a water supply assessment. Specifically, if the project is a proposed development of more than 500 dwelling units (or equivalent), the planning agency must then request that the urban water supplier prepare a water supply assessment. The assessment would include the identification of existing water entitlements, water rights, or water service contracts relevant to the water supply identified for the proposed project, and the amount of water received pursuant to such entitlements, rights, or contracts. Due to the size of the proposed project, a water supply assessment pursuant to SB 610 is not required.

Urban Water Management Plans

Urban water purveyors are required to prepare and update a UWMP every 5 years. The UWMPs address water supply, treatment, reclamation, and water conservation, and contain a water shortage contingency plan. Local UWMPs, such as those prepared by RDDMWD and other water districts, are

supplemental to the regional plans prepared by MWD. The Water Conservation Bill of 2009 (SBX7-7) requires each urban retail water supplier to develop an urban water use target and an interim urban water use target. Notably, SBX7-7 authorizes urban retail water suppliers to determine and report progress toward achieving these targets on an individual agency basis or pursuant to a regional alliance as provided in California Water Code (CWC) Section 10608.28(a). As described above, water service to the site is provided by RDDMWD. In accordance with this regulation, the RDDMWD prepared and their Board of Directors adopted its 2015 UWMP in 2016. RDDMWD's UWMP includes estimated future water demands until 2040, using updated population projections and a conservative assumption that, in the absence of mandatory water conservation measures, per-capita consumption could rebound to its 2020 target value. Demands provided in RDDMWD's UWMP have been coordinated with SDWCA, RDDMWD's wholesale supplier.

2018 Making Water Conservation a Way of Life Laws

In 2018, two laws were passed that built on California's ongoing efforts to make water conservation a way of life. They emphasized efficiency and stretching water supplies in cities and farms. Senate Bill 606 (Hertzberg) and Assembly Bill 1668 (Friedman) serve as a roadmap for Californians to plan for dry conditions, and to work together for clean, reliable water supplies now and in the future.

In addition to water conservation targets, the bills outline certain roles and actions to be carried out by the California Department of Water Resources, the State Water Resources Control Board (State Water Board), and water suppliers. Future milestones include (DWR 2021):

- Beginning in November 2023, urban water suppliers will annually calculate a water efficiency standard based on the indoor and outdoor water needs of its service area.
- The indoor water use standard is one of several metrics used to calculate the overall efficiency standard for a service area. The laws establish a standard of 55 gallons per person per day until January 2025, and then to 50 gallons per person per day in 2030. However, those targets are aggregated across the population in a service area and are not intended as enforceable standards for individuals.
- The State Water Board may initiate enforcement actions in 2025 against urban water suppliers if they fail to meet the standards. The standards are scheduled to go into effect in 2023 (DWR 2021).

Local

San Diego County Integrated Waste Management Plan

Pursuant to the IWMA, the Countywide Integrated Waste Management Plan for San Diego County describes the goals, policies, and objectives of the county for coordinating efforts to divert, market, and dispose of solid waste during the planning period through the year 2017. Countywide policies for reducing waste and implementing the programs are identified in the individual jurisdiction SRREs and HHWEs and are intended to reduce costs, streamline administration of programs, and encourage a coordinated and planned approach to integrated waste management.

To avoid duplication of effort, all of the jurisdictions in the county participate in the San Diego County Integrated Waste Management Local Task Force (LTF). The LTF coordinates mandated planning, oversees implementation of new or countywide integrated waste management programs, and carries out an active legislative program. Regulatory reform, changes to state diversion requirements, and

reduction of the costs of compliance are considered by the LTF, as well as other solid waste issues of regional or countywide concerns.

City of San Marcos Municipal Code

Title 8, Health and Sanitation

SMMC Title 8 contains regulations and provisions on sewers and sewage disposal plants, sewer connections, septic tanks, waste matter, garbage and refuse collection, and other matters concerning sanitation. Chapter 14.15 contains regulations concerning storm water management and discharge control. Chapter 14.24 contains regulations concerning underground utility facilities. Title 19 regulates subdivision requirements, including the installation of utility facilities and connections and payment or fees for such installations.

Title 20, Chapter 20.330 Water Efficient Landscaping Ordinance (WELO)

The provisions of Title 20 of the San Marcos Municipal Code are referred to as the Zoning Ordinance. The City of San Marcos Municipal Code Title 20, Section 20.330, details the City's Water Efficient Landscape (WELO). In accordance with State law, SMMC Chapter 20.330 establishes specific standards for landscape and irrigation design and installation to ensure beneficial, efficient and responsible use of water resources within the City.

City of San Marcos General Plan

The General Plan Conservation and Open Space Element includes one goal regarding water supply that is applicable to the proposed project:

- Goal COS-5: Reduce water consumption and ensure reliable water supply through water efficiency, conservation, capture, and reuse.

- The General Plan Conservation and Open Space Element also includes one goal and associated policy regarding solid waste that is applicable to the proposed project:

- Goal COS-10: Establish and maintain an innovative, sustainable solid waste collection, recycling, and disposal delivery system for present and future generations.

    - Policy COS-10.1: Promote the curbside recycling program to divert residential refuse from the landfills.

The General Plan Land Use and Community Design Element identifies the following goals and policies regarding utilities and services systems that are applicable to the proposed project:

- Goal LU-8: Ensure that existing and future development is adequately serviced by infrastructure and public services.

    - Policy LU-8.1: New development shall pay its fair share of required improvements to public facilities and services.

    - Policy LU-8.2: Promote development timing that is guided by the adequacy of existing and/or expandable infrastructure, services, and facilities.

- Goal LU-13: Water Service and Supply: Manage and conserve domestic water resources by reducing water usage and waste on a per capita basis, to ensure an adequate water supply for existing and future residents.

  - Policy LU-13.1: Work closely with local and regional water providers to ensure high quality water supplies are available for the community.
  - Policy LU-13.2: Actively promote water conservation programs aimed at reducing demand.
  - Policy LU-13.3: Encourage exploration and use of deep underground wells to reduce reliance on treatable water.
- Goal LU-14: Wastewater: Ensure an adequate wastewater system for existing and future development.
  - Policy LU-14.1: Work closely with local service providers to ensure an adequate wastewater system for existing and future development is in place.
  - Policy LU-14.2: Ensure development approval is directly tied to commitments for the construction or improvement of primary water, wastewater, and circulation systems.

The General Plan Land Use and Community Design Element also identifies the following goal and policies regarding solid waste that are applicable to the proposed project:

- Goal LU-16: Solid waste: reduce the amount of waste material entering regional landfills with an efficient and innovative waste management program.
  - Policy LU-16.1: Work closely with local service providers to ensure adequate solid waste disposal, collection, and recycling services.
  - Policy LU-16.2: Increase recycling, composting, source reduction, and education efforts throughout the city to reduce the amount of solid waste requiring disposal at landfills.

The proposed project's consistency with applicable General Plan goals and policies is discussed in Section 3.10, Land Use and Planning. As detailed in Table 3.10-5 in Section 3.10, the project is consistent with the applicable goals and policies.

3.17.3 Thresholds of Significance

The determination of significance for utilities and service systems is based on the Appendix G of the CEQA Guidelines. Utilities and services system impacts would be significant if the proposed project meets any of the following thresholds.

- **Threshold #1:** Require or result in the relocation of reconstruction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- **Threshold #2** - Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?
- **Threshold #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?

- **Threshold #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?

- **Threshold #5** – Comply with federal, state, and local management and reduction statues and regulations related to solid waste?

3.17.4 Project Impact Analysis

As identified above, the project site is located within the RDDMWD water service area and within the VWD sewer service area.

Threshold #1: Require or result in the relocation of reconstruction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

There is no existing water demand on the project site, since it is not developed. The proposed project would include development of 151 multi-family residential units. As such, the proposed project would increase the intensity of uses on the project site, resulting in increased water use. CalEEMod default water usage rates were used to estimate the anticipated water demand of the proposed project. Based on the CalEEMod generation rates, water use per year would be 9.8 million gallons (Ldn 2021, Appendix H.1). The project site lies within RDDMWD's Improvement District 1 water service area and will be served by RDDMWD for potable water and for water for fire protection. RDDMWD has confirmed their ability to serve the project and has no environmental concerns (RDDMWD 2021, Appendix N.2).

RDDMWD currently imports all of its potable, treated water from SDCWA, particularly from the SDCQWA First Aqueduct, and all of its recycled water from the City of Escondido's HARRF. As such, RDDMWD does not currently have water treatment facilities. As discussed in its Water Master Plan, RDDMWD would seek to offset increases in potable water demand by expanding its recycled water distribution system or developing local water supplies, which are projected to increase from 280 AFY in 2020 to 900 AFY in 2035 (RDDMWD 2014). As such, the proposed project would not result in the construction of new water treatment facilities.

RDDMWD will extend the existing 8-inch waterline that currently terminates within the Mira Lago community, through a portion of the project site to loop and connect to the existing 10-inch VWD line in E. Barham Drive. Once operational, the project would connect into this new on-site line. RDDMWD's connection to the VWD waterline also provides a secondary water source if water service from RDDMWD is interrupted.

Water lines within the project site will consist of an 8-inch fire main and a 4-inch domestic main water line. Both lines will circulate beneath the main driveways throughout the project site as shown on **Figure 2-12**. The 8-inch fire main will run under Private Driveway's "A", "B", and "C". The 4-inch domestic water lines will loop through alley's "A," through "K" teeing off from driveway's "A", "B" and "C." The 8-inch fire main and 6" domestic water lines will connect to the existing 10-inch and 8-inch public water mains underneath E. Barham Drive. These improvements would occur within the project footprint, and environmental clearance for these impacts is covered under this EIR. For these reasons, the proposed project would not require or result in the relocation or construction of new water facilities. Impacts to water services would be **less than significant.**

Wastewater

The analysis of wastewater infrastructure is based upon the water and sewer study technical memorandum prepared by VWD (VWD 2020). This study is included in Appendix N.1 of this EIR.

As described above, the proposed project would include development of 151 multi-family residential units. The project's 2008 General Plan land use designation was Low Density Residential (Residential 4-8 dwelling unit per acre [du/ac]). VWDs 2018 Master Plan based its ultimate wastewater generation planning on this approved land use and assumed the project site would generate approximately 13,000 gallons per day (GPD). The project is proposing a density increase with the proposed 151 multi-family residential units (Residential 15-20 du/ac). The sewer study prepared for the proposed project estimated that the proposed project would generate approximately 33,000 gallons of wastewater per day. This is an increase in the projected average wastewater generation by 20,000 GPD (VWD 2020).

Wastewater Collection System Analysis Model Results

VWD modeled several wastewater scenarios to identify system impacts that may be created by the proposed sewer generation, and to recommend any improvements required to provide service to the project. Modeling focused not only on the sewer collection infrastructure in the direct vicinity of the project site, but also on all downstream infrastructure from the development to Lift Station No. 1 on San Marcos Boulevard that would be impacted by the project flows.

The modeling results showed that there are existing system deficiencies in pipe segments HB-29 through HB-31 under the peak wet weather flows during ultimate build-out conditions. The wastewater flow from the proposed project would increase those deficiencies. However, the VWD 2018 Master Plan identified pipe segments HB-29 through HB-31 for upsizing from 18-inch and 24-inch as CIP #SP-25, a Phase 3 project. Phase 3 projects are planned for construction in the 2026-2030 timeframe. Per VWD, the projects included in the Master Plan will address and accommodate the pipeline deficiencies. Wastewater Capital Facility Fees paid by the project will be used towards the construction of these pipelines (VWD 2020).

Wastewater Lift Station Analysis

Per the VWD sewer study, the project is not located in a sewer shed that is served by a lift station. Therefore, no lift station upgrades would be required (VWD 2020).

Parallel Land Outfall Analysis.

Per the sewer study prepared for the project, VWD has a combined peak wet weather wastewater collection capacity of 20.10 MGD. VWD's 2014 average daily wastewater flow through the land outfall was 7.5 MGD. This corresponds to a peak wet weather flow of 17.5 MGD, which falls within VWD's combined peak wet weather collection capacity.

The 2018 Master Plan estimated that, under approved land uses, VWD has an ultimate build-out average dry weather flow of 14.4 MGD. This corresponds to a peak wet weather flow of 31.7 MGD, which exceeds VWD's combined peak wet weather collection capacity. To accommodate additional wastewater flows from planned development, the 2018 Water Plan recommended conveyance of peak flows to the EWPCF through a parallel land outfall.

The project proposes to generate 20,000 GPD of additional average wastewater flow that was not accounted for in the Land Outfall's capacity studied in the 2018 Master Plan. However, per the sewer study prepared for the proposed project, VWD finds that outfall capacity is currently available to serve the project's proposed wastewater generation. Wastewater Capital Facility Fees paid by the project

will be used toward design and construction of a parallel land outfall to be sized to accommodate ultimate build-out wastewater flows.

Wastewater Treatment Facility Analysis

Because VWD utilizes both MRF and EWPCF for wastewater treatment, wastewater generated by the proposed project would be treated at either facility. MRF has liquids treatment capacity of up to 5 MGD with a peak wet weather capacity of 8 MGD. MRF does not have solids treatment capacity, and therefore all solids are treated at the EWPCF. The EWPCF is a regional facility with treatment capacity of up to 40.51 MGD (VWD 2020).

Solids Treatment Capacity

VWD currently owns 10.47 MGD of solids treatment capacity at EWPCF. VWD's 2014 average daily wastewater flow was 7.5 MGD. Therefore, VWD concludes that adequate solids treatment capacity exists at this time to serve the project (VWD 2020). However, the ultimate average wastewater flow identified in the 2018 Master Plan is 14.4 MGD, resulting in a projected solids treatment capacity deficiency of 3.93 MGD (VWD 2020). Wastewater flows from the proposed project would contribute to that deficiency

Liquid Treatment Capacity

VWD currently owns 7.67 MGD of liquids treatment capacity at the EWPCF in addition to the liquids treatment capacity of 5.0 MGD at MRF for a total of 12.67 MGD of liquids treatment capacity. VWD's 2014 average daily wastewater flow was 7.5 MGD. Therefore, VWD concludes that adequate solids treatment capacity exists at this time to serve the project (VWD 2020). However, the ultimate average wastewater flow identified in the 2018 Master Plan is 14.4 MGD resulting in a projected liquids treatment capacity deficiency of 1.73 MGD (VWD 2020). Wastewater flows from the proposed project would contribute to that deficiency.

Ocean Disposal Capacity

VWD currently owns 10.47 MGD of ocean disposal capacity at the EWPCF. VWD's 2014 average daily wastewater flow was 7.5 MGD. Therefore, VWD concludes that adequate ocean disposal capacity exists at this time to serve the project (VWD 2020). The ultimate average wastewater flow identified in the 2018 Master Plan is 14.4 MGD resulting in an ocean disposal deficiency of 3.93 MG (VWD 2020). Wastewater flows from the proposed project would contribute to that deficiency.

Wastewater Summary

Preliminary sewer design for the project concluded a 6-inch PVC sewer main will be needed to adequately service individual homes and community areas discharging wastewater. Pipes will be located underneath the internal private driveways and alleys. The internal sewer main will connect to the existing VWD 8-inch sewer line located beneath E. Barham Drive via the primary project driveway. **Figure 2-13** presents the sewer concept. These improvements would occur within the project footprint, and environmental clearance for these impacts is covered under this EIR.

As discussed above, the project is expected to increase wastewater flows by 20,000 GPD than what was anticipated for the project site in the 2018 Master Plan. This would lead to an increase of 20,000 GPD in solids handling, liquids handling and ocean disposal capacity requirements at the EWPCF and an increase of 20,000 GPD in the parallel land outfall's capacity requirement. VWD has determined that adequate wastewater treatment and disposal capacity exists for the proposed project at this time. As discussed in the sewer study (Appendix N.1), the project applicant would be required to pay all

applicable Wastewater Capital Facility fees in effect at the time service is committed in accordance with District rules and regulations, and acceptance by VWD of all wastewater facilities required to be constructed for service to the project.

Under these conditions, and with consideration that proposed infrastructure is analyzed throughout this EIR, the project would not exceed current capacities of the wastewater treatment system and would not significantly impact existing wastewater treatment systems. Therefore, the proposed project would not require or result in the relocation or construction of new wastewater facilities. Impacts to water services would be **less than significant**.

Stormwater Drainage

As discussed in Section 3.9.4 (Hydrology and Water Quality), the proposed project would result in an increase of impervious areas to the site. If not carefully planned for, increased runoff from impervious surface can cause alterations to drainage courses. However, the proposed project has been designed to carefully handle runoff and to meet regulatory requirements to ensure that post-development runoff quantities and rates are similar to or less than the pre-development condition. Although the project would include new storm water infrastructure (biofiltration basin) to support project facilities, the proposed infrastructure has been accounted for and analyzed throughout this EIR. The project would not contribute a substantial amount of new stormwater runoff relative to existing conditions, and impacts are determined to be less than significant. Please refer to Section 3.9, Hydrology and Water Quality, for additional discussion related to drainage.

Electric Power

As discussed in Section 3.5.4, during construction, the amount of electricity used would be minimal because typical demand stems from the use of several construction trailers that are used by managerial staff during the hours of construction activities in addition to electrically powered hand tools. As discussed in Section 2.2.2.6, the proposed project would connect to the existing underground 69KV line at the project frontage with E. Barham Drive. This connection is accounted for in the project impact analysis and mitigation measures for the proposed project as a whole throughout this EIR.

During operations, proposed project is estimated to have a total electrical demand of approximately 767,483 kWh per year, which was estimated using CalEEMod (LDN 2021, Appendix H.1). The proposed project includes various on-site features and measures to reduce the proposed project's energy consumption. Further, the proposed project would be required to be consistent with appropriate mandatory project design feature in the CAP Consistency Worksheet that would reduce operational electricity consumption (details are provided in Appendix H.1 of this EIR) and would-be built-in compliance with Title 24 requirements applicable at that time. Based on the 2019 standards, homes built under the 2019 Title 24 standards would use about 53% less energy than those under the 2016 Title 24 standards (California Energy Commission [CEC] 2018) because the 2019 standards require solar photovoltaic systems for new homes. On the residential side, the standards also encourage demand responsive technologies including battery storage and heat pump water heaters and improve the building thermal envelope.

Homes built in 2020 and beyond will be highly efficient and include solar photovoltaic generation to meet the home's expected annual electric needs (CEC 2018). The project would install smart meters and programmable thermostats, cool roof materials, and efficient lighting in all buildings and light control systems, where practical, which would reduce lighting energy by 20%. Thus, the proposed project would not require or result in the relocation or construction of expanded electric power facilities. Impacts would be **less than significant.**

Natural Gas

SDG&E maintains a gas distribution system within E. Barham Drive. If the project utilizes gas utilities, the gas line will be extended to the project site through the same joint trench alignment as electrical, cable and telephone facilities.

As discussed in Section 3.5.4, natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection Petroleum. Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not have an adverse effect on the environment. As far as project operation, no natural gas will be used. Further, the proposed 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 applicant would ensure that the proposed project would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. Thus, the proposed project would not require or result in the relocation or construction of new or expanded natural gas facilities. Impacts would be **less than significant.**

Telecommunications

Communications systems for telephones, computers, and cable television are serviced by utility providers such as AT&T, Cox, Spectrum (formerly Time Warner), and other independent cable companies. However, no specific systems upgrades are proposed with this project, and the location and extent of future facilities is not known at this time. Thus, the project would not result in physical impacts associated with the construction of communications systems. Impacts would be **less than significant.**

Threshold #2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

As discussed, the proposed project would be served by Rincon del Diablo Municipal Water District. RDDMWD anticipates the demand of future development through their master planning process. With development of MWD, SDCWA and RDDMWD's supplies, along with compliance with the Water Conservation Bill of 2009, no water shortages are anticipated within RDDMWD's service area in single or multiple dry years through 2040 (RDDMWD 2016). According to RDDMWD's UWMP, RDDMWD would have sufficient supplies available to serve its area during a normal, single dry, and multiple dry years.

SDCWA has invested in carryover storage supplies to assist in achieving reliability in dry years. SDCWA's carryover supplies include regional surface water storage and groundwater storage in the California Central Valley. In years where unanticipated shortages are experienced after expenditure of SDCWA carryover supplies, RDDMWD would respond to allocations in water demands as mandated by Metropolitan and/or SDCWA. Additionally, RDDMWD would implement its Drought Response Plan accordingly (RDDMWD 2016). The Drought Response Plan, which contains four-levels of drought response, provides a response strategy to ensure that, in a time of shortage, available water resources are put to the maximum beneficial use.

In 2015, RDDMWD's actual water demand and supply was 8,882 acre-feet per year (RDDMWD 2016). It should be noted that water demands in 2015 were substantially less than those projected in the 2010 UWMP due to mandatory water use restrictions due to emergency drought regulations, increases

water prices, and conversion of an SDG&E power plant to recycled water (RDDMWD 2016). As a comparison, actual water demand in 2010 was 9,380 acre-feet per year (RDDMWD 2016).

RDDMWD has estimated that future demands will increase at the same rate as the SANDAG-projected population growth rate for RDDMWD's service area. RDDMWD's UWMP utilizes SANDAG growth projections for its project planning. As the project is proposing a density increase, there would be a corresponding increase in water demand that would not have been included in the UWMP and Master Plan. The reliable quantities of projected water demands for Years 2025 and 2030 are 8,009 acre-feet per year and 8,229 acre-feet per year, respectively (RDDMWD 2016). CalEEMod assumed 9.8 million gallons of water per year or approximately 30 acre-feet per year. The estimated water consumption of the proposed project is approximately 0.37% of RDDMWD's projected water demand for 2025 and 2030.

RDDMWD has a goal to supply the growth in demand arising from new development through a combination of recycled water and other possible new local sources of supply. RDDMWD anticipates adding this new supply in increments, reaching a cumulative total of 900 AF/YR by 2035. Per RDDMWD's UWMP, RDDMWD will investigate a variety of options for providing new supply, including additional recycled water development, groundwater, and indirect or direct potable reuse. Since 2016, ID 1 water supplies are augmented from time-to-time with water originating from the Twin Oaks Valley Water Treatment Plant (TOVWTP). TOVWTP water is a blend of treated SDCWA water and desalinated sea water from the Claude "Bud" Lewis Carlsbad Desalination Plant (Lewis Desal Plant). Originating from the Carlsbad Agua Hedionda Lagoon, the desalinated water is a superior quality water – free of salt as well as biological and organic compounds (RDDMWD 2020).

RDDMWD will construct new storage and transmission mains as the system expands and new development service is required. The project applicant will pay the Water Capital Facility (Capacity) Fees that are in effect at the time of building pursuant to Ordinance NO. 21-98.2.

RDDMWD's projected water supplies are 12,009 and 12,229 acre-feet per year, which reflect RDDMWD's goal to supply the growth in demand arising from new development through a combination of increased recycled water usage and other potential local supply projects (RDDMWD 2016).

Considering existing and estimated future water demand, as described in RDDMWD's UWMP, it is reasonably foreseeable that RDDMWD would have sufficient supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. Further, the project site would be redeveloped in compliance with the California Green Building Code (which implements water efficiency standards for appliances and fixtures), which would further reduce project water usage in combination with RDDMWD's ongoing water conservation practices. For these reasons, impacts would be considered **less than significant.**

Threshold #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?

As discussed under Threshold #1, above, the project site is within VWD's service area, which would provide service to the project. Due to proposed densification, the project is expected to increase wastewater flows by 20,000 GPD over what was assumed in the 2018 Master Plan. This would lead to an increase of 20,000 GPD in solids handling, liquids handling and ocean disposal capacity requirements at the EWPCF and an increase of 20,000 GPD in the parallel land outfall's capacity requirement. VWD has determined that adequate wastewater treatment and disposal capacity exists for the proposed project at this time. As discussed in the sewer study (Appendix N.1), the project

applicant would be required to pay all applicable Wastewater Capital Facility fees in effect at the time service is committed in accordance with District rules and regulations, and acceptance by VWD of all wastewater facilities required to be constructed for service to the project. Under these conditions, VWD has determined that adequate wastewater treatment and disposal capacity exists for the proposed project at this time (VWD 2020). Because the project would not exceed current capacities of the wastewater treatment system, impacts would be **less than significant.**

Threshold #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?

Construction of the proposed project would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, and plastics. The City works with EDCO to promote its construction and demolition material waste removal and recycling program.

Operation of the proposed project would represent an increase in intensity of uses on the project site, which would likely be associated with increased generation of solid waste. The anticipated solid waste generation from the proposed project was estimated using CalEEMod, Version 2016.3.2, which estimated that the proposed project would generate approximately 69.5 tons of solid waste per year (Ldn 2021, Appendix H.1). This does not consider any waste diversion through recycling. According to CalRecycle, the City of San Marcos has a disposal rate target of 8.9 lbs/person/day. If the City meets this target, the City is considered in compliance with the 50 percent diversion requirement of AB 939. The most recent data (2019) from CalRecycle identifies the annual per capital disposal rate for the City of San Marcos is 5.0 lbs/person/day (CalRecycle 2019b). Thus, the City is exceeding their current targets for diversion.

Solid waste generated by the proposed project would be collected and transported to the of Sycamore Sanitary Landfill by EDCO. The Sycamore Sanitary Landfill is owned by the City of San Diego and operated by Allied Waste Industries, Inc. According to CalRecycle, the facility has a daily permitted capacity of 5,000 tons per day for solid waste (CalRecycle 2019a) with an anticipated closure date of 2054 (County of San Diego 2018). As of August 2017, remaining capacity was 110,000,000 cy or approximately 86 million tons (County of San Diego 2018).

Solid waste generated by the proposed project during operation would be approximately 380 pounds per day, or 0.19 tons per day, assuming no diversion. However, the proposed project would be required to comply with AB 341, which requires a 75 percent diversion rate by 2020. As such, assuming a 75 percent diversion rate, solid waste would be reduced to 95 pounds per day, or 0.0475 tons per day, which would consist of 0.00095% of the landfill's daily capacity. Thus, the project would contribute a minimal amount of solid waste to Sycamore Sanitary Landfill's daily permitted capacity. As such, the proposed project's solid waste generation can be accommodated at the landfill. The project 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. Impacts would be **less than significant.**

Threshold #5: Comply with federal, state, and local management and reduction statues and regulations related to solid waste?

The proposed project would comply with all federal, state, and local statues and regulations regarding solid waste. More specifically, the proposed project would comply with AB 341, which requires a 75 percent diversion rate by 2020. All solid waste facilities, including landfills, require solid waste facility permits to operate. In San Diego County, Public Resources Code (Sections 44001- 44018) and California Code of Regulations Title 27, Division 2, Subdivision 1, Chapter 4 (Section 21440 et seq.)

authorizes the County Department of Environmental Health, Local Enforcement Agency to issue solid waste facility permits. Sycamore Sanitary Landfill is a permitted facility and EDCO is a licensed hauler. As such, the project would comply with existing regulations related to solid waste disposal and would not violate federal, state, or local management and reduction statutes and regulations related to solid waste. Impacts would be **less than significant.**

3.17.5 Cumulative Impact Analysis

A "cumulative impact" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. Pursuant to CEQA Guidelines Section 15130(b)(1)(A)(B), an adequate discussion of a project's significant cumulative impact, in combination with other closely related projects, can be based on either: (1) a list of past, present, and probable future projects producing related impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or a related planning document that describes conditions contributing to the cumulative effect. For purposes of assessing the proposed project's cumulative impact with respect to utilities and services systems, the cumulative analysis is based upon a combined list and plan project approach.

Water

Some of the cumulative projects included in Table 2-3 are within RDDMWD's service area for potable water service and would contribute to the cumulative demand for water supply and water infrastructure. However, RDDMWD anticipates the demand of future development through their master planning process. According to RDDMWD's UWMP, with development of MWD, SDCWA and RDDMWD's supplies, along with compliance with the Water Conservation Bill of 2009, no water shortages are anticipated within RDDMWD's service area in single of multiple dry years through 2040. Not all cumulative projects included in Table 2-3 fall into the RDDMWD's service area; those that do not would be served by neighboring districts.

As described in Section 3.17.4, above, the proposed project would result in less than significant impacts to water supply services. RDDMWD has indicated there is sufficient water storage capacity to serve the project (RDDMWD 2021). RDDMWD has determined that with supplies provided by SDCWA, and compliance with the Water Conservation Bill of 2009, no water shortages would occur in a normal year through 2040 (RDDMWD 2016). Further, according to RDDMWD's Water Master Plan, future water system and reliability projects over the next five to ten years will primarily occur within the Harmony Grove Village development, a residential development within the County, and development to the immediate north and south of this cumulative project. RDDMWD will construct new storage and transmission mains as the system expands and new development will be served, which is an already approved and separate project. These expansions would also strengthen the reliability of existing water systems to access available water storage, enhance fire flow capabilities, and provide increased redundancy. RDDMWD plans to continue its dependence on SDCWA for potable water supply, and the City of Escondido for recycled water. However, RDDMWD would seek to offset increases in potable water demand by expanding its recycled water distribution system or developing local water supplies, which are projected to increase from 280 AFY in 2020 to 900 AFY in 2035 (RDDMWD 2014). Other cumulative projects that are consistent with the land use assumptions made in RDDMWD's UWMP would have already been accounted for in demand projections. Projects that are inconsistent with the land use assumptions made in RDDMWD's UWMP would also be subject to CEQA and required to include water supply assessments to demonstrate adequate supply for development. Further, related projects would be required to show that adequate infrastructure exists to serve the related projects and mitigate any potential impacts to water infrastructure caused by the project. All projects would be

required to pay applicable Capital Facility Fees to RDDMWD, required to go towards infrastructure improvements. Thus, cumulative impacts to water services would be **less than significant.**

Wastewater

Cumulative projects that are within the VWD service area for wastewater services would contribute to the cumulative demand for wastewater services. VWD anticipates the demand of future development through their master planning process. Cumulative projects that are consistent with the land use assumptions made in VWD's Master Plan would have already had their demand accounted for.

As discussed in Section 3.17.4, above, VWD has sufficient capacity to account for the proposed project's increase in estimated wastewater generation rate. VWD identified existing system deficiencies in pipe segments HB-29 through HB-31, as well as in capacity for solids handling, liquids handling, ocean disposal and parallel land outfall's capacity for ultimate build-out wastewater flows. The cumulative projects that result in an increase in density or development over what was accounted for in VWD's Master Plan would further exacerbate these deficiencies. Per VWD, payment of Wastewater Capital Facility fees would go toward projects identified with their 2018 Master Plan including upsizing applicable pipelines, and design and construction of a parallel land outfall (VWD 2020). The project applicant for the proposed project and for cumulative projects would be required to pay all applicable Wastewater Capital Facility fees in effect at the time service is committed in accordance with District rules and regulations, and acceptance by VWD of all wastewater facilities required to be constructed for service to the project. Thus, with payment of all applicable Wastewater Capital Facility fees to VWD, cumulative impacts to wastewater treatment facilities would be **less than significant.**

Solid Waste

Future development projects would generate solid waste to be disposed of at the Sycamore Sanitary Landfill. According to CalRecycle, the facility has a daily permitted capacity of 5,000 tons/day for solid waste. As of August 2017, remaining capacity was 110,000,000 cy or approximately 86 million tons with an anticipated closure date of 2054 (County of San Diego 2018). Further, there are five other landfills in the County. This includes Borrego Landfill, with a remaining capacity of 111,504 cy and a closure date of 2046; Miramar Landfill, with a remaining capacity of 13,327,508 cy and a closure date of 2030); Otay Landfill, with a remaining capacity of 21,194,008 cy and closure date of 2030, and two Us Marine Corps landfills – Las Pulgas and San Onofre, with remaining capacities of 9,503,985 and 1,064,500 cy and 2059 and 2045 closure dates respectively (County of San Diego 2018). Thus, there is adequate capacity throughout the County to serve future development projects, including those identified on the cumulative project list (Table 2-3). Cumulative impacts for solid waste would be **less than significant.**

3.17.6 Mitigation Measures

Impacts to utilities and service systems would be less than significant. Thus, no mitigation is required.

3.17.7 Conclusion

Development of the proposed project would result in an incremental increase in the need for water, wastewater, stormwater, and solid waste services. However, as outlined in the project impact analysis above, Section 3.17.4, it is determined that water, wastewater, stormwater, and solid waste services would be adequate and **project- and cumulative-level impacts would be less than significant.**

4.0 Alternatives

4.1 Introduction to Alternatives

Section 15126.6 of the California Environmental Quality Act (CEQA) Guidelines states that the Environmental Impact Report (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 and evaluate the comparative merits of the alternatives."

The range of alternatives evaluated in an EIR is governed by the "rule of reason" that requires the EIR set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative [Section 15126.6(a) of the CEQA Guidelines].

In developing the alternatives to be addressed in this EIR, the potential alternatives were evaluated in terms of their ability to meet the basic objectives of the project, while reducing or avoiding the environmental impacts of the project identified in Section 3.0, Environmental Analysis, of the EIR.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, the San Marcos City Council (see PRC Section 21081[a][3].)

4.2 Project Objectives

The following objectives of the Hallmark-Barham Specific Plan describe the purpose of the proposed project and provide a basis for identification of a range of reasonable alternatives evaluated in this EIR:

- Provide a multi-family housing opportunity through a range of unit types, sizes, and number of different bedroom counts, including one, two, three, and four-bedroom units, as well as a range of affordability to accommodate a full spectrum of family demographics to contribute to the growing housing needs of the region;

- To the extent possible given the site constraints, maximize the opportunity to provide medium-density housing for the City of San Marcos in the 12.1-15.0 dwelling unit density range which comparable to other medium-density housing developments near the Specific Plan Area.

- Create a development which accommodates appropriate recreational open space for the anticipated residents expected to reside within the Specific Plan Area;

- Provide development standards to regulate the nature and appearance of all construction within the Hallmark-Barham Specific Plan Area through integration of landform use, architectural design, unified landscape theme, and recreation areas;

- Design a safe and efficient circulation system that adequately supports the appropriate level of traffic within the Specific Plan Area as well as connections to public roadways and improvements to public streets and rights-of-way inclusive of vehicular, bicycle, pedestrian modes of travel;

- Develop a financing plan that provides for the efficient and timely provision of infrastructure and public services prior to and as development occurs;

- Implement a maintenance program which will ensure all common areas are maintained to standards set forth in the City's General Plan; and

- Finance and/or contribute to all appropriate community and citywide infrastructure as warranted.

4.3 Project Alternatives Considered in This EIR

4.3.1 Description of Alternative

The following alternatives are under consideration for this project:

- No Project/No Development Alternative (Section 4.3.3)
- No Project/ Existing Land Use Designation Alternative (Section 4.3.4)
- Reduced Density Alternative (Section 4.3.5)
- Reduced Footprint Alternative (Section 4.3.6)

Alternatives considered and removed from further consideration are summarized in Section 4.4.

4.3.2 Summary of Impacts

Project- and cumulative-level impacts associated with implementation of the proposed project are evaluated in Sections 3.1 through 3.17 of this Draft EIR. As identified in Table 1-1, in Chapter 1 (Summary), construction and/or operation of the proposed project would have the potential to cause the following significant but mitigable environmental impacts:

- **Impact BIO-1:** Potential to impact avian species protected under the Migratory Bird Treaty Act if tree removal, vegetation removal, or other construction activities occur during the nesting season.

- **Impact BIO-2:** The project will directly impact 0.61 acres of Diegan coastal sage scrub, 0.03 acres of Diegan coastal sage scrub – *Baccharis* dominated, and 9.50 acres of non-native grassland.

- **Impact BIO-3:** Potential for indirect impacts to sensitive habitats during project construction.

- **Impact BIO-4:** Potential for indirect impacts to sensitive habitats during project operation.

- **Impact CR-1a:** Due to grading and ground disturbing activities, the project has the potential to impact unidentified archeological resources on the project site.

- **Impact CR-1b:** Due to grading and ground disturbing activities, the project has the potential to impact unidentified historical resources underneath the project site.

- **Impact CR-2:** There is a potential for project construction activities to disturb previously unidentified human remains on the project site.

- **Impact GEO-1:** Project grading may result in disturbance of previously unknown paleontological resource.

- **Impact LU-2a and LU-3a:** Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (West) (the project's western driveway) is calculated to operate at LOS E during the PM peak hour under Near Term 2025 and Horizon Year 2050 With Project condition. The significant effect is only for the outbound left-turn.

- **Impact LU-2b and LU-3b:** Northbound left-turn movement out of the E. Barham Drive/ Project Driveway (East) (the project's eastern driveway) is calculated to operate at LOS E during the PM peak hour under Near Term 2025 and Horizon Year 2050 With Project condition. The significant effect is only for the outbound left-turn.

- **Impact N-1:** Depending on the staging location of a rock drill, noise levels may exceed the 75 dBA exterior noise threshold.

- **Impact N-2:** Noise levels resulting from rock crushing operations would exceed the City's 60 dBA Leq standard at the single-family residences and the City's 65 dBA Leq standard at the adjacent church and preschool.

- **Impact N-3:** Noise levels at 11 receptors at the top of slopes along E. Barham Drive facing SR-78 are modeled to exceed the City's General Plan Noise Element 65 dBA exterior noise threshold.

- **Impact N-4:** Noise levels at 13 receptors on second and third floor balconies facing E. Barham Drive and SR-78 are modeled to exceed the City's General Plan Noise Element 65 dBA exterior noise threshold.

Further, construction and/or operation of the proposed project would have the potential to cause the following significant and unavoidable environmental impacts:

- **Impact LU-1:** Project-related traffic results in a significant increase in delay (greater than 2.0 seconds) at the Rancheros Drive/ SR-78 WB intersection in the AM and PM peak hours under Near Term 2025 With Project condition.

- **Impact TR-1:** Project-related traffic results in a significant increase in delay (greater than 2.0 seconds) at the Rancheros Drive/ SR-78 WB intersection in the AM and PM peak hours under Near Term 2025 With Project condition.

- **Impact TR-2:** The project's per capita VMT is 17.07, which exceeds the threshold of 14.96 VMT per capita.

4.3.3 No Project/No Development Alternative

Under the No Project/No Development Alternative, the proposed project would not be implemented, and the project site would remain undeveloped and in its current condition. No grading or construction

would occur on the project site under this alternative. The project site is currently undeveloped and supports the following vegetation communities/land covers: non-native grassland with smaller areas of Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated, developed, disturbed, ornamental and ruderal vegetation. Habitat on the project site would not be impacted under this alternative.

4.3.3.1 Comparison of the Effects of the No Project/No Development Alternative to the Proposed Project

Aesthetics

Under this alternative the project site would remain in its current condition and the visual character of the site would not change. The project site is currently vacant. Vegetation communities on the project site include non-native grassland with smaller areas of Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated, developed, disturbed, ornamental and ruderal vegetation. The project site slopes generally from higher elevations (710 feet above mean sea level [amsl]) in the southeast to lower elevations (650 amsl) in the northwest of the site. No grading or landform modification would occur under this alternative. This alternative would not add additional sources of lighting to the project site and vicinity. Compared to the proposed project, this alternative would reduce impacts. No aesthetics impacts would occur under the No Project/No Development Alternative.

Air Quality

Under the No Project/No Development Alternative, air emissions associated with project construction including emissions associated with blasting, rock crushing, grading, site preparation, site finishing and building finishing would not occur. Implementation of this alternative would not introduce any uses that could generate air emissions. Thus, compared to the proposed project, this alternative would not result in any air quality emissions. However, as discussed in Section 3.2.4, impacts to air quality for the proposed project would be less than significant and no mitigation would be required. Compared to the proposed project, this alternative would reduce air quality emissions. No air quality impacts would occur under the No Project/No Development Alternative.

Biological Resources

The No Project/No Development Alternative would not require any ground-disturbing activities. As such, this alternative would avoid the impacts to 0.61 acre of Diegan coastal sage scrub, 0.03 acre of Diegan coastal sage scrub – *Baccharis* dominated, and 9.50 acres of non-native grassland (Impact BIO-2). This alternative would also avoid potential impacts to nesting birds (Impact BIO-1), and potential indirect impacts to sensitive habitats during project construction and operation (Impacts BIO-3 and BIO-4). The project does include mitigation measures to reduce these impacts to below a level of significance. However, because impacts to biological resources would be avoided under the No Project/No Development Alternative, mitigation measures MM-BIO-1 through MM-BIO-4 would not be implemented or required. Compared to the proposed project, this alternative would eliminate the biological resources impacts. No biological resources impacts would occur under the No Project/No Development Alternative.

Cultural Resources

The No Project/No Development Alternative would not require any ground-disturbing activities. Therefore, there would be no potential to impact unknown archaeological and historical resources

potentially located within the project site (Impact CR-1a and Impact CR-1b). Further, there would be no potential to disturb previously unidentified human remains that may be present on the project site (Impact CR-2). As such, mitigation measures MM-CR-1a through MM-CR-1c and MM-CR-2 would not be implemented or required. Although there may be a reduced level of direct impact to cultural resources, any previously undiscovered on-site resources could be subject to continued degradation due to lack of preservation of the undeveloped site. Compared to the proposed project, this No Project/No Development Alternative would result in a reduced level of impact to cultural resources as no ground disturbance would occur.

Energy

Under the No Project/No Development Alternative, there would be no energy use associated with construction and operation, since no development would occur. While impacts under the proposed project related to energy use were determined to be less than significant, they would be completely eliminated under this alternative since there would be no energy use. Compared to the proposed project, the No Project/No Development Alternative would eliminate the energy use identified for the project and there would be no energy impacts.

Geology and Soils

Under the No Project/No Development Alternative, the project site would remain in its current state. Existing topography and on-site soils would not be modified to accommodate proposed development. Potential impacts to unknown paleontological resources (Impact GEO-1) that were identified for the project would be avoided under this alternative, as there would be no ground disturbing activities. Compared to the proposed project, the No Project/No Development Alternative would reduce potential impacts related to geology and soils.

Greenhouse Gas Emissions

Under the No Project/No Development Alternative, greenhouse gas (GHG) emissions associated with electricity and natural gas use, water use, and solid waste handling associated with future residences would not occur. This alternative would not introduce any people or uses to the site that would generate greenhouse gas emissions. Additionally, since this alternative would not generate project-related trips, GHG emissions associated with vehicular trips would not occur. The proposed project's GHG impacts were determined to be less than significant. Thus, compared to the proposed project, the No Project/No Development Alternative would result in a reduction of greenhouse gas emissions on the site and no impact would occur.

Hazards and Hazardous Materials

Under the No Project/No Development Alternative, no uses would be introduced that could result in the use or generation of hazardous materials. While the proposed project's hazards and hazardous materials impacts were less than significant, this alternative would further minimize potential impacts related to hazards and hazardous materials.

One area where the project does have a benefit related to hazards is in relation to wildfire risk. Since the proposed project would develop the site and also incorporate a 150-foot managed fuel modification buffer, it would eliminate sources of fire fuel (vegetation) on the project site which could provide a benefit to offsite developments in the event of wildlife. This benefit would not be realized under the No Project/No Development Alternative.

Hydrology and Water Quality

Under the No Project/No Development Alternative, no development would occur, and no impervious surfaces would be created. The existing on-site hydrologic conditions, drainage patterns, and drainage volumes would remain unaltered. Water quality would also remain unchanged. However, as described in Section 3.9, the proposed project's impacts to hydrology and water quality would be less than significant. Thus, although the No Project/No Development Alternative would reduce potential hydrology and water quality impacts on site, this alternative would not eliminate any potential significant impacts to hydrology and water quality.

Land Use and Planning

Under this alternative, the project site would remain undeveloped and none of the discretionary approvals identified for the project would be required. The General Plan Amendment (GPA) to change the designations of the site from Mixed Use 3 (MU3) to Specific Plan Area (SPA), as well as a rezone of the site would not be required. A Conditional Use Permit would not be required as there would be no need for the use of a temporary rock crusher. Additionally, a Grading Variance would not be needed as there would not be any grading nor creation of slopes greater than 20 feet.

Since this alternative would not generate nor add any vehicular trips to the local circulation network, it would avoid the significant and unavoidable impacts related to increase in delay at Rancheros Drive/SR-78 WB Ramp in the AM and PM Peak hours in the Near Term 2025 project condition (Impact LU-1 and TR-1). However, it should be noted that under existing conditions, this intersection operates at Level of Service (LOS) F. The existing traffic conditions at this location are already substandard and warrant a traffic signal. Under this alternative, the developer would not pay the regional and local Public Facilities Fees (PFF) development fees which would help fund the needed improvement of a traffic signal at this intersection. Since there would be no development under this alternative, it would avoid the LOS-related impacts at the project driveways (Impacts LU-2a and LU-2b). Since discretionary approvals would not be required under this alternative and this project would not generate any traffic, it would eliminate the significant and unavoidable land use impacts for the project.

Noise

The project site is currently vacant and does not generate any noise into the surrounding area. Under the No Project/No Development Alternative, the project site would remain undeveloped and would not create any new sources of construction or operational noise. Additionally, this alternative would not generate any of the noise associated with potential rock drilling and rock crushing that were identified for the proposed projects (Impacts N-1 and N-2). Additionally, this alternative would not result in development that would be subject to elevated noise levels at sensitive receptors (Impacts N-3 and N-4). As such, Impacts N-1 through N-4 would not occur, and mitigation measures MM-N-1 through MM-4, outlined in Section 3.11.6, would not be required. As such, noise impacts under this alternative would be reduced as compared to the proposed project. No noise impacts would occur under the No Project/No Development Alternative.

Population and Housing

The project site is currently vacant and located adjacent to existing residential uses to the east and southwest and a church and preschool to the west. The No Project/No Development Alternative would not induce population growth in the area, as no development would occur. As described in Section 3.12, the proposed project would add an additional 469 people on site but would not result in

substantial population growth in the area. No residents or housing would be added to the site under the No Project/No Development Alternative, so this alternative would not contribute to meeting regional housing demands. Because this alternative does not result in the addition of people on site, beyond the current allowable residential uses on site, impacts would be reduced compared to the proposed project. No population and housing impacts would occur under the No Project/No Development Alternative.

Public Services

The No Project/No Development Alternative would not result in an increase in demand for public services, since no homes would be developed and there would not be additional residents moving into the area. Specifically, the No Project/No Development Alternative would not increase the demand for police and fire protection services, nor would this alternative increase demand for park, school, and library services. As stated in Section 3.13, public service impacts for the proposed project would be less than significant. Since this alternative would not result in additional residents on site, impacts on public services would be reduced, compared to the proposed project. No public services impacts would occur under the No Project/No Development Alternative. Under this alternative, the developer would not pay the regional and local Public Facilities Fees (PFF). Additionally, no school fees would be paid under this alternative.

Recreation

Under the No Project/No Development Alternative, there would not be an increase in demand for park and recreation services. As such, payment of the City's Public Facility Fees (PFF) by the applicant would not be required. Compared to the proposed project, the No Project/No Development Alternative would decrease impacts and no recreation impacts would occur under the No Project/No Development Alternative. Under this alternative, the developer would not pay the Public Facilities Fees (PFF), a portion of which go towards funding park and recreation facilities and program.

Transportation

The No Project/No Development Alternative would not result in the generation of vehicular trips or result in an increase in vehicle miles traveled (VMT). Since this alternative would not generate any vehicular trips to the local circulation network, it would avoid the significant and unavoidable impacts related to increase in delay at the Rancheros Drive/SR-78 WB Ramp intersection in the AM and PM Peak hours in the Near Term 2025 project condition (Impacts LU-1 and TR-1). However, it should be noted that under existing conditions, this intersection operates at LOS F. The existing traffic conditions at this location are already substandard and warrant a traffic signal. Under this alternative, the developer would not pay the regional and local Public Facilities Fees (PFF) which would help fund the needed improvement of a traffic signal at this intersection along with circulation streets and SR-78 interchanges within the City of San Marcos. Similarly, since there would be no development under this alternative, it would avoid the significant and unavoidable impact related to Vehicle Miles Traveled (VMT). Compared to the proposed project, the No Project/No Development Alternative would eliminate all significant and unavoidable transportation impacts identified for the project. No transportation impact would be identified for the No Project/No Development Alternative.

Tribal Cultural Resources

The No Project/No Development Alternative would not require any ground-disturbing or other construction/development activities. Therefore, there would be no potential to impact unknown tribal

cultural resources located within the project site. As such, mitigation measures MM-CR-1a through MM-CR-1c and MM-CR-2 would not be implemented or required. Although there may be a reduced level of direct impact to tribal cultural resources, any previously undiscovered on-site resources could be subject to continued degradation due to lack of preservation of the undeveloped site. Compared to the proposed project, this alternative would result in a reduced level of impact to tribal cultural resources.

Utilities and Service Systems

No homes would be constructed under the No Project/No Development Alternative. As such, there would be no increase in demand for water service, wastewater service, stormwater capacity, energy, and solid waste handling services. As discussed in Section 3.17.4, project impacts related to utilities and services systems were determined to be less than significant. Because no development would occur under this alternative, the demand for utilities would be eliminated. Thus, impacts to utilities and service systems would be reduced compared to the proposed project. No utilities and service system impacts would occur for the No Project/No Development Alternative.

This alternative would not realize the benefit of the looped water line that would be constructed by the project applicant as part of the project. This water line extension and connection to VWD infrastructure would provide a backup water source for the Mira Lago community, located immediately east of the project site.

Conclusion

Since the No Project/No Development Alternative would not develop any homes on the project site, overall impacts would be less than with the proposed project or eliminated entirely. There are some benefits of the project that would not be realized under this alternative, including providing additional housing units as identified in the General Plan and a reduction of wildfire risk through vegetation removal and fire fuels management. Under this alternative there would not be any payment of Public Facilities Fess (PFF), which goes toward supporting variety of services and improvements in the City, including but not limited to Circulation Street, SR-78 Interchanges, NPDES, Tech Improvements, Parks, and Habitat Conservation. Similarly, this alternative would not contribute any school fees. This alternative would not realize the benefit of the looped water line that would be constructed by Rincon del Diablo Municipal Water District (RDDMWD) as part of the project. This water line extension and connection to VWD infrastructure would provide a backup water source for the Mira Lago community, located immediately east of the project site. Finally, this alternative would not meet any of the project objectives (Table 4-1).

4.3.4 No Project/Existing Land Use Designation Alternative

Under the No Project/Existing Land Use Alternative, the project site would be developed consistent with the site's existing land use. Per the City's General Plan, the project site has an existing General Plan Land Use designation of Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. According to Table 2-3 of the Land Use Element of the City's General Plan, this designation "Provides for a variety of commercial and office uses integrated as a cohesive development. These uses may be mixed 'vertically' (on separate floors of a building) or 'horizontally' (on a single site or adjacent parcels). Structured parking, while not required to achieve the maximum FAR, may be allowed. Shared parking arrangements may also be allowed consistent with the nature of mixed uses. Typical uses include retail, commercial services, administrative and office uses, institutional and government uses, business support and financial uses, restaurants, and health

care facilities. To maintain a pedestrian scale and orientation, retail and other active services are encouraged at street level. This designation does not allow residential uses. A Specific Plan is required for development" (City of San Marcos 2012).

Figure 4.3-1 presents a development concept that would meet the MU3 requirements. It would include three 3-story buildings on the project site for a total of 275,067 square feet (s.f.) of office use, 18,344 of retail use, and 879 parking spaces. The southern portion of the project site would be reserved for a minimum 150-foot fire fuel modification buffer. Overall, the development footprint and area of disturbance would be similar to that of the proposed project, but with different uses.

Vehicular trips under the No Project/Existing Land Use Alternative would be approximately four times higher than the proposed project. This alternative would generate approximately 5,410 ADT compared to the 1,208 ADT anticipated for the project.

4.3.4.1 Comparison of the Effects of the No Project/Existing Land Use Alternative to the Proposed Project

Aesthetics

The No Project/Existing Land Use Alternative would develop three 3-story buildings and a parking garage. Proposed buildings would be a similar height as the proposed project but would be larger in bulk and scale. The proposed project includes 19 7-Plex Buildings (133 units) and six 3-plex buildings (18 units) and a recreation center dispersed throughout the project site at different orientations and grades to break up the bulk and scale of the project. Buildings under this alternative would be larger and placed on the northern portion of the site. This may result in a more visually dominating appearance from SR-78 compared to the project. However, through architectural features and varying facades as well as landscaping, it is expected that impacts would be less than significant.

Similar to the proposed project, this alternative would incorporate lighting for safety, security and way finding. Lighting would be required to comply with the City's Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080 to minimize light pollution. The No Project/Existing Land Use Alternative would have a similar level of aesthetics impact as the proposed project and those impacts would be less than significant.

Air Quality

Under the No Project/Existing Land Use Alternative, air emissions associated with project construction including emissions associated with blasting, rock crushing, grading, site preparation, site finishing and building finishing would still occur and would be similar to those anticipated for the project.

Operationally, office and retail uses are not typically sources that create odors or significant air emissions from their day-to-day operations. Emissions from vehicles going to and from the projects site typically account for the largest portion of greenhouse gas emissions. The project's TIA (Appendix K to the EIR) calculated potential ADT under the existing General Plan land use on the project site. Vehicular trips an Existing Land Use alternative would be higher than the proposed project. This alternative would generate approximately 5,410 ADT compared to the 1,208 ADT anticipated for the project, or more than four times the amount. As such, because this alternative would result in an increase of ADT on site, air quality emissions would be greater when compared to the proposed project. However, air quality impacts under this alternative are still anticipated to be less than significant.

Biological Resources

The No Project/Existing Land Use Designation Alternative would have a similar level of biological resources impacts as the proposed project, since it would have a similar footprint of disturbance.

This would include 0.61 acre of Diegan coastal sage scrub, 0.03 acre of Diegan coastal sage scrub – *Baccharis* dominated, and 9.50 acres of non-native grassland as well as the potential for impact to nesting birds and potential indirect impacts to sensitive habitats during project construction and operation. Biological resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-BIO-1 through MM-BIO-4) and would reduce the impacts to below a level of significance. This No Project/Existing Land Use Designation Alternative would have a similar level of biological resources impacts as the proposed project.

Cultural Resources

The No Project/Existing Land Use Designation Alternative would result in similar ground disturbance as the proposed project. Therefore, potential to impact unknown historical and archaeological resources potentially located within the project site as well as unidentified human remains would still occur. Cultural resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-CR-1a, MM-CR-1b and MM-CR-2) and would reduce the impacts to below a level of significance. This No Project/Existing Land Use Designation Alternative would have a similar level of cultural resources impacts as the proposed project.

Energy

Construction-related energy use would be similar as the proposed project. Operationally, office and retail uses have a higher energy demand than residential uses. Additionally, since this alternative would generate four times the ADT compared to the proposed project, fuel use would be higher under this alternative. Compared to the proposed project, energy demand would be higher than the No Project/Existing Land Use alternative, but is still expected to be less than significant.

Geology and Soils

Under the No Project/Existing Land Use Designation Alternative, although the project site would be developed with different land uses, ground-disturbance areas would be similar. Development under this alternative would be subject to the same potential seismic hazards such as rupture of a known active fault or seismic ground shaking. Further, as discussed above, due to the underlying geology of the site, the same amount of blasting would be required under this alternative.

This alternative would also require abiding by geological recommendations, such as the ones identified in the geotechnical evaluation. Compared to the proposed project, this alternative would result in the same level of impacts to geology and soils.

Greenhouse Gas Emissions

Under the No Project/Existing Land Use Alternative, greenhouse gas emissions associated with project construction would still occur. Operationally, greenhouse gas emissions would be higher for this alternative than the proposed project. Emissions from vehicles typically account for the largest portion of greenhouse gas emissions. The traffic impact analysis prepared for the project (Appendix K to the EIR), calculated potential ADT if a project was developed consistent with the current General Plan land use designation. Vehicular trips under this scenario would be higher than the proposed project. This

alternative would generate approximately 5,410 ADT compared to the 1,208 ADT anticipated for the project, or more than four times the amount. Under this alternative, operational GHG emissions are anticipated to be 3,269.10 MT/Year, while the proposed project GHG emissions are modeled to be 949.79 MT/Year (LDN 2021b). As such, because this alternative would result in an increase of ADT on site, greenhouse impacts would be greater when compared to the proposed project however it is anticipated that this alternative would implement all of the required CAP measures and greenhouse gas impacts would be less than significant.

Hazards and Hazardous Materials

The project site is currently vacant and is not listed on any hazardous materials sites. Construction and operation of an office and retail/commercial use, as contemplated under the No Project/Existing Land Use Alternative, is not expected to result in the release of any significant hazardous materials or the routine transport, use, or disposal of such materials. Development under this alternative would not result in any safety hazards resulting from proximity to the McClellan-Palomar Airport, nor would this alternative impair implementation of or physically interfere with emergency response or evacuation plans. Development under this alternative would be constructed in accordance with all applicable fire codes and would incorporate an appropriate fire fuel modification zone. Impacts related to hazards and hazardous material would be less than significant for this alternative and would be similar to the proposed project.

Hydrology and Water Quality

The No Project/Existing Land Use Alternative would result in similar ground disturbance to the site. As such, this alternative would introduce impervious surfaces at the site, similar to the proposed project. The existing on-site hydrologic conditions, drainage patterns, and drainage volumes would be modified. It is expected that this alternative would also incorporate all required and applicable best management practices in order to avoid any violations of water quality standards or otherwise modify or adversely affect surface and groundwater quality. As compared to the proposed project, this alternative would result in similar impacts and the impacts would be less than significant.

Land Use and Planning

Under the No Project/Existing Land Use Alternative, a General Plan Amendment and Rezone would not be required as the development would be consistent with the General Plan and zoning designation of the site, which is Mixed Use 3 (MU3).

The proposed project would result in significant impacts related to land use, specifically due to an inconsistency with policies in the Mobility Element of the General Plan that address LOS. The proposed project would result in significant and unavoidable impacts at intersection of Rancheros Drive/ SR-78 WB in the AM and PM peak hours under Near Term 2025 With Project condition. Since the No Project/Existing Land Use Alternative would result in four times the ADT as the project (5,410 ADT compared to 1,208 ADT), this significant and unavoidable impact would still occur at this intersection. Similarly, the significant impact identified for the project related to left-turn movements out of the project driveways would also be anticipated under this alternative and would be mitigated through driveway turn restrictions, similar to the mitigation identified for the project.

In summary, this alternative would have a similar level of impact as the proposed project and would have significant and unavoidable land use impacts.

Noise

Construction-related noise under the No Project/Existing Land Use Alternative is expected to be similar to the proposed project, since grading activities would still be required, and similar types of equipment would be used. Blasting and rock crushing would still be required under this alternative and impacts identified for the project related to the staging location of rock drilling and noise from rock crushing activities would still be expected under this alternative. Mitigation measures identified for the project (MM-N-1 and MM-N-2) would be applicable to this alternative and would reduce potential construction-related noise impacts to below a level of significance.

Operational noise generated under the No Project/Existing Land Use Alternative would be related to the noise generated on the project site from office and retail/commercial activities as well as trips generated by the project.

Similar to the proposed project, commercial uses, including office and retail, have an exterior noise standard of 65 dBA Leq. For non-residential noise sensitive land uses, such as those that would be developed under this alternative, the exterior noise level is defined as noise measured at the exterior area provided for public use (City of San Marcos 2017). If public use areas were incorporated into this alternative, they could experience elevated noise levels from offsite vehicular traffic associated with SR-78 and E. Barham Drive. Mitigation measures, such as walls and/or berms, may be required to attenuate the noise. This is similar to what has been identified for the proposed project. It is expected that sound levels could be attenuated to below a level of significance, similar to the proposed project.

This alternative would generate more than four times the ADT as the project (5,410 ADT compared to 1,208 ADT). Therefore, offsite noise generated by the project would be higher under this alternative than the proposed project. Currently, there is 18,025 ADT on E. Barham Drive (LLG 2021). Since it takes a doubling of traffic to create a significant noise impact, this alternative would not result in a significant offsite noise impact associated with vehicular noise. Operationally, an office and retail/commercial development would typically have more daily activity compared to a residential project, which could result in more operational noise. Additionally, such buildings would typically require larger HVAC equipment, which can result in more noise compared to residential buildings. However, such operational activities are not anticipated to be significant and HVAC equipment is typically shielded with rooftop parapets or other barriers which help to minimize noise.

Compared to the proposed project, this alternative would have a similar level of impact as the proposed project and all anticipated noise impacts could be mitigated to below a level of significance.

Population and Housing

The No Project/Existing Land Use Alternative would develop the site in a manner that is consistent with the City's General Plan and would, therefore, have been considered in the City's growth assumptions. The proposed project would increase the population by approximately 469 residents. However, this increase was determined to be less than significant. The No Project/Existing Land Use Alternative would not increase the population because no residential uses are included. The No Project/Existing Land Use Alternative would not create market rate/work force housing on the project site, which is needed in the City. Compared to the proposed project, this alternative would have a similar level of impact and impacts would be less than significant.

Public Services

Similar to the proposed project, the No Project/ Existing Land Use Alternative would result in an increase in demand for public services, due to the construction of office and retail/commercial uses. Specifically, this alternative would increase the demand for police and fire protection services, as well as park, and library services over existing conditions. Since no residences would be constructed under this alternative there would be no increase in demand for school services. Development under this alternative would still be required to pay applicable Public Facilities Fees (PFF) and school fees, though the school fees would be at a reduced rate compared to the proposed project, since no residential uses are proposed. Similar to the proposed project, impacts would be less than significant.

Recreation

The No Project/Existing Land Use Alternative is not anticipated to generate an increase in demand of recreational needs compared to the proposed project as no residential uses would be proposed. Residential uses are the primary driver for demand for park and recreation services. Compared to the proposed project, this alternative would decrease the demand for park and recreation service and impacts would be less than significant.

Transportation

Under the No Project/Existing Land Use Alternative impacts associated with consistency with policies in the Mobility Element of the General Plan that address LOS are still anticipated. The proposed project would result in significant and unavoidable impacts at the intersection of Rancheros Drive/ SR-78 WB in the AM and PM peak hours under Near Term 2025 With Project condition. Since the No Project/Existing Land Use Alternative would result in four times the ADT as the project (5,410 ADT compared to 1,208 ADT), significant and unavoidable impacts would still occur at this intersection.

With regard to Vehicle Miles Traveled (VMT), based upon San Diego Association of Governments (SANDAG) screening maps, if the site was developed under the existing zoning, this alternative would exceed the significance threshold by 13.1%. This would require mitigation of 13.1% or more to reduce Vehicles Miles Traveled (VMT) to a less than significant level. Compared to the project, there may be additional mitigation measures available to reduce Vehicle Miles Traveled (VMT) since an office and commercial use has more Vehicle Miles Traveled (VMT) reduction strategies available. Such strategies could include employer carpool/vanpool programs, employer transit subsidies, and telecommute/alternative work schedules. Depending on the mix of reduction strategies an employer implements and the number of employees who participate, it could be possible to reduce the Vehicle Miles Traveled (VMT) impact to be below a level of significance for this alternative. Compared to the proposed project this alternative could reduce the Vehicles Miles Traveled (VMT) impact, however the significant and unavoidable impacts related to inconsistency with the Mobility Element of the General Plan would still occur.

Tribal Cultural Resources

The No Project/Existing Land Use Designation Alternative would result in similar ground disturbance as the proposed project. Therefore, the potential to impact tribal cultural resources would still be possible under this alternative. Cultural resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-CR-1a, MM-CR-1b and MM-CR-2) and would reduce the impacts to below a level of significance. This No Project/Existing Land Use Designation Alternative would have a similar level of tribal cultural resources impacts as the proposed project.

Utilities and Service Systems

The No Project/Existing Land Use Alternative would result in an increase in utilities and service systems, including water, wastewater, stormwater infrastructure, and solid waste service over existing conditions through the development of new office and retail/commercial uses. For sewer service, Vallecitos Water District (VWD) estimates 1,500 gallons per day (gpd)/acre for commercial uses. Residential uses are calculated at 3,300 gpd/acre. Therefore, the demand for sewer services would be decreased under this alternative. Rincon del Diablo Municipal Water District (RDDMWD) does not publish water demand rates; however, residential uses typically result in more water use than office and retail uses. Compared to the project, this alternative would decrease the demand for water and sewer service but would still be required to pay all applicable water and sewer fees. Storm water infrastructure is anticipated to be similar as the proposed project as a similar amount of impervious surface would be created. Solid waste generated would not differ significantly under this alternative. Utilities and service system impacts would be less than significant under the No Project/Existing Land Use Alternative and would reduce water and sewer demand compared to the proposed project.

Conclusion

The No Project/Existing Land Use Alternative would result in a more intensive use on the project site, including more than four times the trip generation compared to the proposed project (5,410 ADT compared to 1,208 ADT). This results in a corresponding proportional increase in air and greenhouse gas emissions and noise from vehicles compared to the proposed project. Footprint- specific impacts, such as those related to biological resources, cultural and tribal cultural resources, and geology and soils would be similar as the proposed project as the same amount of site area would be disturbed. This alternative would not generate any students for SMUSD and would reduce demand for water and sewer service compared to the proposed project. Depending on the mix of Vehicle Miles Traveled (VMT) reduction strategies an employer implements and the number of employees who participate, it could be possible to reduce the Vehicle Miles Traveled (VMT) impacts to below a level of significance. This alternative could meet some of the project objectives, as shown in Table 4-1.

4.3.5 Reduced Density Alternative

Under the Reduced Density Alternative, the project site would be developed with 74 residential units for a density of 7 du/acre. Such a density could support a mix of single-family and multi-family residential units. The southern portion of the project site would be reserved for a minimum 150-foot fire fuel modification buffer. Overall, the development footprint and area of disturbance would be similar to that of the proposed project, but with less density of residential units.

Vehicular trips under this alternative would be reduced compared to the proposed project. Depending on the type and number of units developed under this alternative (single family and multifamily), this alternative would generate between 592 and 740 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by at least 38% and up to 50%.

4.3.5.1 Comparison of the Effects of the Reduced Density Alternative to the Proposed Project

Aesthetics

Development under the Reduced Density Alternative would include a mix of single family and multifamily residential units and could include buildings up to three stories high. Compared to the proposed project, there would be less overall development on the project site. Development would still

be visible from SR-78. Similar to the proposed project, this alternative would incorporate lighting for safety, security and way finding. Lighting would be required to comply with the City's Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080 to minimize light pollution. The Reduced Density Alternative would have a similar level of aesthetics impact as the proposed project and those impacts would be less than significant.

Air Quality

Under the Reduced Density Alternative, air emissions associated with construction including emissions associated with blasting, rock crushing, grading, site preparation, site finishing and building finishing would still occur and would be similar to those anticipated for the project.

Operational emissions under this alternative would be similar to the project, since a similar use is proposed, but since fewer residential units would be constructed, area source emissions would be proportionally decreased. Vehicular trips under the Reduced Density Alternative would be lower than the proposed project. Depending on the type and number of units developed under this alternative (single family and multifamily), this alternative would generate between 592 and 740 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by at least 38% and up to 50%. As such, because this alternative would result in a decrease of ADT, vehicular-related air emissions would be reduced when compared to the proposed project and impacts would be less than significant.

Biological Resources

The Reduced Density Alternative would have a similar level of biological resources impacts as the proposed project, since it would have a similar footprint of disturbance.

This would include 0.61 acre of Diegan coastal sage scrub, 0.03 acre of Diegan coastal sage scrub – *Baccharis* dominated, and 9.50 acres of non-native grassland as well as the potential for impact to nesting birds and potential indirect impacts to sensitive habitats during project construction an operation. Biological resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-BIO-1 through MM-BIO-4) and would reduce the impacts to below a level of significance. This Reduced Density Alternative would have a similar level of biological resources impacts as the proposed project.

Cultural Resources

The Reduced Density Alternative would result in similar ground disturbance as the proposed project. Therefore, potential to impact unknown historical and archaeological resources potentially located within the project site as well as unidentified human remains would still occur. Cultural resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-CR-1a, MM-CR-1b and MM-CR-2) and would reduce the impacts to below a level of significance. This Reduced Density Alternative would have a similar level of cultural resources impacts as the proposed project.

Energy

Construction related energy demands would be similar as the proposed project. However, energy use associated with operation of the Reduced Density Alternative would be less compared to the proposed project since the number of units would be decreased from 151 units to 74 units. Similarly, energy use associated with vehicle fuel would be reduced since this alternative would reduce the number of

trips by at least 38%. Compared to the proposed project, the Reduced Density Alternative reduces the amount of energy used and impacts would be less than significant.

Geology and Soils

Ground disturbance under the Reduced Density Alternative would be similar as the proposed project. Development under this alternative would be subject to the same potential seismic hazards such as rupture of a known active fault or seismic ground shaking. Further, as discussed above, due to the underlying geology of the site, the same amount of blasting would be required under this alternative. This alternative would also require abiding by geological recommendations, such as the ones identified in the geotechnical evaluation. Compared to the proposed project, this alternative would result in the same level of geology and soils impacts.

Greenhouse Gas Emissions

Under the Reduced Density Alternative, greenhouse gas emissions associated with project construction would still occur. Operational emissions under this alternative would be similar to the project, since a similar use is proposed. However, vehicular emissions typically account for the largest portion of greenhouse gas emissions. Vehicular trips under the Reduced Density Alternative would be lower than the proposed project. Depending on the type and number of units developed under this alternative (single family and multifamily), this alternative would generate between 592 and 740 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by at least 38% and up to 50%. As such, because this alternative would result in a decrease of ADT on site, greenhouse gas emissions would be reduced when compared to the proposed project and greenhouse gas impacts would be less than significant.

Hazards and Hazardous Materials

The project site is currently vacant and is not listed on any hazardous materials sites. Construction and operation of this alternative would result in a similar level of hazards and hazardous materials risk as the proposed project since a similar type of use is proposed (residential use). Development under this alternative would not result in any safety hazards resulting from proximity to the McClellan-Palomar Airport, nor would this alternative impair implementation of or physically interfere with emergency response or evacuation plans. Development under this alternative would be constructed in accordance with all applicable fire codes and would incorporate an appropriate fire fuel modification zone. Impacts related to hazards and hazardous material would be less than significant for this alternative and would be similar to the proposed project.

Hydrology and Water Quality

The Reduced Density Alternative would result in ground disturbance to the site. As such, this alternative would introduce impervious surfaces at the site, similar to the proposed project. The existing on-site hydrologic conditions, drainage patterns, and drainage volumes would be modified. It is expected that this alternative would also incorporate all required and applicable best management practices in order to avoid any violations of water quality standards or otherwise modify or adversely affect surface and groundwater quality. As compared to the proposed project, this alternative would result in similar hydrology and water quality impacts and the impacts would be less than significant.

Land Use and Planning

Under the Reduced Density Alternative, a General Plan Amendment and Rezone would still be required. The proposed project would result in significant impacts related to land use, specifically due to an inconsistency with policies in the Mobility Element of the General Plan that address LOS. The proposed project would result in significant and unavoidable impacts at intersection of Rancheros Drive/ SR-78 WB in the AM and PM peak hours under Near Term 2025 With Project condition. While the Reduced Density Alternative would decrease ADT by 38%, this impact would still occur at this intersection as the existing LOS at this intersection is already below an acceptable level. Similarly, the significant impact identified for the project related to left-turn movements out of the project driveways would also be anticipated under this alternative and would be mitigated through driveway turn restrictions, similar to the mitigation identified for the project. In summary, this alternative would have a similar level of land use and planning impact as the proposed project and would have significant and unavoidable land use impacts.

Noise

Construction-related noise under the Reduced Density Alternative is expected to result in a similar level of noise as the proposed project, since grading activities would still be required and similar types of equipment would be used. Blasting and rock crushing would still be required under this alternative and impacts identified for the project related to the staging location of rock drilling and noise from rock crushing activities would still be expected under this alternative. Mitigation measures identified for the project (MM-N-1 and MM-N-2) would be applicable to this alternative and would reduce potential construction-related noise impacts to below a level of significance.

Operational noise generated under the Reduced Density Alternative would be related to the noise generated on the project site from residential uses as well as trips generated by the project. Similar to the proposed project, significant impacts related to elevated noise levels associated with SR-78 and E. Barham Drive would be expected under this alternative. Mitigation measures, such as walls and/or berms, would be required to reduce the impact to below a level of significance. This is similar to what has been identified for the proposed project. It is expected that sound levels could be attenuated to below a level of significance, similar to the proposed project.

This alternative would generate less vehicular trips than the proposed project. Therefore, offsite noise generated by the project would be less under this alternative than the proposed project. Compared to the proposed project, this alternative would have a similar level of impact, with a reduction in offsite noise associated with vehicular traffic. Similar to the proposed project, all anticipated noise impacts could be mitigated to below a level of significance.

Population and Housing

The Reduced Density Alternative would result in an increase the population of the City by approximately 230 residents. The proposed project would increase the population by approximately 469 residents. However, this increase was determined to be less than significant. This alternative would create less market rate/work force housing on the project site compared to the proposed project. Compared to the proposed project, this alternative would have a similar level of impact and impacts would be less than significant.

Public Services

Similar to the proposed project, the Reduced Density Alternative would result in an increase in demand for public services due to the construction of residential uses on the project site. Specifically, this alternative would increase the demand for police and fire protection services, schools, as well as park, and library services over existing conditions. Compared to the proposed project, fewer students would be generated since fewer residential units would be constructed. Development under this alternative would still be required to pay applicable Public Facilities Fees (PFF) and school fees. The amount of Public Facilities Fees (PFF) paid under this alternative would be less than compared to the project since fewer residential uses would be constructed. The amount of school fees paid to SMUSD would be less under this alternative. Similar to the proposed project, impacts would be less than significant.

Recreation

Similar to the proposed project, the Reduced Density Alternative would result in an increase in demand for park and recreation facilities. Development under this alternative would still be required to pay applicable Public Facilities Fees (PFF) and school fees, however the amount of fees paid would be less since fewer residential units would be constructed. Additionally, this alternative would be required to provide common open space and private open space per City requirements. Similar to the proposed project, impacts would be less than significant.

Transportation

Under the Reduced Density Alternative, impacts associated with consistency with policies in the Mobility Element of the General Plan that address LOS are still anticipated. The proposed project would result in significant and unavoidable impacts at the intersection of Rancheros Drive/ SR-78 WB in the AM and PM peak hours under Near Term 2025 With Project condition. While the Reduced Density Alternative would decrease ADT by 38% to 50%, this impact would still occur at this intersection due to its unacceptable LOS under existing condition. Given the site's suburban location and proposal for residential uses under this alternative, Vehicle Miles Traveled (VMT) impacts are still anticipated under this alternative and would remain significant and unavoidable. In summary, this alternative would have a similar level of impact as the proposed project and would have significant and unavoidable transportation impacts.

Tribal Cultural Resources

The Reduced Density Alternative would result in similar ground disturbance as the proposed project. Therefore, potential to impact tribal cultural resources would still be possible under this alternative. Cultural resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-CR-1a, MM-CR-1b and MM-CR-2) and would reduce the impacts to below a level of significance. The Reduced Density Alternative would have a similar level of tribal cultural resources impacts as the proposed project.

Utilities and Service Systems

The Reduced Density Alternative would result in an increase in utilities and service systems, including water, wastewater, stormwater infrastructure, and solid waste service through the development of 74 residential units. However, compared to the project, this alternative would decrease the overall increase in demand since fewer residences would be constructed. Development under this alternative would still be required to pay all applicable water and sewer fees. Storm water infrastructure is anticipated to be similar as the proposed project as a similar amount of impervious surface would be

created. Solid waste generated would be reduced under this alternative. Utilities and service system impacts would be less than significant under the Reduced Density Alternative and would reduce water and sewer demand solid waste generation compared to the proposed project.

Conclusion

The Reduced Density Alternative would reduce the number of residential units constructed on the project site. This results in a corresponding decrease in vehicular trips by approximately 38% to 50% and a corresponding decrease in air and greenhouse gas emissions and noise from offsite traffic compared to the proposed project. Public services, utilities and service systems, and energy demands would also proportionally decrease. Footprint specific impacts, such as those related to biological resources, cultural and tribal cultural resources, and geology and soils would be similar as the proposed project since a similar area of disturbance would occur under this alternative. This alternative would contribute less Public Facilities Fees (PFF) and school fees since fewer residential units would be constructed. This alternative would meet the majority of the project objectives as detailed in Table 4-1.

4.3.6 Reduced Footprint Alternative

A Reduced Footprint Alternative was analyzed as it would result in less grading and site disturbance compared to the project. For the Reduced Footprint Alternative, the southernmost row of residential buildings proposed by the project would be eliminated. This includes eight 7-plex buildings and one 3-plex building. Under the Reduced Foot Alternative, the site would be developed with 92 multifamily residential units. The southern portion of the project site would still be subject to a minimum 150-foot fire fuel modification buffer.

Vehicular trips under this alternative would be reduced compared to the proposed project. This alternative would generate 736 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by 39%.

4.3.6.1 Comparison of the Effects of the Reduced Footprint Alternative to the Proposed Project

Aesthetics

Development under the Reduced Footprint Alternative would still develop three-story high multifamily residential building and a recreation center. Compared to the proposed project, there would be less overall development on the project site. Development would still be visible from SR-78. Similar to the proposed project, this alternative would incorporate lighting for safety, security and way finding. Lighting would be required to comply with the City's Street Lighting Standards and Specifications and San Marcos Municipal Code Title 20, Section 20.300.080 to minimize light pollution. The Reduced Footprint Alternative would have a similar level of aesthetics impact as the proposed project and those impacts would be less than significant.

Air Quality

Under the Reduced Footprint Alternative, air emissions associated with construction including emissions associated with blasting, rock crushing, grading, site preparation, site finishing and building finishing would still occur. The emission would be reduced, since the overall footprint of disturbance would be less so less earthwork activity would be required.

Operational emissions under this alternative would be similar to the project, since a similar use is proposed, but since fewer residential units would be constructed, area source emissions would be proportionally decreased. Vehicular emissions typically account for the largest portion of greenhouse gas emissions. Vehicular trips under the Reduced Footprint Alternative would be lower than the proposed project. This alternative would generate 736 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by 39%. As such, because this alternative would result in a decrease of ADT, air emissions would be reduced when compared to the proposed project and impacts would be less than significant.

Biological Resources

The Reduced Footprint Alternative would have a result in less site disturbance since a smaller area would be graded. This would result in less impact to vegetation, primarily nonnative grassland. This alternative would still have a potential to impact sensitive species, nesting birds, and have the potential to result in indirect impacts related to project construction. Biological resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-BIO-1 through MM-BIO-4) and would reduce the impacts to below a level of significance. This Reduced Footprint Alternative would reduce the amount of nonnative grassland impacts compared to the proposed project. Similar to the proposed project, this alternative would reduce biological resources impacts to below a level of significance.

Cultural Resources

The Reduced Footprint Alternative would result in less ground disturbance as the proposed project. However, the potential to impact unknown historical and archaeological resources potentially located within the project site as well as unidentified human remains would still occur. Cultural resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-CR-1a, MM-CR-1b and MM-CR-2) and would reduce the impacts to below a level of significance. This Reduced Footprint Alternative would have a slighted reduced level of potential impacts to cultural resources compared to the project since less of the site would be graded.

Energy

Construction related energy demands would be similar as the proposed project. However, energy use associated with operation of the Reduced Footprint Alternative would be less compared to the proposed project since the number of units would be decreased from 151 units to 92 units. Similarly, energy use associated with vehicle fuel would be reduced since this alternative would reduce the number of trips by 39%. Compared to the proposed project, the Reduced Footprint Alternative reduces the amount of energy used and impacts would be less than significant.

Geology and Soils

Ground disturbance under the Reduced Footprint Alternative would be reduced compared to the proposed project. Development under this alternative would be subject to the same potential seismic hazards such as rupture of a known active fault or seismic ground shaking. Further, as discussed above, due to the underlying geology of the site, the same amount of blasting would be required under this alternative. This alternative would also require abiding by geological recommendations, such as the ones identified in the geotechnical evaluation. Compared to the proposed project, this alternative would result in the same level of impacts to geology and soils.

Greenhouse Gas Emissions

Under the Reduced Footprint Alternative, greenhouse gas emissions associated with project construction would still occur. Operational emissions under this alternative would be similar to the project, since a similar use is proposed. However, vehicular emissions typically account for the largest portion of greenhouse gas emissions. Vehicular trips under the Reduced Footprint Alternative would be lower than the proposed project. This alternative would generate between 736 ADT. Compared to the proposed project, which generates 1,208 ADT, this alternative would reduce ADT by 39%. As such, because this alternative would result in a decrease of ADT on site, greenhouse gas would be reduced when compared to the proposed project and impacts would be less than significant.

Hazards and Hazardous Materials

The project site is currently vacant and is not listed on any hazardous materials sites. Construction and operation of this alternative would result in a similar level of hazards and hazardous materials risk as the proposed project since a similar type of use is proposed (residential use). Development under this alternative would not result in any safety hazards resulting from proximity to the McClellan-Palomar Airport, nor would this alternative impair implementation of or physically interfere with emergency response or evacuation plans. Development under this alternative would be constructed in accordance with all applicable fire codes and would incorporate an appropriate fire fuel modification zone. Impacts related to hazards and hazardous material would be less than significant for this alternative and would be similar to the proposed project.

Hydrology and Water Quality

The Reduced Footprint Alternative would result in ground disturbance to the site. As such, this alternative would introduce impervious surfaces at the site, though to a lesser degree compared to the project due to a reduced development footprint. The existing on-site hydrologic conditions, drainage patterns, and drainage volumes would be modified. It is expected that this alternative would also incorporate all required and applicable best management practices in order to avoid any violations of water quality standards or otherwise modify or adversely affect surface and groundwater quality. As compared to the proposed project, this alternative would result in similar impacts and the impacts would be less than significant.

Land Use and Planning

Under the Reduced Footprint Alternative, a General Plan Amendment and Rezone would still be required. The proposed project would result in significant impacts related to land use, specifically due to an inconsistency with policies in the Mobility Element of the General Plan that address LOS. The proposed project would result in significant and unavoidable impacts at intersection of Rancheros Drive/ SR-78 WB in the AM and PM peak hours under Near Term 2025 With Project condition. While the Reduced Footprint Alternative would decrease ADT by 39%, this impact would still occur at this intersection as the existing LOS at this intersection is already below an acceptable level. Similarly, the significant impact identified for the project related to left-turn movements out of the project driveways would also be anticipated under this alternative and would be mitigated through driveway turn restrictions, similar to the mitigation identified for the project. In summary, this alternative would have a similar level of impact as the proposed project and would have significant and unavoidable land use impacts.

Noise

Construction-related noise under the Reduced Footprint Alternative is expected to result in a similar level of noise as the proposed project, since grading activities would still be required and similar types of equipment would be used. Blasting and rock crushing would still be required under this alternative and impacts identified for the project related to the staging location of rock drilling and noise from rock crushing activities would still be expected under this alternative. Mitigation measures identified for the project (MM-N-1 and MM-N-2) would be applicable to this alternative and would reduce potential construction-related noise impacts to below a level of significance.

Operational noise generated under the Reduced Footprint Alternative would be related to the noise generated on the project site from residential uses as well as trips generated by the project. Similar to the proposed project, significant impacts related to elevated noise levels associated with SR-78 and E. Barham Drive would be expected under this alternative. Mitigation measures, such as walls and/or berms, would be required to reduce the impact to below a level of significance. This is similar to what has been identified for the proposed project. It is expected that sound levels could be attenuated to below a level of significance, similar to the proposed project.

This alternative would generate less vehicular trips than the proposed project (39% reduction). Therefore, offsite noise generated by the project would be less under this alternative than the proposed project. Compared to the proposed project, this alternative would have a similar level of impact, with a reduction in offsite noise associated with vehicular traffic. Similar to the proposed project, all anticipated noise impacts could be mitigated to below a level of significance.

Population and Housing

The Reduced Footprint Alternative would result in an increase the population of the City by approximately 286 residents. The proposed project would increase the population by approximately 469 residents. However, this increase was determined to be less than significant. This alternative would create less market rate/work force housing on the project site compared to the proposed project. Compared to the proposed project, this alternative would have a similar level of impact and impacts would be less than significant.

Public Services

Similar to the proposed project, the Reduced Footprint Alternative would result in an increase in demand for public services due to the construction of residential uses on the project site. Specifically, this alternative would increase the demand for police and fire protection services, schools, as well as park, and library services over existing conditions. Compared to the proposed project, fewer students would be generated since fewer residential units would be constructed. Development under this alternative would still be required to pay applicable Public Facilities Fees (PFF) and school fees. The amount of Public Facilities Fees (PFF) paid would be less than compared to the project since fewer residential uses would be constructed. Similarly, the amount of school fees paid to SMUSD would be less under this alternative. Similar to the proposed project, impacts would be less than significant.

Recreation

Similar to the proposed project, the Reduced Footprint Alternative would result in an increase in demand for park and recreation facilities. Development under this alternative would still be required to pay applicable Public Facilities Fees (PFF) and school fees. Additionally, this alternative would be

required to provide common open space and private open space per City requirements. Similar to the proposed project, impacts would be less than significant.

Transportation

Under the Reduced Footprint Alternative, impacts associated with consistency with policies in the Mobility Element of the General Plan that address LOS are still anticipated. The proposed project would result in significant and unavoidable impacts at the intersection of Rancheros Drive/ SR-78 WB in the AM and PM peak hours under Near Term 2025 With Project condition. While the Reduced Footprint Alternative would decrease ADT by 39%, this impact would still occur at this intersection due to its unacceptable LOS under existing condition. Given the site's suburban location and proposal for residential uses under this alternative, Vehicles Miles Traveled (VMT) impacts are still anticipated under this alternative and would remain significant and unavoidable. In summary, this alternative would have a similar level of impact as the proposed project and would have significant and unavoidable transportation impacts.

Tribal Cultural Resources

The Reduced Footprint Alternative would result in less ground disturbance as the proposed project. However, the potential to impact tribal cultural resources within the project site would still occur. Cultural resources mitigation measures identified for the proposed project would be applicable to this alternative (MM-CR-1a, MM-CR-1b and MM-CR-2) and would reduce the impacts to below a level of significance. This Reduced Footprint Alternative would have a slighted reduced level of potential impacts to tribal cultural resources compared to the project since less of the site would be graded.

Utilities and Service Systems

The Reduced Footprint Alternative would result in an increase in utilities and service systems, including water, wastewater, stormwater infrastructure, and solid waste service through the development of 92 residential units. However, compared to the project, this alternative would decrease the overall increase in demand since fewer residences would be constructed. Development under this alternative would still be required to pay all applicable water and sewer fees. Storm water infrastructure is anticipated to be similar as the proposed project as a similar amount of impervious surface would be created. Solid waste generated would be reduced under this alternative. Utilities and service system impacts would be less than significant under the Reduced Footprint Alternative and would reduce water and sewer demand solid waste generation compared to the proposed project.

Conclusion

The Reduced Footprint Alternative would reduce the number of residential units constructed on the project site. This results in a corresponding decrease in vehicular trips by approximately 39% and a corresponding decrease in air and greenhouse gas emissions and noise from offsite traffic compared to the proposed project. Public services, utilities and service systems, and energy demands would also proportionally decrease. Footprint specific impacts, such as those related to biological resources, cultural and tribal cultural resources, and geology and soils would be less than the proposed project since less ground disturbing activities would be required. The amount of Public Facilities (PFF) paid would be less than compared to the project since fewer residential uses would be constructed. Similarly, the amount of school fees paid to SMUSD would be less under this alternative. This alternative would meet the majority of the project objectives as detailed in Table 4-1.

4.4 Alternatives Considered But Rejected

State CEQA Guidelines Section 15126.6(c) provides guidance in selecting a range of reasonable alternatives for the project. The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. State CEQA Guidelines Section 15126.6(c) provides the following guidance in selecting a range of reasonable alternatives for the project. There are many factors that may be taken into account when addressing the feasibility of range of potential alternatives for the project, such as 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 (or the site is already owned by the proponent). The alternatives discussion shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

The EIR need not discuss every alternative to the project. A range of alternatives that are "reasonable" for analysis have been evaluated and are discussed above in Section 4.3, Project Alternatives Considered in this EIR. The following describes other alternatives considered by the City but dismissed from further evaluation in this EIR, and a brief description of the reasons for their rejection.

4.4.1 Alternative Location

Pursuant to Section 15126.6(f)(2) of the CEQA Guidelines, the City considered the potential for alternative locations to the project. There are sites within the City of an approximately equivalent size to the project site that could be redeveloped with a residential project; however, the project applicant does not control another site within the City of comparable land area that is available for development of the proposed project. One of the factors for feasibility of an alternative is "whether the proponent can reasonably acquire, control or otherwise have access to the alternative site."

Because the City is highly urbanized and is largely built out, obtaining another site of a similar size in a similar location is not considered feasible. It should also be noted that the project site is surrounded by development and located adjacent to existing transportation and utility infrastructure. As such, an alternative location was ultimately rejected from further analysis in the EIR.

4.5 Environmentally Superior Alternative

Table 4-2 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. As shown in Tables 4-1 and 4-2, the No Project/No Development Alternative would eliminate all of the significant impacts identified for the project. However, the No Project/No Development Alternative would not meet any of the project objectives. Additionally, there is no certainty that the project site would remain undeveloped in perpetuity. CEQA Guidelines Section 15126.6(e)(2) states that if the No Project alternative is identified as the environmentally superior alternative, then an environmentally superior alternative should be identified among the other alternatives.

Among the other alternatives, not including the proposed project, the Reduced Footprint Alternative is the environmentally superior alternative because it would provide a reduced level of impact in some environmental analysis areas including air quality, greenhouse gas, noise, public services, recreation, and utilities/service systems. Additionally, footprint specific impacts, such as those related to cultural and tribal resources, biological resources, and geology and soils would be reduced compared to the proposed project, since less ground disturbing activities would be required. Mitigation measures would still be required to mitigate impacts to biological resources, cultural resources, geology and soils, noise, tribal cultural resource, and land use (partially mitigated).

Due to the project site being located in a suburban setting and the limited options available to mitigate Vehicle Miles Traveled (VMT) impacts for residential projects, the Reduced Footprint Alternative would still result in significant and unavoidable transportation impacts due to Vehicle Miles Traveled (VMT). Similarly, due to existing degraded LOS at the intersection of Rancheros Drive/ SR-78 WB, this alternative would still result in significant and unavoidable impacts in the AM and PM peak hours under Near Term 2025 With Project condition. Even though payment of funds to the City's Congestion Management Community Facilities District (CFD) and Public Facilities Fees (PFF) that addresses congestion would occur, the needed improvements at this intersection to improve LOS are within Caltrans jurisdiction, not the City's. Therefore, the City cannot control the timing of the installation of the improvements and it cannot be conclusively stated that the intersection improvements would be in place in time. Thus, the inconsistency with policies in the Mobility Element related to LOS will remain and the significant and unavoidable land use and transportation impacts would still occur under the Reduced Footprint Alternative.

Table 4-1. Summary of Alternatives and Project Objectives

Objective	Proposed Project	No Project/No Development	No Project/Existing Land Use Alternative	Reduced Density Alternative	Reduced Footprint Alternative
Provide a multi-family housing opportunity through a range of unit types, sizes, and number of different bedroom counts, including one, two, three, and four-bedroom units, as well as a range of affordability to accommodate a full spectrum of family demographics to contribute to the growing housing needs of the region.	Meets objective	Does not meet this objective	Does not meet this objective	Meets objective	Meets objective
To the extent possible given the site constraints, maximize the opportunity to provide medium-density housing for the City of San Marcos in the 12.1-15.0 dwelling unit density range which comparable to other medium-density housing developments near the Specific Plan Area.	Meets objective	Does not meet this objective	Does not meet this objective	Does not meet this objective	Does not meet this objective
Create a development which accommodates appropriate recreational open space for the anticipated residents expected to reside within the Specific Plan Area.	Meets objective	Does not meet this objective	Does not meet this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective
Provide development standards to regulate the nature and appearance of all construction within the Hallmark-Barham Specific Plan Area through integration of landform use, architectural design, unified landscape theme, and recreation areas.	Meets objective	Does not meet this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective

Objective	Proposed Project	No Project/No Development	No Project/Existing Land Use Alternative	Reduced Density Alternative	Reduced Footprint Alternative
Design a safe and efficient circulation system that adequately supports the appropriate level of traffic within the Specific Plan Area as well as connections to public roadways and improvements to public streets and rights-of-way inclusive of vehicular, bicycle, pedestrian modes of travel.	Meets objective	Does not meet this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective
Develop a financing plan that provides for the efficient and timely provision of infrastructure and public services prior to and as development occurs.	Meets objective	Does not meet this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective
Implement a maintenance program which will ensure all common areas are maintained to standards set forth in the City's General Plan.	Meets objective	Does not meet this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective	Could be designed in a manner that meets this objective
Finance and/or contribute to all appropriate community and citywide infrastructure as warranted.	Meets objective	Does not meet this objective	Meets objective	Meets objective but would contribute less compared to the proposed project.	Meets objective but would contribute less compared to the proposed project.

Table 4-2. Comparison of Impacts of Proposed Project and Alternatives

Environmental Topic	Proposed Project	No Project/No Development Alternative	No Project/Existing Land Use Designation Alternative	Reduced Density Alternative	Reduced Footprint Alternative
Aesthetics	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Air Quality	LTS	No Impact (Reduced)	LTS (Increased)	LTS (Reduced)	LTS (Reduced)
Biological Resources	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Cultural Resources	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Energy	LTS	No Impact (Reduced)	LTSM (Increased)	LTSM (Reduced)	LTSM (Reduced)
Geology and Soils	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Greenhouse Gas Emissions	LTS	No Impact (Reduced)	LTS (Increased)	LTS (Reduced)	LTS (Reduced)
Hazards and Hazardous Materials	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Hydrology and Water Quality	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Land Use and Planning	SU	No Impact (Reduced)	SU (Same)	SU (Same)	SU (Same)
Noise	LTSM	No Impact (Reduced)	LTSM (Increased)	LTSM (Reduced)	LTSM (Reduced)
Population and Housing	LTS	No Impact (Reduced)	LTS (Same)	LTS (Same)	LTS (Same)
Public Services	LTS	No Impact (Reduced)	LTS (Same)	LTS (Reduced)	LTS (Reduced)

Environmental Topic	Proposed Project	No Project/No Development Alternative	No Project/Existing Land Use Designation Alternative	Reduced Density Alternative	Reduced Footprint Alternative
Recreation	LTS	No Impact (Reduced)	No Impact (Reduced)	LTS (Reduced)	LTS (Reduced)
Transportation	SU	No Impact (Reduced)	SU (Reduced for VMT, Increased for ADT generation)	SU (Same)	SU (Same)
Tribal Cultural Resources	LTSM	No Impact (Reduced)	LTSM (Same)	LTSM (Same)	LTSM (Reduced)
Utilities and Service Systems	LTS	No Impact (Reduced)	LTS (Reduced)	LTS (Reduced)	LTS (Reduced)

Notes: Impact Status: LTS = Less than significant impact; LTSM = Less than significant with mitigation; SU = Significant and unavoidable

Figure 4.3-1. No Project/Existing Land Use Designation Alternative

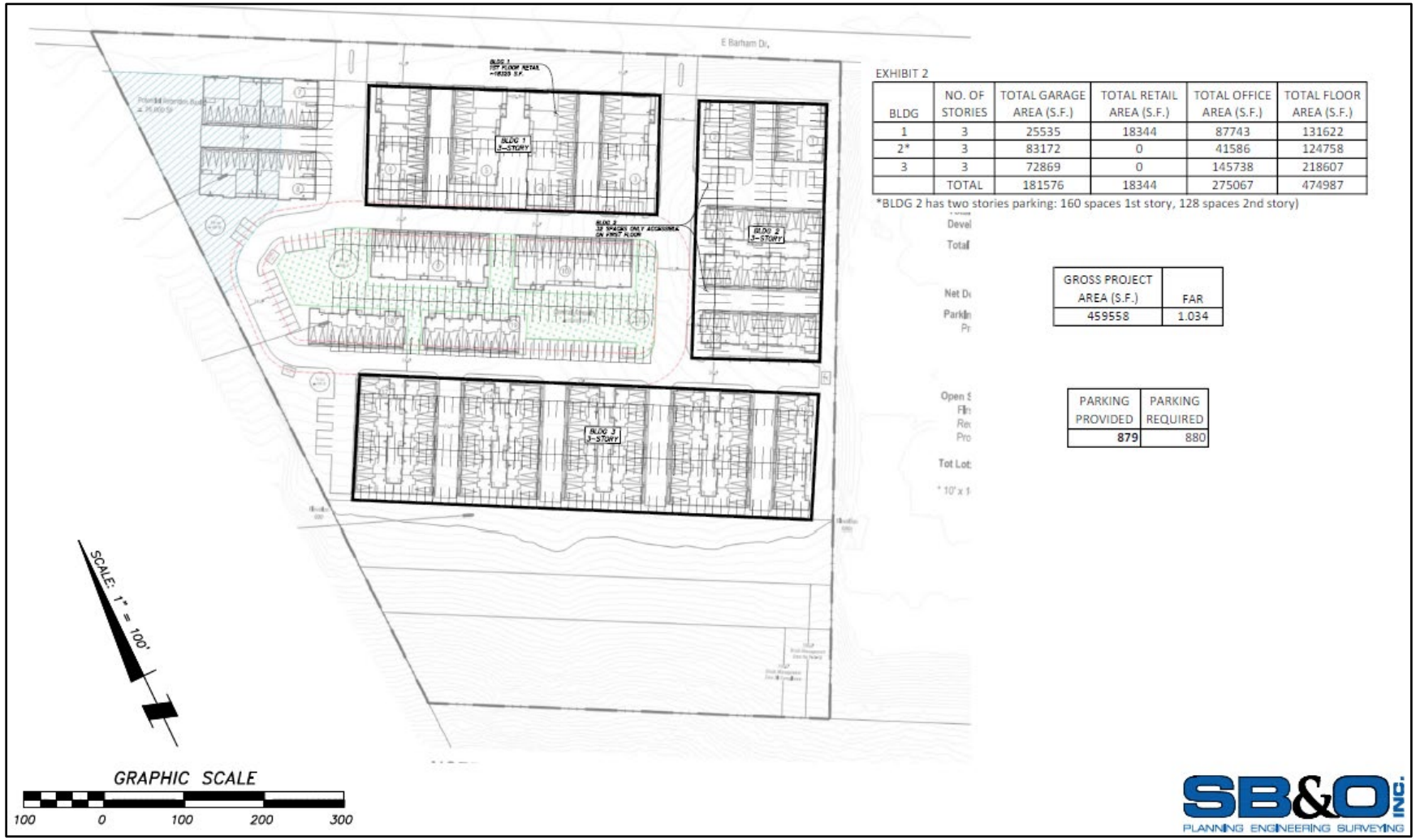


EXHIBIT 2

BLDG	NO. OF STORIES	TOTAL GARAGE AREA (S.F.)	TOTAL RETAIL AREA (S.F.)	TOTAL OFFICE AREA (S.F.)	TOTAL FLOOR AREA (S.F.)
1	3	25535	18344	87743	131622
2*	3	83172	0	41586	124758
3	3	72869	0	145738	218607
	TOTAL	181576	18344	275067	474987

*BLDG 2 has two stories parking: 160 spaces 1st story, 128 spaces 2nd story)

GROSS PROJECT AREA (S.F.)	FAR
459558	1.034

PARKING PROVIDED	PARKING REQUIRED
879	880

5.0 Environmental Effects Found not to be Significant

The City of San Marcos completed an Initial Study for the proposed project in accordance with Sections 21000-21189 of the Public Resources Code and Section 15063 of the California Environmental Quality Act (CEQA) Guidelines. A Notice of Preparation (NOP) was prepared by the City and mailed to applicable agencies, organizations, and neighboring property owners. The NOP is included in Appendix C.[19]

As required by Section 15128 of the CEQA Guidelines, the following is a discussion of the environmental effects that were considered as a part of the Initial Study but were determined to have "No Impact", and, therefore, are not discussed in detail in the Environmental Impact Report (EIR).

In some instances, complete environmental issue areas were eliminated during the NOP process, including agriculture/forestry resources and mineral resources. In other instances, some of the specific CEQA thresholds were eliminated during the Initial Study process.

5.1 Agriculture and Forestry Resources

Threshold of Significance: 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.

The project site is not mapped as prime farmland, unique farmland, or farmland of statewide importance, as determined by the Farmland Mapping and Monitoring Program, as shown on Figure 4-4 (Agricultural Areas) in the San Marcos General Plan (San Marcos 2012). Therefore, the project would not result in the conversion of prime farmland, unique farmland, or farmland of statewide importance. No impact is identified for this issue area.

Threshold of Significance: Conflict with existing zoning for agricultural use, or a Williamson Act contract.

The project site has a General Plan designation of Mixed Use 3 (MU3) and a zoning designation of Mixed-Use-3 (MU-3). The project site does not support zoning for an agricultural use. The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The project site is not located within a Williamson Act contract area. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

Threshold of Significance: 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)).

Forest land is defined as "land that can support ten percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest

19 The Initial Study, NOP, and comment letters received on the NOP are included in Appendix B and C of this EIR.

resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (California Public Resources Code Section 1220(g)). Timberland is defined as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees" (California Public Resources Code Section 4526). A Timberland Production Zone is defined as "an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses" (California Public Resources Code Section 51104(g)).

The project site has a General Plan designation of Mixed Use 3 (MU3) and a zoning designation of Mixed-Use-3 (MU-3). A General Plan Amendment and Rezone is proposed for the project to change these designations to Specific Plan Area (SPA). The proposed project is not located in an area that is zoned for forest land, timber land or for timber production. Implementation of the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No impact is identified and this topic.

Threshold of Significance: Result in the loss of forest land or conversation of forest land to non-forest use.

The project site does not support forests, nor is there any forest land adjacent to the project site. The project site is developed. Therefore, the proposed project would not result in the loss of forest land or the conversion of forest land to non-forest use. No impact is identified for this issue area.

Threshold of Significance: Involve other changes in the existing environment that, 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.

The project would not result in any other changes to the existing environment that would, due to their location or nature, results in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. There is no agricultural activity on the project site. No impact is identified for this issue area.

5.2 Geology and Soils

Threshold of Significance: 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 wastewater.

Septic tanks and alternative wastewater disposal systems are not proposed as part of the project. The project will receive wastewater service from Vallecitos Water District (VWD) and VWD has indicated they can serve the project (VWD 2020). Therefore, no impact is identified for this issue area.

A discussion of additional geology and soils significance thresholds is provided in Section 3.6., Geology and Soils.

5.3 Hydrology and Water Quality

Threshold of Significance: In flood hazards, tsunami or seiche zones, risk release of pollutants due to project inundation.

Per the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map Numbers 06073C1052G and 6073C1055G, the project site is not located within a 100- year flood hazard area (FEMA 2012). The project site is approximately 6.5 miles inland from the Pacific Ocean and would not be subject to inundation by tsunami. Given that the project site is not located near a large standing body of water, inundation by seiche (or standing wave) is considered negligible. No impact is identified for this issue area.

A discussion of additional hydrology and water quality significance thresholds is provided in Section 3.9, Hydrology and Water Quality.

5.4 Land Use and Planning

Threshold of Significance: Physically divide an established community

The project site is currently undeveloped. The project proposes residential uses in an area that is already developed with similar uses, and as such, would be compatible with existing uses. The project would not physically divide an established community. No impact is identified for this issue area.

A discussion of additional land use and planning significance thresholds is provided in Section 3.10, Land Use and Planning.

5.5 Mineral Resources

Threshold of Significance: 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

According to the City of San Marcos General Plan Conservation & Open Space Element, the City has land classified in all four Mineral Resource Zones (MRZ) (City of San Marcos 2013). California does not require that local governments protect land designated as MRZ-1, MRZ-3, or MRZ-4. However, the City is responsible for recognizing lands designated as MRZ-2 and protecting these areas from premature development incompatible with mining. The lands designated as MRZ-2 include small portions between Double Peak, Mt. Whitney, and Franks Peak; and small portions in the northern Sphere of Influence within Twin Oaks Valley Neighborhood. These locations do not overlap with the proposed project site; therefore, no loss of known mineral resources would occur. No impact would occur.

Threshold of Significance: 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

The proposed project site is not designated as a locally important mineral resource recovery site on any local general plan, specific plan, or other land use plan (City of San Marcos 2013). Due to the location and the nature of the proposed project, there would be no impact to mineral resources.

5.6 Noise

***Threshold of Significance**: 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 are to excessive noise levels?*

The proposed project is not located within the vicinity of a private airstrip. The public airport closest to the project site is the McClellan-Palomar Airport, located approximately 7.5 miles to the west. According to the ALUCP for the McClellan-Palomar Airport, the project site is not located within the existing or future 60 dB CNEL noise contour of the airport (San Diego County Regional Airport Authority 2011). Therefore, people residing or working in the project area would not be exposed to substantial airport noise. This topic will not be analyzed in the EIR.

5.7 Population and Housing

***Threshold of Significance**: Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere*

There is no existing housing on the project site. Therefore, the project will not remove existing housing. The project proposes 151 housing units which would add to the housing stock in the City. No impact is identified for this issue area.

A discussion of additional population and housing significance thresholds is provided in Section 3.12, Population and Housing.

5.8 Wildfire

***Threshold of Significance:** A significant wildfire would be identified if the project was located in or near a state responsibility area or lands classified as very high fire hazard severity zone and would:*

- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- Due to slope, prevailing wind, and other factors exacerbate wildlife risk, and thereby, expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire;
- 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; or
- Expose people or structure to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes.

The project site is not located in or near a State Responsibility Area (SRA) nor is the site on or near lands classified as a very high fire hazard severity zone. SRA is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. SRA does not include lands within city boundaries or in federal ownership. As such, the project site is located in a Local Responsibility Area and fire services are provided by the San Marcos Fire Department.

The project site is located within a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) designation per CalFire's San Marcos Fire Hazards Severity Zones Map (2009) and is surrounded by areas also

identified as Non-VHFHSZ. Further, per Figure 6-4 of the City's General Plan, the project site and surrounding area are not identified as a SMFPD Community Hazard Zone. The project includes a 150-foot fuel modification buffer along the southern portion of the project site to further minimize fire risk to the proposed development. The existing highly developed areas and development of the project site would not exacerbate wildfire risk with respect to exposure of project occupants to pollutant concentrations from a wildfire, uncontrolled spread of wildfire, or alter post-fire slope stability. The project would also not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. Thus, the proposed project would result in less than significant impacts related to wildfire.

***Threshold of Significance*: Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere**

There is no existing housing on the project site. Therefore, the project will not remove existing housing. The project proposes 151 housing units which would add to the housing stock in the City. No impact is identified for this issue area.

A discussion of additional population and housing significance thresholds is provided in Section 3.12, Population and Housing.

6.0 Other CEQA Considerations

6.1 Significant and Unavoidable Impacts

California Environmental Quality Act (CEQA) Guidelines, Section 15126.2(b), requires that an Environmental Impact Report (EIR) describe any significant impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less-than-significant level. Chapter 3, Environmental Analysis, of this EIR describes the potential environmental impacts of the proposed project and recommends mitigation measures to reduce impacts, where feasible.

As discussed in this EIR, implementation of the proposed project would result in significant and unmitigated impacts related to land use and transportation, as detailed below:

- Impact LU-1: Inconsistency with Mobility Element (Rancheros Drive/SR-78 WB – Near Term 2025 During AM and PM Peak Hour exceeds acceptable LOS)
- Impact TR-1: Conflict with Policies Addressing Roadways
- Impact TR-2: Vehicle Miles Traveled

These significant impacts cannot be mitigated to a less than significant level, and therefore, are considered significant and unavoidable impacts. Refer to Section 3.10, Land Use and 3.15, Transportation, of this EIR for additional information.

6.2 Growth Inducement

Section 15126.2(d) of the CEQA Guidelines mandates that the growth inducing nature of a proposed project be discussed. This CEQA Guideline states the growth-inducing analysis is intended to address the potential for the proposed project to "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Further, the CEQA Appendix G Checklist (Population and Housing) also mandates that a CEQA document speak to the proposed project's likelihood to induce substantial population growth in an area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., through extension of roads or other infrastructure).

A project may be distinguished as either facilitating planned growth or inducing unplanned growth. Facilitating growth is related to the establishment of direct employment, population, or housing growth that would occur within a project site. Inducing growth is related to lowering or removing barriers to growth or by creating an amenity or facility that attracts new population/economic activity.

For purposes of this EIR analysis, a significant growth inducement impact would occur if the proposed project, and associated infrastructure improvements, directly or indirectly removes obstacles to growth such that the induced growth would significantly burden existing community services, the environment or cause a demand for General Plan Amendments. This section contains a discussion of the growth inducing factors related to the proposed project and as defined under CEQA Guidelines, Section 15126.2(d). A project is defined as growth inducing when it directly or indirectly:

- Fosters population growth;
- Includes the construction of additional housing in the surrounding environment;

- Removes obstacles to population growth;
- Taxes existing community service facilities, requiring construction of new facilities that could cause significant environmental effects; and/or
- Encourages or facilitates other activities that could significantly affect the environments, either individually or cumulatively.

It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

As discussed in Section 3.12, Population and Housing, of the EIR, the proposed project would directly induce growth through the development of 151 multi-family residential dwelling units, resulting in a gross density of approximately 14.3 dwelling units per acre. Based on the population rate of 3.1 persons per dwelling unit, the proposed project would directly induce population growth to the area and would potentially add an estimated 469 people to the area. The proposed project would not, however, indirectly induce a growth in population as no extension of infrastructure is proposed beyond what is required to adequately serve the proposed project. Additionally, the majority of the surrounding area is developed. The SANDAG population growth forecasts rely, in part, on individual jurisdiction's planning documents, such as the City's General Plan. Because the project proposes a General Plan Amendment and Rezone, the estimated population of 469 people would not have been accounted for in SANDAG's projections. Therefore, the project's induced population would exceed these projections. However, determination of impacts related to population growth are based upon whether the induced growth would be considered substantial.

As shown in Table 3.12-2, the City's population is projected to grow from 98,915 people in 2020 to 109,095 people by 2035 (an increase of 10,180 people). The population increase of 469 people would account for 4.6% of SANDAG's projected population growth.

There is no hardline number or percentage available to determine whether or not this estimated introduction of 469 people (4.6% of projected growth) could be considered a substantial increase in population. However, SANDAG's 2050 Regional Growth Forecast is intended to be used as a starting point for regional planning as opposed to a prescribed growth pattern. Although the City determined that there are adequate sites available with appropriate designations/zoning to accommodate the remaining RHNA allocation for the current Housing Element planning period, the City has the discretion to adjust allocated housing units/sites as necessary to balance proposed plans for residential development with approved/constructed residential development City of San Marcos 2021). Therefore, while the proposed project would directly induce growth beyond current estimates and forecasts, it would not be considered substantially growth inducing, and impacts would be less than significant.

6.3 Significant Irreversible Environmental Changes

CEQA Guidelines, Section 15126.2(c), requires that an EIR identify any significant irreversible environmental changes associated with the proposed project. Such changes include, for example, the intensification of land use or irreversible damage from environmental accidents associated with the proposed project.

Implementation of the proposed project would result in irreversible environmental changes. Approval of the project would involve the development of 151 multi-family residential units and associated open space and infrastructure improvements. Development would result in direct impacts to biological

resources through the removal of vegetation (see Section 3.3). Although mitigated to a less-than-significant level, such impacts would be considered irreversible.

Further, construction and/or operation of the proposed project would require the use of resources that include, but are not limited to, soils, gravel, concrete, and asphalt, lumber and other related forest products, petrochemical construction materials, steel, copper, and other metals, water, fuels, and energy. As such, the proposed project would result in the short-term and long-term use of fossil fuels and other nonrenewable resources.

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