Mission 316 West

Initial Study

prepared by

City of San Marcos
Planning Division
1 Civic Center Drive
San Marcos, California 92069
Contact: Joseph Farace, Principal Planner

prepared with the assistance of

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

February 2019

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Environmental Scientists | Planners | Engineers
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Figures

Initial Study

1. Project Title

Mission 316 West Project

2. Lead Agency Name and Address

City of San Marcos Planning Division
1 Civic Center Drive
San Marcos, California 92069
Contact: Joseph Farace, Principal Planner
(760) 744-1050, ext. 3248

3. Contact Person and Phone Number

Kurt Bausback, Director of Planning and Entitlements
KB Home Coastal
9915 Mira Mesa Blvd., Suite 100
San Diego, California 92131
(858) 877-4262

4. Project Location

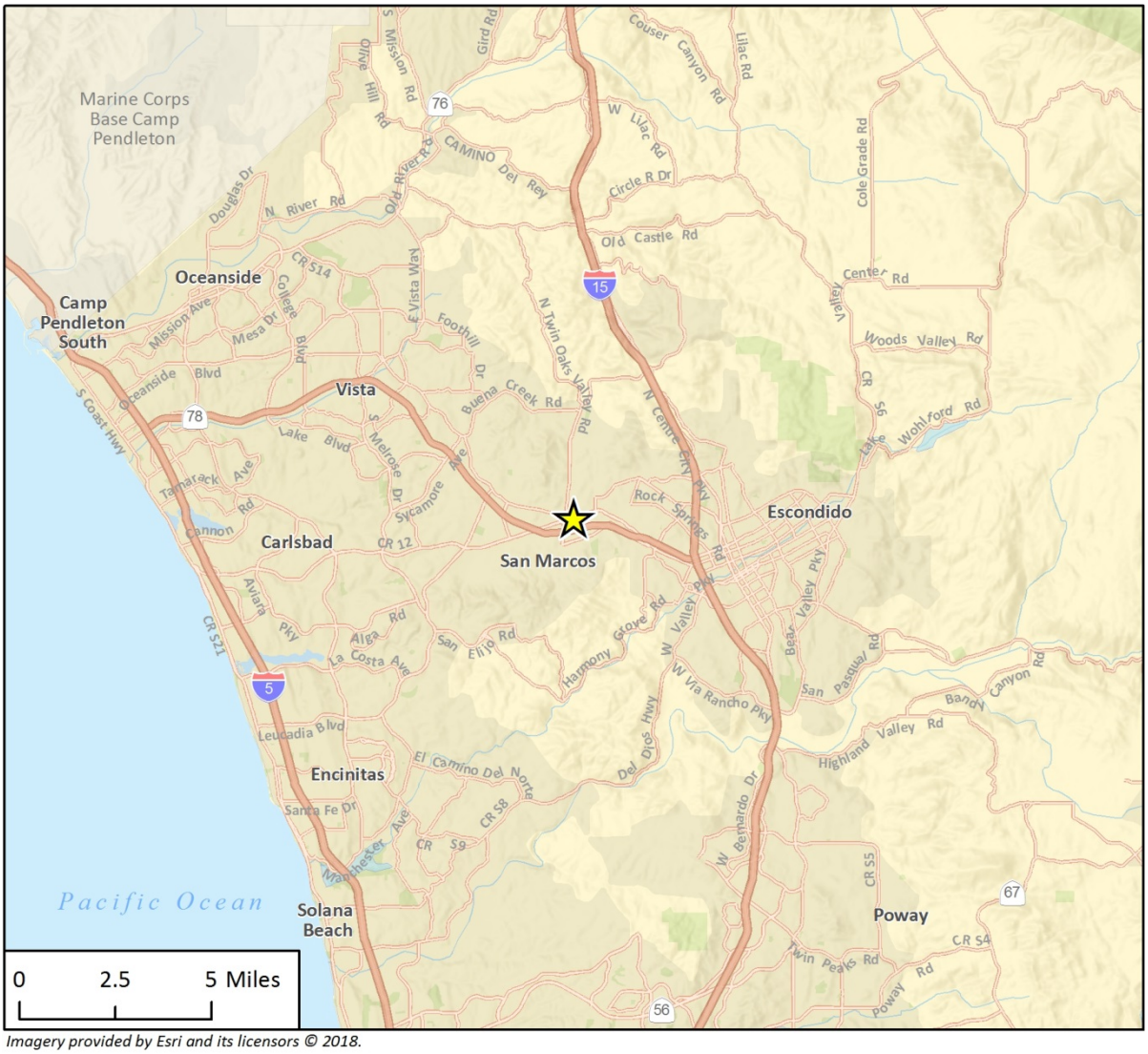
The project site is located in the City of San Marcos in northern San Diego County. The approximate 3.7-acre site is identified as APN 220-210-50 and is located at 260 East Mission Road in the northeast corner of Woodward Street and East Mission Road, as seen in Figure 2. The site has diverse topography, with a steep hillside sloping down towards East Mission Road. The regional location of the project is shown in Figure 1.

5. Related Permits and other Public Approvals

The following entitlements are required for the proposed project:

- Specific Plan Amendment
- General Plan Amendment
- Multi-family Site Development Plan
- Tentative Subdivision Map
- Grading Variance
- Conditional Use Permit for blasting and rock crushing

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2018.

Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 2 Project Location

6. Existing Zoning District

The project site is zoned Specific Plan Area (SPA) in the Heart of the City and Richmar Specific Plan areas.

7. Proposed Use of Site

The site is proposed for multi-family residential units, with a total of 67 units in nine separate buildings.

8. General Plan Land Use Designation

The General Plan Land Use Designation for the project site is Specific Plan Area according to Figure 2-3 in the City's General Plan. The Mission 316 Specific Plan is proposing residential and open space land uses within an area designated for commercial within the existing Heart of the City Specific Plan area. The development will expand the existing Mission 316 Specific Plan area to the west creating a similar residential community to the existing developed site.

9. Zoning

The project site is zoned Specific Plan Area – SPA.

10. Project Description

Background

The proposed project is intended to complement and be consistent with the residential development to the east, known as Mission 316 East. That property, APN 220-210-50, was developed under the Mission 316 Specific Plan, which established standards and regulations for the development of the multi-family housing. The proposed development, Mission 316 West, would be developed in accordance with the Mission 316 Specific Plan, which would be updated to incorporate design standards and development regulations specific to the proposed project.

Proposed Development

The project would develop 3.7 acres with 67 two-and three-bedroom multi-family housing units, detailed in Figure 3. The residential units would consist of three plan types, detailed in Table 1. The units would be distributed in nine separate buildings with five building typologies. Figure 4 shows the elevation of a residential building typology. The 67 residential units provide for a density of approximately 18 dwelling units per acre. The project includes 161 total parking spaces, 134 of which would be provided in two-garages for each residential unit. An additional 27 open parking spaces for residents and visitors are proposed. The San Marcos Municipal Code requires 2.33 spaces per unit, which would total 157 parking spaces.

Figure 3 Proposed Site Plan

Figure 4 Proposed Multi Family Building Elevations

RIGHT

REAR

LEFT

(MISSION RD) FRONT

PERSPECTIVE

MATERIAL SCHEDULE

1	ROOF - CONCRETE 'S' TILE
2	FASCIA - 2 X 6 RESAWN WOOD
3	WALL - STUCCO
4	WALL - BRICK VENEER
5	TRIM - 2 X STUCCO OVER
6	RAILING - DECORATIVE METAL
7	DECORATIVE - WOOD SHUTTERS
8	DECORATIVE - RAFTER TAILS
9	SECTIONAL GARAGE DOOR
10	EXTERIOR LIGHT FIXTURE
11	DECORATIVE POTSHELF
12	DECORATIVE METAL GRILLE

PERSPECTIVE

SAN MARCOS, CA
KB HOME
9915 MIRA MESA BLVD. STE 100
SAN DIEGO, CA 92131

MISSION 316 WEST
AUGUST 31, 2018
SCALE: 0 8 16 24

BUILDING E ELEVATION
SUMMA ARCHITECTURE
5256 S. Mission Road, Ste 404
Bonsall, CA 92003
760.724.1198
A-13

Table 1 Residential Unit Summary

Plan Type	Number of Units	Square Feet per Unit
2 bedroom/2.5 bathroom	37	1,104
3 bedroom/2.5 bathroom	17	1,339
3 bedroom/3.5 bathroom	13	1,646

The proposed open space would conform to the Mission 316 Specific Plan development standards. The project includes 33,889 square feet of common open space. This includes a recreational area with amenities such as barbeques, counters, seating and share structures, and an open turf area.

The project also includes 3,263 square feet of private open space in the form of patios and decks. The project proposes retaining walls and tubular, steel patio fencing. Walls and fences would be visually appealing and add visual landscape treatments to the project site in conformance with the guidelines of the Missions 316 Specific Plan. Proposed landscaping and hardscaping would also confirm to the standards by incorporating drought tolerant plant species and would maintain continuity with the Mission 316 East development by incorporating a similar landscape theme. Hardscaping would utilize pavers to accentuate entry points and provide pedestrian pathways through the project site and landscaped areas.

The project site contains steep slopes that require substantial grading to accommodate the project. Earthwork quantities would include approximately 25,200 cubic yards of cut material, 13,400 cubic yards of fill material, and 11,800 cubic yards of export material. A grading variance is proposed for slopes exceeding 20 feet in height. Utilities to the site would be extended from existing facilities located off of East Mission Road.

Access to the site would be provided via one driveway located off Woodward Street and one driveway off East Mission Road. The project would share access from East Mission Road with the neighboring Mission 316 East development via a central 24-foot wide circulation road. Twenty-foot wide internal alleys would connect the multi-family dwellings to the main circulation road.

11. Surrounding Land Uses and Setting

The project site is surrounded by a mix of land uses. The Inland Rail Line runs parallel to the project frontage, south of East Mission Road. Multi-family residences are located east of the site. Single-family residences are located northeast of the site. The City of San Marcos Civic Center is located to the south, and includes the public library, the Veteran's Center, and City Hall. Areas of open space with sensitive habitats are located near the project site, including land containing coastal sage scrub to the north and a riparian corridor of Twin Oaks Valley Creek to the south. Neighborhood context is shown in Figure 2.

12. Other Public Agencies Whose Approval is Required

No other public agency approval is anticipated to be required.

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

■ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

2/4/19
Date

JOSEPH FARACE
Printed Name

PRINCIPAL PLANNER
Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	■
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

a. Except as provided in Public Resources Code Section 21099, would the project have a substantial adverse effect on a scenic vista?

The site is undeveloped and located in a mixed commercial, residential, and light industrial area near Woodward Street and East Mission Road. The project site is not located in or near a designated scenic vista according to the City of San Marcos General Plan; therefore, the project would not degrade the view of designated scenic resources from any important view location. The City of San Marcos has designated the San Marcos Mountains, Merriam Mountains, Mount Whitney, Cerro de La Posas, Double Peak, Owens Peak, Franks Peak, creek corridors, eucalyptus stands, historic buildings, and ocean views as scenic resources. The project site would not affect views of these designated scenic resources and does not lie within the Ridgeline Protection and Management Overlay Zone (City of San Marcos 2012). Therefore, there would be no project impacts related to scenic vistas.

NO IMPACT

b. Except as provided in Public Resources Code Section 21099, would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The portion of State Route 78 (SR 78) that travels through the City of San Marcos and by the project site is not a designated scenic highway (Caltrans 2011). However, the City of San Marcos General Plan designates SR 78 as a view corridor, providing views of the Merriam Mountains, Mount Whitney, and Double Peak (City of San Marcos 2013). The project site is located approximately 0.38 miles north of SR 78. Due to the elevation of the highway and relative location to these scenic resources, the project is not visible from and would not directly damage or block the view of these designated scenic resources from SR 78. Therefore, the proposed project would not affect scenic resources as viewed from a scenic highway and there would be no impact.

NO IMPACT

c. Except as provided in Public Resources Code Section 21099, would the project, 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 project site is located in an urbanized area in the City of San Marcos. The proposed architectural design would comply with the Mission 316 Specific Plan guidelines and would be compatible in height and appearance with the adjacent Mission 316 East development. The proposed three-story buildings would be consistent with the height standards and regulations set forth in both the Mission 316 Specific Plan and San Marcos Municipal Code. The landscape plans would comply with Section 3.3 of the Mission 316 Specific Plan, Landscape Guidelines, and the project has included a Lighting Plan (see section d for more information) and fuel modification zones.

Given the topography of the proposed Mission 316 West site, the project would require a grading exception to grade and remove over 11,000 cubic yards of material off-site. Due to the substantial amount of grading proposed, retaining walls would be installed along the northern portion of the project site. The retaining wall has been designed with materials which are visually appealing. Additionally, the grading and retaining walls would comply with City regulations. The project would not conflict with applicable zoning and other regulations governing scenic quality and therefore, there would be no impact.

NO IMPACT

d. Except as provided in Public Resources Code Section 21099, would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The surrounding area has existing light from the reflective windows in San Marcos City Hall, car headlights on State Route 78, and minimal light from commercial buildings to the west. The proposed project would generate typical residential light sources such as street lights, home lighting, and vehicle lights and would not use reflective materials that would create a significant amount of glare. The project would utilize interior street lighting, as specified in the project Lighting Plan, located on the corner of each building and key areas along the proposed circulation road. Accent lighting would also be implemented within the open space area. These additional light sources would be compatible with the surrounding residential developments, commercial buildings,

and light industrial infrastructure. The project would also be required to comply with the light and glare guidelines set by Section 20.300.080 of the San Marcos Zoning Code. The proposed lighting would be wall- or ground-mounted with deflectors to confine the rays to the site with minimal intrusion to the dwelling units, as consistent with Section 20.300.080 of the San Marcos Zoning Ordinance (City of San Marcos 2012). Therefore, compliance with the preceding regulations would reduce the proposed project's impact to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

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2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

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

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

The project site is located in an urbanized area of San Marcos, and is not labeled as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2018a). The project site is located in an area designated as Non-Farmland/Open Space according to Figure 4-4 *Agricultural Areas* in the City of San Marcos General Plan Open Space and Conservation Element. The site is not labeled as forestland or farmland, and it is not currently used for agricultural purposes or outlined within a Williamson Act contract. The proposed project would not involve any conversion of farmland or forestland to non-agricultural, non-forest use. Therefore, the proposed project would have no impact on forestland or related to the conversion of farmland to non-agricultural uses.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

The project area is located in the San Diego Air Basin (SDAB), which is bordered by the Pacific Ocean to the west, the South Coast Air Basin to the north, the Salton Sea Air Basin to the east, and the United States/Mexico border to the south. The project site is located approximately nine miles inland from the coast in an interior valley. Air pollutant emission sources in the SDAB are typically grouped into two categories: stationary and mobile sources. Mobile source emissions can be attributed to vehicles and transportation-related activities. Stationary sources can be divided into two major subcategories: point and area sources. Point source emissions originate from manufacturing and industrial processes, while area emissions are generated from residential heaters, small engines, and other consumer products. Both major emissions categories are widely distributed within SDAB and may have a cumulative effect.

An Air Quality and Greenhouse Gas Study was prepared by Rincon Consultants, Inc. to analyze the project's air quality emissions and impacts on surrounding sensitive land uses. The analysis considered temporary construction impacts and long-term operation impacts associated with the project. The results of the Air Quality and Greenhouse Gas Study are used in the analysis in the section.

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

The San Diego County Air Pollution Control District has prepared a Regional Air Quality Strategies (RAQS) to address San Diego County's nonattainment status for ozone. The RAQS relies on information from the California Air Resources Board (CARB) and San Diego Association of Governments (SANDAG), including projected growth in the County, mobile, area, and all other source emissions to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. Projects that propose

development that is consistent with the growth anticipated by the City's General Plan is consistent with the RAQS.

Based on the California Department of Finance estimate for the City's average persons per household rate of 3.13, the proposed 67 dwelling units would generate an estimated 209 additional residents in the City (DOF 2018). According to demographic and socioeconomic estimates provided by the SANDAG Data Surfer database, the City of San Marcos is forecast to add 7,233 multi-family residential units by between 2012 and 2050, a 74 percent increase that would bring the overall multi-family residential inventory from 9,738 units to 16,971 units (SANDAG 2015). The 67 proposed units would account for 0.9 percent[1] of the additional multi-family residential units forecast by SANDAG. The project is not anticipated to provide new employment opportunities. The project would result in growth in residential units that is consistent with the City's General Plan and would not exceed the regional growth or population forecasts in the City. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

The project site is located in the SDAB, which is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). As the local air quality management agency, the SDAPCD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the SDAB is classified as being in "attainment" or "nonattainment." Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The SDAB is designated a nonattainment area for the federal and State eight-hour ozone standards, State one-hour ozone standards, and for State PM_{10} and $PM_{2.5}$. The SDAB is designated unclassifiable or in attainment for all other federal and State standards (SDAPCD 2017).

The characteristics associated with criteria pollutants for which the SDAB is in non-attainment are described in Table 2.

[1] Project residential units as percentage of SANDAG multi-family unit forecast for City of San Marcos (67 project units / [16,971 2050 units – 9,738 2012 units]) * 100 = 0.9 percent.

Table 2 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and volatile organic compounds (VOC)[2]. NO_X is formed during the combustion of fuels, while VOCs are formed during combustion and evaporation of organic solvents. Because O_3 requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.
Suspended particulate matter	Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (which measures no more than 10 microns in diameter) and $PM_{2.5}$ (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with small particulates (PM_{10} and $PM_{2.5}$) can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction and demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: EPA, Air Quality Criteria for Particulate Matter, October 2004.

The SDAPCD has adopted numerical thresholds to analyze the significance of a project's construction and operational emissions. These thresholds are designed such that a project consistent with the thresholds would not have an individually or cumulatively significant impact to the SDAB's air quality. These thresholds are also used by planning agencies and local jurisdictions for comparative purposes when evaluating projects under CEQA. Thus, a project that does not exceed these SDAPCD thresholds would have a less than significant impact. Table 3 presents the significance thresholds for construction and operational-related criteria air pollutant and precursor emissions being used for the purposes of this analysis. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SDAB's existing air quality conditions. For the purposes of this analysis, the proposed project would result in a significant impact if construction or operational emissions would exceed any of the thresholds shown in Table 3.[3]

[2] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, VOC, ROC, and VOC). SDAPCD uses the term VOC to denote organic precursors.

[3] Note the thresholds for PM_{10} and $PM_{2.5}$ apply to construction exhaust emissions only.

Table 3 SDAPCD Screening Level Significance Thresholds

Pollutant	Total Emissions	
	Lbs per Day	Tons per Year
ROG/VOCs	75[1]	13.7[2]
NO_x	250	40
CO	550	100
SO_x	250	40
PM_{10}	100	15
$PM_{2.5}$	55[3]	10[3]

[1] Threshold for VOCs based on the threshold of significance for VOCs from the SCAQMD for the Coachella Valley.

[2] 13.7 tons per year threshold based on 75 lbs/day multiplied by 365 days/year and divided by 2,000 lbs/ton.

[3] EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the SCAQMD.

Source: San Diego County. March 2007. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Air Quality*. Accessed June 2018 at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf

Air quality modeling was performed in general accordance with the statutory requirements outlined in the SDAPCD 2016 RAQS to identify both construction and operational emissions associated with the proposed project. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 (Rincon Consultants, Inc., 2019a)

Construction Emissions

Construction activities associated with the proposed project would consist of grading, site preparation, construction of the proposed buildings, parking lot and roadway paving, and architectural coating. These construction activities would generate temporary emissions of fugitive dust (measured as particulate matter), exhaust emissions from heavy construction vehicles and soil hauling trucks, and ROGs from architectural coatings. Table 4 summarizes maximum daily and annual emissions of pollutants throughout the construction period of the project. Emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ would not exceed SDAPCD screening level thresholds during project construction.

Table 4 Maximum Daily Estimated Construction Emissions

	Maximum Emissions[1]					
Emissions Source	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Daily Construction Emissions (lbs/day)						
2019 Maximum	1.8	21.6	12.2	<0.1	1.5	0.9
2020 Maximum	50.4	39.3	24.9	<0.1	4.4	2.5
2021 Maximum	50.2	18.9	21.6	<0.1	3.2	1.4
SDAPCD Screening Level Thresholds	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No
Annual Construction Emissions (tons/yr)						
2019 Maximum	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2020 Maximum	0.5	2.2	1.6	<0.1	0.3	0.2
2021 Maximum	0.9	0.9	1.0	<0.1	0.2	0.1
SDAPCD Screening Level Thresholds	13.7	40	100	40	15	10
Threshold Exceeded?	No	No	No	No	No	No

Notes: All calculations were made using CalEEMod v.2016.3.2. Site Preparation, Grading, Paving, Building Construction, and Architectural Coating totals include worker trips, soil export hauling trips, construction vehicle emissions and fugitive dust. Totals may not add up due to rounding. Emission data is pulled from "mitigated" results that include compliance with regulations and project design features as described in Section 1.2 (Rincon Consultants, Inc., 2019a).

[1] Grading phases incorporate anticipated emissions reductions from the conditions listed above, which are required by SDAPCD Rules 52, 54, and 55 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions from the conditions listed above, which are required by SDAPCD Rule 67.

Operational Emissions

Table 5 summarizes estimated emissions associated with operation of the project. The majority of operational emissions generated would be due to mobile emissions from vehicle trips to and from the project site. As shown in Table 5, emissions generated during the operation of project would not exceed SDAPCD screening level thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Table 5 Project Operational Emissions

Emissions Source	Estimated Emissions (lbs/day)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	2.8	0.1	5.5	<0.1	<0.1	<0.1
Energy	<0.1	0.2	0.1	<0.1	<0.1	<0.1
Mobile	0.8	2.9	7.4	<0.1	2.1	0.6
Project Total	3.5	3.2	13.0	<0.1	2.1	0.6
SDAPCD Screening Level Thresholds	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Source: Air Quality and Greenhouse Gas Study

Note: Estimate emissions are from Annual operational emissions. Numbers may not add up due to rounding.

CO Hotspots

The SDAB is in attainment of State and federal CO standards. The Escondido - E. Valley Parkway monitoring station (600 E Valley Parkway) is located closest to the project site that provides CO data. The maximum 8-hour average CO level recorded in 2015 was 3.10 ppm, which is well below the 9 ppm State and federal eight-hour standard. A CO hotspot analysis is required by the County if a proposed development would cause road intersections to operate at or below LOS E with intersection peak-hour trips exceeding 3,000 trips.

The traffic study prepared for the project evaluated three intersections in the vicinity of the project site, as well as the proposed driveway for the project (LLG, 2018). The project would generate approximately 536 daily trips once fully operational, which would include 43 peak morning trips and 54 peak afternoon trips on the roadways surrounding the project site. The additional traffic generated during project operation would not cause intersections in the vicinity of the project site to operate at or below LOS E, and project-generated trips would not exceed 3,000 peak-hour trips. Therefore, a CO hotspot analysis is not required and project-generated trips would not result in, or substantially contribute to, CO concentrations that exceed the eight-hour ambient air quality standards along area roadways and intersections and impacts would be less than significant.

Since emissions associated with the project would not exceed SDAPCD thresholds for construction or operation, the project would not violate an air quality standard or lead to result in a cumulatively considerable net increase in criteria pollutants and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors that may be affected by air quality impacts associated with project construction and operation include multi- family residences located approximately 500 feet east of the site along East Mission Road, single-family residences located approximately 700 feet north east of the site along Silk Mill Place, and the San Marcos Civic Center located approximately 1,000 feet southwest of the project site along East San Marcos Boulevard. The nearest school is Mission Hills High School (1 Mission Hills Court) located approximately 0.9 miles east of the project site along East Mission Road.

According to the County of San Diego Guidelines for Determining Significance for air quality, the primary emissions of concern regarding health effects for land development projects are diesel-fired particulates and carbon monoxide. As detailed in the impacts above, a CO hotspot would not be created with the implementation of the project, and the project would not exceed SDAPCD thresholds for CO during construction or operation. The primary source of diesel particulates is heavy-duty trucks on freeways and high-volume arterial roadways. The project site is approximately 0.32 miles north of CA-78 and is not located within 500 feet of other high-volume roadways. Additionally, the project would not exceed criteria pollutant thresholds during construction or operation of the project. Therefore, the proposed project would not expose the surrounding sensitive receptors to substantial pollutant contaminants and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

During construction, the project would involve the temporary use of diesel-powered equipment, which would generate exhaust that may be noticeable for short durations at adjacent properties. However, construction activities would be temporary and this impact would be less than significant and no mitigation would be necessary.

Land uses and facilities typically associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, refineries, landfills, dairies, and fiberglass molding. The operation of the proposed multi-family residential dwellings is not typically associated with objectionable odors. Therefore, the project would not generate objectionable odors and there would be no impacts.

LESS THAN SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	□	□	□
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	□	□	□
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	□	□	□	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	□	□	■	□
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	■	□	□	□
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	■	□	□	□

The project site is located in the Multiple Habitat Conservation Program (MHCP) Subregional Plan for the northwestern portion of San Diego County. Specifically, the project site is within the City of

San Marcos Draft Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (hereafter, Draft Subarea Plan), which comprehensively addresses how the City will conserve natural biotic communities and sensitive plant and wildlife species. The Draft Subarea Plan has been prepared in response to direction from the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) to meet the applicable requirements of the Federal and state Endangered Species Acts and the Natural Communities Conservation Planning Act of 1992. The City's Draft Subarea Plan is not formally approved and adopted, so all projects are required to obtain applicable permits for impacts to sensitive species and communities. Although the Draft Subarea Plan has not yet been approved, the plan has been used by the City as a guide for open space design and preservation.

Rincon Consultants, Inc. prepared a Biological Resources Assessment of the project site in January 2019. According to the assessment, the project site contains three vegetation communities: Diegan coastal sage scrub (2.1 acres), Disturbed Habitat (1.05 acres), and Urban/Developed (1.28 acres). The assessments conclude that there is moderate potential of four special-status plant species occurring on-site and low potential for seven special-status species. No jurisdictional features that would be regulated by the US Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and/or CDFW are present on the project site. Coastal California Gnatcatcher (CAGN) Protocol surveys were completed for the project and one pair and one individual CAGN were observed on and near the site (Rincon Consultants, Inc., 2019b)).

a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

b. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The project site supports approximately 2.01 acres of Diegan Coastal Sage Scrub (Rincon Consultants, Inc., 2019b). Diegan Coastal Sage Scrub is considered a sensitive community by the City, according to the Draft Subarea Plan. Also, a CAGN pair and individual were observed during CAGN protocol surveys. As detailed in the Biological Resources Assessment, individuals were observed adjacent to the development envelope of the project. CAGN is federally-listed as threatened and is a MHCP Covered Species. A Cooper's Hawk, which is a CDFW watch list species and a MHCP Covered Species, was also observed flying over the project site.

The Biological Resources Assessment did not identify special-status plant species on-site and concluded there is moderate to low potential for some species to occur (Rincon Consultants, Inc., 2019b). However, the assessment concluded protocol surveys were not completed during optimal blooming season for some of the species which have the potential to occur. The site also contains potential nesting habitat for raptors and birds protected under the Migratory Bird Treaty Act, which would require preconstruction surveys if construction occurs during the breeding season. Due to the presence of sensitive communities and wildlife species and the potential for other special-status species to occur, impacts to special status species and sensitive natural communities are potentially significant and will be further addressed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

According to the Biological Resources Assessment prepared by Rincon Consultants, Inc., the project site does not contain wetland or riparian areas or habitat on-site. No jurisdictional features that would be regulated by USACE, RWQCB, and/or CDFW are on-site. Therefore, there would be no impact and further analysis of this issue is not warranted.

NO IMPACT

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, and areas with vegetation cover provide corridors for wildlife travel. The project site is located near the San Marcos Creek wildlife corridor located along Twin Oaks Valley Road. However, the project site is a habitat island with Twin Oaks Valley Road to the west, Mission Road to the south, and residential development to the north and east of the site, which would prevent the movement of wildlife. The site is not identified as within a wildlife corridor per Figure 4-2 of the City of San Marcos General Plan. The project site is also not within or adjacent to an essential connectivity area or natural landscape block (Spencer et al. 2010). Since there were no wildlife corridors identified on the project site, the project would not interfere substantially with the movement of wildlife species. Short-distance movements of low-mobility wildlife could be impacted on a local scale; however this would be less than significant since it would not impact regional movements. Therefore, impacts would be less than significant and further analysis is not warranted.

LESS THAN SIGNIFICANT IMPACT

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

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

Due to the Coastal Sage Scrub located on the project site, the presence of Cooper's Hawk and CAGN, and nesting bird habitat, the project may conflict with the guidelines of the MHCP and related policies in the San Marcos General Plan. Because the project has the potential to conflict with the MHCP and General Plan policies, the impact is potentially significant and this issue will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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5 Cultural Resources

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

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

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

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b]).

PRC, Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Rincon Consultants, Inc. completed a cultural resources study in September 2018. The report identifies nine previously recorded cultural resources within a half-mile radius of the project site. One resource, CA-SDI-21254, is located adjacent to the development envelope of the project. It is a multi-component site that was originally recorded as the ruins of a residential structure with historic and modern debris, but during construction monitoring in July 2015, prehistoric cultural deposits were identified. The remaining eight cultural resources consist of five prehistoric sites, one prehistoric isolate, one historic building, and one prehistoric lithic scatter. The multi-component historic and prehistoric site located adjacent to the project site were recommended as ineligible for listing on the CRHR and NRHP due its inability to meet the criteria to be eligible.

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

The project site is vacant and lacks historical resources as defined in Section 15064.5 of the CEQA Guidelines. Therefore, no impact would occur and further analysis of this issue is not warranted.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

As detailed above, the archaeological resource identified on-site is not considered eligible for listing and is located outside of the building envelope of the project. Archaeological resources are not known to be present on-site. Nevertheless, excavation and ground disturbing activities during construction have the potential to directly or indirectly disturb additional subsurface archaeological resources. This impact is potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Due to ground disturbing activities during construction, the potential exists for the discovery of human remains. If human remains are found, the State of California 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. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner would notify the Native American Heritage Commission (NAHC), which would determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. With adherence to existing regulations regarding the treatment of human remains, the impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	■	☐

Electricity and Natural Gas

In 2017, California used 292,039 gigawatt-hours (GWh) of electricity, of which 29 percent were from renewable resources (CEC 2018a). California also consumed approximately 12,500 million U.S. therms (MMthm) of natural gas in 2017. (CEC 2017b). The project site would be provided electricity by San Diego Gas and Electric Company (SDGE). The project would not consume natural gas as the development proposes to only run off electricity and would not pipe and connect into the surrounding natural gas pipes. Table 6 shows the electricity consumption by sector and total for SDGE. In 2017, SDGE provided approximately 0.06 percent of the total electricity used in California.

Table 6 Electricity Consumption in the SDGE Service Area in 2017

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
286.6	8,534.7	1,679.0	1,245.3	344.9	6,481.2	87.9	18,659.6

Notes: All usage expressed in GWh

Source: CEC 2017a, http://ecdms.energy.ca.gov/elecbyutil.aspx

Petroleum

In 2016, approximately 40 percent of the state's energy consumption was used for transportation activities (EIA 2018a). Californians presently consume over 19 billion gallons of motor vehicle fuels per year (CEC 2018b). Though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030, a 20 percent to 22 percent reduction. This decline comes in response to both increasing vehicle electrification and higher fuel economy for new gasoline vehicles (CEC 2018b).

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

Construction Energy Demand

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The proposed project would require site preparation and grading, including hauling material off-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping.

The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from CalEEMod used to estimate construction air emissions in the Air Quality and Greenhouse Gas Study. Table 7 presents the estimated construction phase energy consumption, indicating construction equipment, vendor trips, and worker trips would consume approximately 37,496 gallons of diesel fuel over the project construction period. Construction equipment would consume an estimated 35,284 gallons of fuel; vendor trips would consume approximately 2,038 gallons of fuel; and worker trips would consume approximately 173 gallons of fuel over the combined phases of project construction.

Table 7 Estimated Fuel Consumption during Construction

Fuel Type	Gallons of Fuel	MMBtu[4]
Diesel Fuel (Construction Equipment)[1]	35,284.1	4,497.5
Diesel Fuel (Hauling & Vendor Trips)[2]	2,038.0	259.8
Other Petroleum Fuel (Worker Trips)[3]	173.4	19.0
Total	**37,495.5**	**4,776.3**

[1] Fuel demand rate for construction equipment is derived from the total hours of operation, the equipment's horse power, and the equipment's fuel usage per horse power per hour of operation, which are all taken from CalEEMod outputs (Rincon Consultants, Inc., 2019a)). Fuel consumed for all construction equipment is assumed to be diesel fuel.
[2] Fuel demand rate for hauling and vendor trips (cut material imports) is derived from hauling and vendor trip number, hauling and vendor trip length, and hauling and vendor vehicle class from "Trips and VMT" Table contained in Section 3.0, *Construction Detail*, of the CalEEMod results (Rincon Consultants, Inc., 2019a)). The fuel economy for hauling and vendor trip vehicles is derived from the United States Department of Transportation (DOT 2018). Fuel consumed for all hauling trucks is assumed to be diesel fuel.
[3] The fuel economy for worker trip vehicles is derived from the U.S. Department of Transportation (24 mpg) (DOT 2018). Fuel consumed for all worker trips is assumed to be gasoline fuel.
[4] CaRFG CA-GREET 2.0 fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for worker trips specified above (California Air Resources Board [CARB] 2015). Low-sulfur Diesel CA-GREET 2.0 fuel specification of 127,464 Btu/gallon used to identify conversion rate for fuel energy consumption for construction equipment specified above (CARB 2015). Totals may not add up due to rounding.

The construction energy estimates represent a conservative estimate as the construction equipment used in each phase of construction was assumed to be operating every day of construction. The fuel consumption during construction represents a nominal percentage of the total fuel consumption in the State, less than 0.0001[4] percent. Construction equipment would be maintained to all applicable standards, and construction activity and associated fuel consumption and energy use would be

[4] 110.060.1/19,000,000,000

temporary and typical for construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, the proposed project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand

The operation of the project would increase area energy demand from greater electricity and gasoline consumption at a currently undeveloped site. Gasoline consumption would be attributed to the trips generated from future residents and people accessing the site. The estimated number of average daily trips associated with the proposed project is used to determine the energy consumption associated with fuel use from the operation of the project. The majority of the fuel consumption would be from motor vehicles traveling to and from the project site. According to the Traffic Impact Analysis, the project would result in approximately 536 average daily trips, or 965,213 annual vehicle miles travelled (LLG, 2018). Table 8 shows the estimated total annual fuel consumption of the project and the assumed vehicle fleet mix.

Table 8 Estimated Project Annual Transportation Energy Consumption

Vehicle Type[1]	Percent of Vehicle Trips[2]	Annual Vehicle Miles Traveled[3]	Average Fuel Economy (miles/gallon)[4]	Total Annual Fuel Consumption (gallons)	Total Fuel Consumption (MBtu)[6]
Passenger Cars	59.9	577,820	24.0	24,076	2,643
Light/Medium Trucks	22.2	214,279	17.4	12,315	1,352
Heavy Trucks/Other	17.3	167,307	7.4	22.609	2,482
Motorcycles	0.6	5,807	43.9[5]	132	14
Total	**100.00**	**965,213**	**–**	**59,132**	**6,491**

[1] Vehicle classes provided in CalEEMod do not correspond exactly to vehicle classes in DOT fuel consumption data, except for motorcycles. Therefore, it was assumed that passenger cars correspond to the light-duty, short-base vehicle class, light/medium trucks correspond to the light-duty long-base vehicle class, and heavy trucks/other correspond to the single unit, 2-axle 6-tire or more class.

[2] Percent of vehicle trips from Table 4.4 "Fleet Mix" in Air Quality and Greenhouse Gas Study, CalEEMod output (Rincon Consultants, Inc., 2019a).

[3] Annual VMT found in Table 4.2 "Trip Summary Information" in Air Quality and Greenhouse Gas Study CalEEMod output (Rincon Consultants, Inc., 2019a).

[4] Average Fuel Economy: U.S. Department of Transportation 2018.

[5] U.S.Department of Transportation 2013

[6] CaRFG fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for vehicle classes specified above (CARB 2015).

Notes: Totals may not add up due to rounding.

As shown in Table 8, vehicles associated with operation of the project would consume approximately 59,132 gallons of fuel, or 6,491 MBtu, each year under the most conservative estimate. The fuel consumed by the project operation is assumed to be typical of other multi-family residential developments.

The operation of the project would also increase energy demand from greater electricity consumption at a currently undeveloped site. The project would not include natural gas connections and would run only off electricity. Electricity would be used for heating and cooling systems,

lighting, appliances, water use, and the overall operation of the residential units. Electricity consumption is based on electricity and natural gas CalEEMod outputs included in the Air Quality and Greenhouse Gas Study, which is based on baseline values determined through California Energy Commission (CEC) surveys and studies. Natural gas energy outputs were converted into the electrical units. Table 9 shows the estimated annual electricity use from operation of the project.

Table 9 Estimated Project Energy Use Compared to Utility Provider Sources

Form of Energy	Units	Annual Project-Related Energy Use	Utility Provider Energy Use
Electricity	GWh	0.335[1]	18,659.6[2]
Natural Gas	GWh	0.262[3]	–
Total		**0.597**	–

[1] Electricity Use provided in the CalEEMod output for the Air Quality and Greenhouse Gas Study (Rincon Consultants, Inc., 2019a)

[2] CEC 2017, http://ecdms.energy.ca.gov/elecbyutil.aspx.

[3] Natural Gas use provided in CalEEMod outputs for the Air Quality and Greenhouse Gas Study and was converted from kBTU to GWh.

After converting the estimated natural gas use from the CalEEMod outputs, the operation of the project would consume approximately 0.597 GWh of electricity per year (Rincon Consultants, Inc., 2019a). The project's energy demands would be served by SDGE, which provided 18,660 GWh of electricity in 2017; therefore, SDGE would have sufficient supplies to serve the project.

Furthermore, the project would comply with all standards set in California Building Code (CBC) Title 24, which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources during operation**.** California's Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) requires implementation of energy efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (CBC Title 24, Part 6) requires newly constructed buildings to meet energy performance standards set by the Energy Commission. As the name implies, these standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. For example, according to the CEC, residences built with the 2019 standards will use about seven percent less energy due to energy efficiency measures versus those built under the 2016 standards, or 53 percent less energy with rooftop solar, and nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018c). Furthermore, the project would further reduce its use of nonrenewable energy resources as the electricity generated by renewable resources provided by SCE continues to increase to comply with state requirements through Senate Bill 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.The proposed project is located adjacent to the San Marcos Civic Center, a branch of the San Marcos Library, bus stops, and the Sprinter commuter rail stop. Due to the location, the project would reduce the number of vehicle trips and miles used compared to other similar projects. Therefore, the operational energy use attributed from transportation fuel consumption would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. In conclusion, the construction of the project would be typical of similar projects and not result in the wasteful use of energy. The operation of the project would increase the consumption of fuel and electricity from

existing conditions of an undeveloped site. However, development would be in conformance with the applicable version of California Green Building Standards Code and the Building Energy Efficiency Standards. In addition, SDGE has sufficient supplies to serve the project. Therefore, the project would not result in wasteful, inefficient, or unnecessary use of energy resources and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

The City of San Marcos adopted a Climate Action Plan (CAP) in 2013 in order to reduce greenhouse gas emissions from City government operations and community activities. The plan includes a number of measures and strategies to achieve greenhouse gas reduction targets, including energy efficiency measures. Energy efficiency measures which relate to the project in the CAP include:

- **E-1 Energy Efficiency of Existing Buildings:** Facilitate voluntary energy assessments, retrofits, and retrocommissioning of existing residential and nonresidential buildings within San Marcos.
- **E-2 Energy Efficient New Construction:** Increase the efficient use of energy and conservation of available resources in the design and construction of new buildings.
- **E-3 Energy Efficiency Outreach and Incentives:** Increase energy efficiency and conservation by promoting existing incentive programs and providing targeted education and outreach.
- **E-4 Smart Meters:** Increase the community's awareness, understanding, and use of realtime energy consumption data and pricing available through SDGE's Smart Meter program.
- **E-5 On-Site Small-Scale Solar Energy:** Facilitate the installation and use of on-site small-scale solar energy systems, such as solar PV systems and solar water heaters.

The project would not conflict with the City's outreach or promotion efforts for energy efficiency in new construction. The project would also comply with all City requirements for energy efficiency and with the latest Title 24 standards. The City of San Marcos also has energy efficiency policies in the General Plan. Energy related policies that are applicable to the project include:

- **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.
- **Policy COS-4.9:** Encourage use and retrofitting of existing buildings under Title 24 of the California Building Energy Code.

The project would be constructed in accordance with Title 24 of the California Building and Energy Code and would run entirely off electricity, which is increasingly generated from renewable resources. The project would not conflict or inhibit implementation of energy conservation policies or measures in the General Plan. Therefore, the project would not conflict or obstruct a local plan for renewable energy or energy efficiency and there would be no impacts.

NO IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	☐	☐	☐	■
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■

a.1. Would the project 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 not located in an Alquist-Priolo Earthquake Fault Zone (California Department of Conservation, 2015). No active or potentially active faults are located in the City (General Plan, 2012). Therefore, the risk associated exposing people or structures to risk of ground rupture of a known earthquake fault is low, and there would be no impact and further analysis of this issue is not warranted.

NO IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

San Marcos has experienced minor to moderate ground shaking events historically. The City has a lower potential for strong ground shaking than other areas in Southern California. As shown in Figure 6-2 of the San Marcos General Plan Safety Element, there are a number of regional faults that surround the City and are capable of producing severe earthquakes of magnitude 6.0 or greater. These regional faults are:

- Elsinore Fault Zone
- San Jacinto Fault Zone
- Rose Canyon Fault Zone
- San Joaquin Hills Blind Thrust
- Carlsbad Blind Thrust
- Oceanside Blind Thrust

General seismic risk is considered low in San Marcos, with higher seismic activity and risk concentrated in the fault areas to the east, west, and north. The Rose Canyon Fault is considered the greatest potential threat to San Marcos. This fault and the other Southern California faults are potential generators of ground shaking in the project area. Conformance with the California Building Code (CBC) as recommended in the Geotechnical Report by GeoSoils, Inc., would reduce impacts related to ground shaking to a less than significant level. Therefore, further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Liquefaction susceptibility is based on the areas risk to severe ground shaking, the height of groundwater, and the density and type of soil deposits. There is limited information on the overall groundwater depth throughout the City of San Marcos. Previous studies indicate that liquefaction areas in the City are a concern in the areas adjacent to San Marcos Creek and Twin Oaks Valley channel. According to Figure 6-1 of the Safety Element in the General Plan, the project site is not located in an area prone to liquefaction. The project site is also not located in a liquefaction zone according to the Alquist-Priolo Earthquake Fault Zoning Map (California Department of Conservation, 2018b). A preliminary geotechnical investigation by GeoSoils, Inc. encountered

groundwater as localized seepage within bedrock at about 5 to 17 feet below existing grades. It has been determined that liquefaction hazards would not affect the development and impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The project is not located within an area susceptible to landslides according to Figure 6-1 of the General Plan Safety Element or from maps produced by the California Department of Conservation. The Geotechnical Report concluded that landslides and other adverse geologic features were not noted during review and surveys of the site and are not anticipated to significantly affect the development of the site (GeoSoils, Inc., 2018). The risk associated with landslide hazards is low. Impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

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

The project is proposed on a lot with relatively steep to gentle, south-facing slopes, with slopes as steep as 1:1 (horizontal:vertical). Activities during the construction phase of the project, including excavation and grading, have the potential to cause a loss of topsoil and soil erosion. During construction, short-term erosion impacts would be reduced by compliance with the National Pollutant Discharge Elimination System (NPDES) permit, the implementation of a stormwater pollution prevention plan (SWPPP), an erosion control plan, and the implementation of required BMPs. Compliance with these requirements would reduce impacts to soil erosion and a loss of top soil to a less than significant level and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Unstable soils include expansive, compressible, erodible, corrosive, or collapsible soils. Expansive soils are associated with soils, alluvium, and bedrock formations that contain minerals susceptible to expansion under wet conditions and contracting under dry conditions. According to the General Plan Safety Element, the likely locations for collapsible soils are in the San Marcos Creek Valley and Twin Oaks Valley Drainage. The project is located nearby these drainages. According to the Geotechnical Report, the earth materials on the project site consist of undocumented fill, topsoil, collivium, and granitic bedrock (GeoSoils, Inc., 2018). These materials consist of silty sands and sand with variable amount of rock fragments, and are generally considered non-detrimentally expansive.

With adherence to recommendations in the geotechnical report, impacts from unstable soils and placing structures on expansive soils would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project would connect to the existing sewer system and not use septic tanks or another alternative wastewater disposal system. Therefore, there is no impact to soils from proposed septic tanks or wastewater. Further analysis of this issue is not warranted.

NO IMPACT

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

Paleontological resources are not known to be present on-site, as identified in the General Plan. According to the Geologic Map of the Oceanside 30' x 60' Quadrangle, the project is located in an area underlain by tonalite (California Department of Conservation 2007). Tonalite is a plutonic igneous rock which has no paleontological resource potential due to its formation from molten rock deep below the earth's surface. Due to the geologic formation under the project site, the project would not directly or indirectly impact a unique paleontological resource or geologic feature and there would be no impacts.

NO IMPACT

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Climate Change Background

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHGs). GHGs contribute to the "greenhouse effect," which is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature.

GHGs occur naturally and from human activities. Human activities that produce GHGs are the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation); methane from landfill wastes and raising livestock; deforestation activities; and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). Emissions of GHGs affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way in which the Earth absorbs gases from the atmosphere. Potential impacts of global climate change in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CEC March 2009).

Regulations

In 2005, the Governor issued Executive Order (EO) S-3-05, which identifies Statewide GHG emission reduction targets of reducing GHG emissions to 1990 levels by 2020 and reducing GHG emissions to 80 percent below 1990 levels by 2050 in order to achieve long-term climate stabilization. Senate Bill

(SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT of CO_2e. The Scoping Plan was approved by the CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan. In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 statewide goals.

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, the CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

Senate Bill 32 became effective on January 1, 2017 and requires the ARB to develop technologically feasible and cost effective regulations to achieve the targeted 40 percent GHG emission reduction. The 2017 Scoping Plan was adopted by ARB on December 14, 2017. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050 (CARB 2017b). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

In 2018, the Governor expanded upon EO S-3-05 by issuing EO S-55-18 and creating a statewide goal of carbon neutrality by 2045. EO S-55-18 identifies the CARB as the lead agency to develop a framework for implementation and progress-tracking toward this goal.

Greenhouse Gas Analysis

The City of San Marcos has an adopted CAP with a 2020 target that is consistent with AB 32 (establishes a target of statewide GHG emissions to be reduced to 1990 levels by the year 2020). Thus, the adopted CAP qualifies as GHG reduction plan under CEQA for the period up to 2020.

However, the proposed project has an operational year or horizon year of 2021 and as such, the project level CEQA tiering or analysis should be completed using a GHG reduction plan that consistent with the adopted 2030 statewide target in SB 32. The adopted San Marcos CAP was completed prior to the adoption of SB 32 (establishes a statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030) and includes a 2030 target that is not consistent with the statewide 2030 target. Therefore, the CAP does not qualify as a GHG reduction plan for projects with horizon years beyond 2020 and the Consistency Checklist or 2030 project-level GHG efficiency threshold cannot be use for CEQA analysis.

Because the proposed project has an operational year (horizon year) after 2020, it is evaluated for consistency with the statewide SB 32 State targets. Based on current industry best practice, the project was evaluated by comparing the project's calculated construction and operational emissions against a project-specific efficiency threshold derived from the SB 32 target (Rincon Consultants, Inc., 2019a).

Greenhouse Gas Efficiency Thresholds

A project-specific efficiency threshold can be calculated by dividing statewide GHG emissions by the sum of statewide jobs and residents. However, not all statewide emission sources are present in the project area (e.g., mining). Accordingly, the Air Quality and Greenhouse Gas Study modified the 2030 statewide inventory target with substantial evidence provided to establish a locally-appropriate, evidence-based, project-specific threshold consistent with California's SB 32 targets.

To develop this threshold, the local planning area was first evaluated to determine emissions sectors that are present and will be directly affected by potential land-use changes. After removing Agricultural, Industrial, and Cap and Trade emissions, the remaining emissions sectors with sources within the San Marcos planning area are then summed to create a locally-appropriate emissions total. This locally-appropriate emissions total is divided by the statewide 2030 service person population to determine a locally-appropriate, project-level threshold of 3.2 MT of CO_2e per service person that is consistent with SB 32 targets (Rincon Consultants, Inc., 2019a).

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction of the project would generate temporary GHG emissions primarily as a result of operation of construction equipment on-site, as well as from vehicles transporting construction workers to and from the project site and heavy trucks to export earth materials on-site. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling.

Emissions associated with the construction period were estimated using the CalEEMod v. 2016.3.2 based on the projected maximum amount of equipment that would be used on-site at any given time during construction activities. The construction GHG emissions associated with the project are shown in Table 10 below. Construction emissions would generate an estimated 629.4 MT of CO_2e per year, or 21.0 MT of CO_2e per year when amortized over a 30-year period.

Table 10 Estimated Construction GHG Emissions

Year	Project Emissions (MT/yr CO_2e)
Total	629.4
Total Amortized over 30 Years	21.0

Calculations were taken from the CalEEMod results in the Air Quality and Greenhouse Gas Study.

Operational Emissions

Project operation would generate GHG emissions as a result of energy use, area emissions from landscaping equipment and consumer products, waste generation and water consumption, and from mobile sources from vehicle trips generated by the project. Table 11 combines the amortized construction, operational, and mobile GHG emissions associated with the project.

Table 11 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT of CO_2e)
Construction	21.0
Operational	
Area	0.8
Energy	149.6
Solid Waste	15.5
Water	28.6
Mobile	
CO_2 and CH_4	392.3
N_2O	19.4
Total Project Emissions	**627.2**

Source: Air Quality and Greenhouse Gas Study

The overall operational emissions of the project would be approximately 627.2 MT of CO_2e per year. The project's service population is based on the 2017 average household rate for the City of San Marcos of 3.11 persons per household (US Census Bureau 2017). Using this rate, the project would add approximately 209 residents (3.11 x 67 dwelling units = 209) to the project site. The project does not propose employment opportunities. Therefore, the project's service population is 209. Table 12 details the breakdown of the project's per service population emissions in relation to SB 32 thresholds.

Table 12 Project GHG Emissions Consistency Evaluation

	Metric
Project Service Population	209
Project Total Annual Emissions (MT CO_2e/year)	627.2
Project Annual Emissions per Service Person (MT CO_2e/SP/year)	**3.0**
SB 32 Efficiency Threshold (MT CO_2e/SP/year)	3.2
Exceed SB 32 Threshold?	No

Source: Air Quality and Greenhouse Gas Study

The project would generate 3.0 MT CO_2e per capita of its service population. As the SB 32 project specific threshold of 3.2 MT CO_2e would not be exceeded, impacts would be less than significant. Therefore, further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As mentioned above, the project would add 209 additional people to the City. As of July 2017, the U.S. Census estimates San Marcos's population at 96,198 (U.S. Census Bureau 2017). The San Diego Association of Governments 2050 Regional Transportation Plan and Sustainable Community Strategy estimates the population of San Marcos to reach 103,238 by 2035, which would be an increase of 7,040 people (SANDAG 2011b). The 209 people created by the proposed project would represent three percent of the projected growth, would not exceed plans for projected growth in the area.

As mentioned above, the San Marcos CAP qualifies as an AB 32 GHG reduction plan under CEQA and can be used to evaluate projects with horizon years prior to 2020. However, the CAP is not consistent with SB 32 and therefore cannot be used to evaluate GHG emissions associated for projects with a horizon year that extends past 2020. Therefore, compliance with thresholds specific with SB 32 targets would be applicable for this project. The project would not exceed established per service population thresholds and would be consistent with applicable policies and regulations related to reducing greenhouse gas emissions.

The project also consistent with and promotes policies in SANDAG's 2050 RTP/SCS. Table 13 lists the applicable policies and how the project is consistent.

Table 13 Consistency with SANDAG's 2050 RTP/SCS

RTP/SCS Policy	Project Consistency
Provide convenient travel choices including transit, intercity and high speed trains, driving, ridesharing, walking, and biking	The project is located conveniently adjacent to transit stops and train stations as well as across E. Mission Road from the San Marcos Library and Civic Center. This provides convenient transportation choices.
Increase the use of transit, ridesharing, walking and biking in major corridors and communities	The proximity of the project to the Civic Center, transit stops, and a train station will increase the use of alternative modes of transportation.
Ensure access to jobs, services, and recreation for populations with fewer transportation choices	The project is across E. Mission Road for the Civic Center and about 0.7 miles north of CSU San Marcos, providing easy access to job centers, education, and recreational areas.
Reduce greenhouse gas emission from vehicles and continue to improve air quality in the region	The project would promote the use of alternative modes of transportation due to its location, which would reduce greenhouse gas emissions.

With the adoption of EO S-55-18, the State now has a policy and goal of carbon neutrality for the State by 2045. Currently the EO is applicable to state agencies, and while quantitative long-term emissions analysis may be speculative at this point, the project is designed as an all-electric and EV-ready community to fully utilize the existing legislation for carbon intensity reduction in utility electricity mix portfolios. As SB 100 requires electricity providers to reduce the emissions of provided electricity to zero-GHG emissions by 2045, Mission 316 development emissions will be

reduced in tandem. Therefore, under existing legislation, long term emissions of the Mission 316 development are expected to continually decrease relative to the emissions at build-out.

Since the project would not exceed growth projections or established GHG thresholds and is consistent with applicable policies in the 2050 RTP/SCS, there would be no impact and further analysis of this issue is not warranted.

NO IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	■
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	■	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction of the project would involve the temporary use and transport of hazardous materials used in the operation of required construction equipment. These materials include diesel fuel, lubricants, gasoline, adhesives, cleaning solutions, and chemical toilets. The materials would be transported to and within the project site for regular construction activities. The project, however, would comply with all pertinent federal, state, and City regulations, which regulate the control of these materials on-site and the disposal of them off-site. Compliance with applicable regulations would reduce potential impact to a less than significant level.

Operation of the residential development would not require the transport or disposal of hazardous materials, other than typical household and landscaping materials. These would be subject to federal and state regulations which would minimize the risk of hazardous materials release. The amount of these hazardous materials would not be substantial and would not pose a risk to the public or environment. Compliance with the applicable regulations of hazardous materials use, storage, and disposal during construction and operation of the project would reduce impacts to a less than significant level.

Based on the above, further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The nearest schools are San Marcos Elementary, 0.44 miles away, and California State University San Marcos, 0.54 miles away. Potential hazardous materials, such as paint products, lubricants, solvents, gasoline, and cleaning products, would be used and stored on-site during the construction of the proposed project. However, due to the limited quantities of these materials to be used by the project, they are not considered hazardous to the public at large. Also, the transport, use, and storage of hazardous materials during the construction of the project would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22.

The operation of the project would not emit or handle hazardous materials. Given that there are no schools located within 0.25 miles of the project site and that construction or operation of the project would not emit hazardous materials, there would be no potential impact on local schools. Further analysis of this issue is not warranted.

NO IMPACT

d. Would the project be located on a site included on a list of hazardous material 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?

A search of the Department of Toxic Substances EnviroStor database and the State Water Board GeoTracker database concluded that the project site is not located on any known hazardous materials site. Five sites are located nearby the project site. These are detailed in Table 14.

Table 14 Hazardous Materials Sites

Project Type	Name	Location	Status
LUST Cleanup Site	US Post Office	420 N. Twin Oaks Valley Road	Completed- Case Closed
LUST Cleanup Site	Tri-M-Co	528 E. Mission Road	Completed- Case Closed
School	North County Regional Learning Center	Mission Road & Pico Avenue	No further action as of 12/12/2005
School	Proposed Foothill High School Southeast Site	140 W. San Marcos Blvd.	No action required as of 7/14/2011
School	Future Foothill High School	West San Marcos Blvd	No further action as of 10/15/2009

Source: GeoTracker Database, 2015; EnviroStor, 2018

The nearby sites have been closed and/or require no further action and present no potential hazard to the project. Because there were no hazardous material sites on or near the property, there would be no impact. Further analysis of this issue is not warranted.

NO IMPACT

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

The airport nearest to the project site is the McClellan-Palomar Airport, which is about 6.3 miles west of the project site. The site is located within the McClellan-Palomar Airport Land Use Compatibility Plan, which contains policies and guidelines to create compatible development and land uses adjacent to the airport, and to protect the public health, safety, and welfare. Policies in the Compatibility Plan are based on the project airport activity levels associated with the airport and addresses noise, safety, airspace protection, and overflight compatibility factors with proposed projects.

According to the McClellan-Palomar Airport Compatibility Plan, the site is located within Review Area 2, which limits the height of structures in higher elevated areas (SD County Airport Land Use Commission 2010). The proposed project would not be on high terrain and the proposed heights of the buildings do not conflict with the Compatibility Plan regulations. While the project is not located within the overflight notification area, since the project is located in Review Area 2, it would still be required to record overflight notification documents per the Compatibility Plan and Chapter 20.265 of the City's Municipal Code (City of San Marcos, 2012). This would serve to notify potential residents of common annoyances associated with the proximity to the Airport, such as noise, vibration, and overflights. The project would not exceed height limits and would comply with

nuisance notification requirements. Impacts related to airport hazards would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City of San Marcos adopted the Unified San Diego County Emergency Services Organization Emergency Operations Plan in 2010. Official evacuation routes have not been established. However, emergency communication systems will provide information on event-specific evacuation plans and routes. There are several main thoroughfares that would serve as primary evacuation corridors in most cases, which include Mission Road which borders the project site. The project site is not located in recommended fire evacuation routes in the San Marcos Fire Department Community Wildfire Protection Plan (SMFD 2007).

The project does not include structures that would impair or block any established evacuation routes. The project would generate increased traffic from the proposed residences, but the increase would be minor in nature and not impact the evacuation routes. The project would comply with all applicable City standards for emergency access in the development, and the project would be reviewed by the San Marcos Fire Department and comply with all design recommendations. Therefore, impacts to emergency evacuation routes and emergency response would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project site is located in a Moderate Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection, and according to Figure 6-4 of the General Plan, the project site is not located in an area at risk of wildfire (Cal Fire 2009, San Marcos 2013). The project site is located adjacent to vegetated, undeveloped land, which could pose a risk of fire to the project. The project would be designed and constructed according to California Building and Fire Code standards, including installing fire sprinklers, and the project would be reviewed and approved by the San Marcos Fire Department. The project will prepare a Fire Prevention Plan as well as implement and maintain a fuel modification zone, approved by the Fire Marshal, to separate the residences from nearby vegetation. With the preparation of a Fire Prevention Plan, the incorporation of the fuel modification zone, and compliance with building standards, the project would not expose people or structures to a significant wildfire risk. Therefore impacts would be less than significant and no further analysis is warranted.

LESS THAN SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	☐	■
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	■
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	■

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Potential water quality impacts associated with the project include short-term construction impacts from erosion and sedimentation as well as potential hazardous material discharge from construction equipment and materials. Because the project would involve development and ground disturbance of over one acre, it would be required to comply with regulations established under the National Pollution Discharge Elimination System (NPDES) for construction stormwater discharges. The Construction General Permit, General Permit Order 2009-0009-DWQ, would also require the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The project would be considered a high priority project with the City of San Marcos, which will require a SWPPP and Erosion and Sediment Control Plan as a part of the grading plans for the project. The SWPPP for the Construction General Permit can be used for the City, but the project will also meet the minimum BMP requirements for the City that are detailed Construction Best Management Practices Manual. These would reduce potential construction impacts to water quality and discharge to a less than significant level.

Post construction and operation of the project would comply with Chapter 14.15 of the San Marcos Municipal Code, which requires development of land to prevent, to the maximum extent possible, pollutants from entering the stormwater conveyance system in the City. The project would also comply with requirements of the San Diego Regional Water Quality Control Board (SDRWQCB) Municipal Separate Stormwater Permit, Order No. R9-2013-0001. The City of San Marcos developed a Jurisdictional Urban Runoff Management Program (JURMP) to comply with this Order and to reduce pollution in urban runoff within the City. Under Order R9-2013-0001, the project would be considered a priority project and will require additional treatment control BMPs under Provision E.3.b (City of San Marcos 2008). The project would comply with all necessary provisions and BMPs, along with preparing a SWPPP.

With compliance with all applicable regulations and measures, the project would not violate water quality standards or waste discharge requirements. Impacts would be less than significant and further analysis of these issues is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

San Marco's water supply is provided primarily by Vallecitos Water District (VWD), which receives all of its supply from the San Diego County Water Authority (SDCWA). SDCWA obtained most of its water from the State Water Project (SWP) and from the Colorado River via the Colorado River Aqueduct. The project and area are located within the San Marcos Valley Groundwater Basin. The basin occupies and area of 2,130 acres (3.3 square miles) (California Department of Water Resources 2004). VWD currently does not obtain water from the groundwater basin, as it receives its water from SDCWA, which is not reliant on imported water sources. VWD conducted a groundwater feasibility analysis in 1996 which concluded the storage capacity would not produce groundwater at an economically viable rate, even in the short term (VWD 2015). Therefore, there would be no impact to groundwater depletion as the project would not utilize the groundwater as a potable water source.

The project is located on a currently undeveloped lot with no impervious surfaces within the San Marcos Valley Groundwater Basin. Construction of the project would increase impervious surfaces with the construction of 67 housing units, parking lots and roads, and walkways to 2.41 acres which could impact groundwater recharge and supplies. The project would be required to implement BMPs and the required NPDES permit, which would reduce the impacts of the increased impervious surfaces. The project would comply with all applicable regulations and policies, and would not utilize groundwater for construction or operation; therefore, impacts to groundwater would be less than significant and further analysis is not warranted.

LESS THAN SIGNIFICANT IMPACT

c.i. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.ii. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

There are no streams or rivers present on the project site, but the site is located nearby the Twin Oaks Valley and San Marcos Creeks. As mentioned above, the project would increase the imperious surfaces on-site, creating potential impacts to the nearby streams and drainage patterns due to increased stormwater runoff. The project, however, will be required to comply with a Construction General Permit, which will entail an Erosion Control Plan, SWPPP, and compliance with JURMP. During the construction phase, the project will implement BMPs to for erosion and siltation prevention. The project would be considered a priority project and will be designed to minimize erosion and siltation through soil stabilization, sediment control, and erosion control BMPs outlined in the City of San Marcos's Construction Urban Runoff Requirements Manual (City of San Marcos 2008). The project would, therefore, have a less than significant impact on drainage patterns through increased erosion and siltation.

All development projects in San Marcos are required to meet minimum requirements of incorporating site design and source control BMPs. Source control BMPs, as mentioned above, would reduce erosion and siltation impacts on local drainage patterns. The project will also implement site design BMPs, or low impact development, to mimic the hydrology of the site before the development of the proposed project. These measures capture, filter, evaporate, detain, and/or infiltrate runoff within the development area. Priority project shall also control post-development peak storm water runoff discharge rates and velocity to maintain or reduce pre-development downstream erosion (JURMP, 2008). These measures will reduce the project's impact on surface water runoff to a less than significant level.

Based on the above, further analysis of these issues is not warranted.

LESS THAN SIGNIFICANT IMPACT

c.iii. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As discussed previously, the project would implement BMPs to accommodate project runoff volumes and rates with those prior to project development. This would reduce any potential impacts on stormwater system capacity. The project would also comply with requirements of MS4 Permit No. R9-2013-0001, the JURMP, and Chapter 14.15 of the San Marcos Municipal Code, which would prevent pollutants, to the maximum extent possible, from entering the stormwater conveyance system. Compliance with these regulations would reduce project impacts related to runoff exceeding system capacity to a less than significant level. Further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

c.iv. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede of redirect flood flows?

The project site is not located in a flood hazard area according to FEMA Flood Insurance Rate Map 06073C0793G (U.S. Department of Homeland Security 2012). The project is located in Zone X, area of minimal flood hazard. Therefore, the project would not place development within a flood hazard area which would impede or redirect flood flows. There would be no impact and further analysis of these issues is not warranted.

NO IMPACT

d. Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The City is located downstream of various dams and reservoirs which create various inundation hazards in parts of the City. According to San Marcos 2013 General Plan Safety Element, there are four dams and ten reservoirs in the planning area:

- South Lake
- Discovery Lake
- San Marcos Lake
- Jack's Pond
- Palomar Reservoir
- Richland #1 Reservoir
- Meadowlark #1 Reservoir
- Meadowlark #2 Reservoir
- School House Reservoir
- Sage Canyon Reservoir
- Via Vera Cruz Reservoir
- Double Peak Reservoir

- Palomar Estates Reservoir
- Simmons Park Reservoir

According to Figure 6-3 FEMA Flood Hazards and Reservoir/Dam Inundation Zones in the General Plan, the project is not located within an inundation zone from the previously listed dams and reservoirs. Therefore, there would be no impact related to risk associated with failure of a levee or dam and further analysis is not warranted.

NO IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed under Impact A, the project would comply with all applicable regulations and measures to reduce potential water quality impacts during construction and operations of the project. Therefore, the project would not conflict with the implementation of The SDRWQCB Basin Plan, which establishes water quality objectives and implementation measures.

The project site is located in the San Marcos Valley Groundwater Basin (9-032). The Basin is a "Very Low" basin priority under the California Department of Water Resources Final 2018 Basin Prioritization (California Department of Water Resources 2019). Therefore, it is not required to prepare a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act. Therefore, the project would not impact a sustainable groundwater management plan. There would be no impacts.

NO IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

a. Would the project physically divide an established community?

The proposed project outlines a plan for a residential development on currently undeveloped property, surrounded by existing development including commercial, residential, light industrial, and civic/public facility uses. The proposed update to the Mission 316 Specific Plan would specify a circulation plan that incorporates one circulation road originating from East Mission Road, that would share an access point with Mission 316 East, and connecting to a second access point on Woodard Street. Internal alleyways would be constructed to connect the multi-family dwelling units to the proposed circulation road. The circulation road would not divide an existing community or negatively affect the physical structure of the surrounding neighborhoods. There would be no impact and further analysis of this issue is not warranted.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project site is located in the Richland Neighborhood of the City of San Marcos. The City's General Plan designates the site as a Specific Plan Area (SPA), and specifically it is located within the existing Heart of the City and Richmar Specific Plan areas. The project includes a Specific Plan Amendment to the Mission 316 Specific Plan in order to add the project site within the Specific Plan boundaries and to provide for additional standards and regulations for the design and construction of the proposed project. If the project is approved, the proposed development, density, and standards would be consistent with the City's General Plan and applicable land use policies. The project would also comply with all applicable regulations in the City's municipal code. Therefore, impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

The project site and surrounding properties are part of the overall urbanized area within the City of San Marcos. According to the Conservation Open Space Element of the General Plan, the project site is located in Mineral Resource Zone 3 and there are no known mineral resources on-site. In addition, there are no suitable sources of mineral resources for construction materials within the City of San Marcos (San Marcos 2013). Therefore, the project would not have an impact on any known mineral resource and no impact would occur.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	■	□	□	□
b. Generation of excessive groundborne vibration or groundborne noise levels?	□	□	■	□
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	□	■

Noise is unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). Because of the way the human ear works, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources (such as construction equipment). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance, while noise from a point source typically attenuates at about 6 dBA per doubling of distance. Noise levels may also be reduced by the introduction of intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm that breaks the line-of-sight reduces noise levels by 5 to 10 dBA. The construction style for new buildings in California generally provides a reduction of exterior-to-interior noise levels of about 30 dBA with closed windows (Federal Highway Administration [FHWA] 2006).

The Community Noise Equivalent Level (CNEL) is the 24 hour A-weighted average for sound, with corrections or penalties for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7:00 PM and 10:00 PM and an addition of 10 decibels to sound levels at nighttime hours between 10:00 PM and 7:00 AM. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sounds appear louder.

The City of San Marcos General Plan Noise Element provides a description of existing noise levels and sources, and incorporates comprehensive goals and policies. The Noise Element includes several policies on noise and acceptable noise levels. The City has an established land use compatibility exterior noise exposure threshold of 65 dBA CNEL for multi-family housing and housing in mixed-use areas (City of San Marcos 2013).

To implement the City's noise policies, the City adopted a Noise Ordinance. San Marcos's Noise Ordinance (San Marcos Municipal Code (SMMC) Chapter 10.24.010) which states that it is the City's policy to regulate and control annoying noise levels from all sources, and prohibits loud, unnecessary or unusual noise that unreasonably disturbs the peace and quiet of any residential neighborhood or that causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

SMMC Chapter 17.32.180 states that grading, extraction, and construction activities are allowed between 7:00 AM to 4:30 PM, Monday through Friday. Grading, extraction, or construction activities are not permitted in the City on weekends or holidays. The City's municipal code does not set noise limits on construction activities, though the City has commonly utilized the County of San Diego's Noise Ordinance construction noise threshold of 75 dBA.

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. The General Plan Noise Element identified residences, hospitals, convalescent and day care facilities, schools, and libraries as sensitive land uses. The proposed residential units are considered a noise sensitive land use, and are surrounded by existing noise sensitive uses such as the single-family residences to the north.

Ldn Consulting prepared a noise study for the project in September 2018. Information from this technical report is used herein.

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

On-site noise-generating activities associated with the project would include short-term construction and long-term operational noise. The project would generate off-site traffic noise along adjacent roadways (primarily along E. Mission Road and Woodward Street). These potential effects are analyzed below.

Construction Noise

Temporary construction noise would be generated from construction activities on-site and traffic noise from construction vehicles. Nearby noise-sensitive land uses include single-family residences located 100 feet and more from the project site. Noise impacts are a function of the type of activity being undertaken and the distance to the receptor location. Construction activity would commence in December 2019 and would occur over a period of approximately 20 months.

Calculations of the expected construction noise impacts were completed using a point-source noise prediction model. 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.

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. No pile driving is anticipated as part of the project. However, some blasting is anticipated and a rock crusher is needed during project construction due to the properties of the bedrock on the project site. Rock crushing is anticipated to occur for several weeks once the material is required, and would be located approximately 500 feet from the nearest existing residence in the southwestern portion of the project site in order to maximize the distance from adjacent residential uses. Rock crushing and blasting activities would be completed separately from grading activities, and therefore, these activities were separately analyzed.

Grading Activities

Grading activities would consist of the preparation of internal roadways, parking and the finished pads. The grading equipment would be spread out over the project site from distances near the property line adjacent to the nearest sensitive receptor (approximately 100 feet north) to distances of 500 feet or more away. Based on the site plan, the majority of the grading operations will occur more than 300 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 300 feet.

Table 15 shows the noise levels generated from construction activities at 50 feet from the noise source and the cumulative noise level at an average distance of 150 feet over the amount of time the equipment would operate during a normal work day (duty-cycle).

Table 15 Construction Noise Levels

Construction Equipment	Quantity	Source Level at 50 ft (dBA)	Duty Cycle (hours/day)	Cumulative Noise Level at 50 ft (dBA)
Dozer – D8	1	74	8	74.0
Dozer – D6	1	74	6	72.8
Dozer – 450	1	74	6	72.8
Scraper – 621G	3	75	8	79.8
Wheel Loader – 972G	1	73	8	73.0
Excavator – 336E	1	72	8	72.0
Compactor – 815B	1	74	6	72.8
Grader – 160M	1	73	4	70.0
Grader – 14M	1	73	8	73.0
Backhoe	1	72	4	69.0
Water Truck	1	70	8	70.0
Cumulative Levels at 50 feet				84.2
Average Distance to Property Line (feet)				150.0
Noise Reduction Due to Distance				-9.6
Nearest Property Line Noise Level				74.6

Source: Ldn Consulting 2018.

As shown in Table 15, construction noise at the nearest property line is estimated at 74.6 dBA. This noise level would comply with the 75 dBA Leq standard average over 8 hours at the property lines.

Rock Crusher

The project may utilize a Thunderbird Hazemag Impact Crushing Plant Model CP300 rock crusher, or equivalent as proposed by the applicant. Use of the rock crusher is limited to the hours of 7:00AM to and 4:30PM, Monday through Friday. Rock crushing is not allowed on weekends or holidays. According to the project applicant, rock crushing is anticipated to occur for several weeks once the material is required. The rock crusher would have a worst case 60 dBA noise contour extending 900 feet. The noise contours do not take into account any shielding from topography, stockpiled materials or any barriers that may exist at the nearest residences.

The rock crushing equipment would be located in the southwestern corner of the proposed site, more than 500 feet from the nearest residence. 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 2018). In order to achieve the City's 60 dBA Leq standard, the rock crusher needs to be 900 feet from the nearest residence. The nearest residence to the proposed rock crusher

location is 576 feet. Table 16 shows the estimated noise level for the rock crusher from the nearest sensitive receptor.

Table 16 Rock Crushing Noise Levels

Construction Equipment	Quantity	Source Level at 50 ft (dBA)	Duty Cycle (hours/day)	Cumulative Noise Level at 50 ft (dBA)
Thunderbird Hazemag #CP300	1	86	8	86.0
Distance to Sensitive Use (feet)				576.0
Noise Reduction Due to Distance				-22.1
Property Line Noise Level				**63.9**

Source: Ldn Consulting 2018

As shown in Table 16, noise generated by the rock crusher would exceed the City's 60 dBA Leq rock crusher standard. Therefore, construction noise impacts may be potentially significant, and will be further analyzed in an EIR.

Operational Noise

The project would construct new multi-family residential buildings on the project site with driveways between the proposed buildings to access garages, an outdoor recreational area for residents, and landscaping throughout the site. Existing uses near the project site may periodically be subject to noises associated with operation of the project. The closest noise sensitive receptors are residences located approximately 100 feet north of the project site boundary. The proposed project would also be a sensitive use upon completion.

On-site Noise Sources

The proposed project would introduce new residential development on the project site. Noise that is typical of such development include conversations, music, noise associated with rooftop ventilation and heating systems, and noise from people using outdoor spaces such as patios, balconies, and the passive recreational area.

The proposed two-car garages would be enclosed at the ground floor level of each residential unit. Therefore, noise associated with vehicle parking and lot circulation would not be audible at nearby noise-sensitive receptors. Similarly, parking noise would not be audible by the proposed residential units based on the use of wall and floor-ceiling assemblies that have a sound transmission class (STC) of at least 40 to ensure interior noise environment does not exceed an hourly equivalent noise level of 45 dBA in occupied areas, per CALGreen standards (CALGreen Code 2016).

Rooftop ventilation and heating systems would be on-site noise generators. Noise from heating, ventilation and air conditioning (HVAC) equipment can reach 100 dBA at a distance of three feet without shielding (EPA 1971). This equipment usually has noise shielding cabinets placed on the roof or is located within mechanical equipment rooms. HVAC equipment noise would not be perceptible to nearby noise sensitive receptors if HVAC equipment would be placed in the interior of the proposed units (in the garage on the first floor), which is typical of multi-family residential development. If the HVAC equipment is placed on the roof with noise shielding, noise would be

reduced to no greater than 55 dBA Leq at 50 feet from the source (EPA 1971). Site plans indicate that the nearest rooftop of the proposed residential units would be approximately 200 feet southwest of the property line of the nearest sensitive receptor. At 200 feet, the distance from the proposed residential unit nearest to the property line of the nearest noise sensitive receptor, HVAC noise would be 43 dBA Leq. This would not exceed the City's exterior noise standard of 60 dBA Leq during the daytime or 50 dBA Leq during the evening for single-family residential uses adjacent to the project site.

Noise generated by residents would include conversations, music, and the use of outdoor spaces such as patios, balconies, and the passive recreational area. Conversational noise would be intermittent, occurring only when people are using the outdoor spaces. Such noise levels would be imperceptible and would not exceed the City's exterior noise standard of 65 dBA Leq during the daytime and 55 dBA Leq during the evening for multi-family residential uses. Furthermore, SMMC Chapter 10.24.010 prohibits loud, unnecessary or unusual noise that unreasonably disturbs the peace and quiet of any residential neighborhood or that causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. Noise sources associated with property maintenance activities and all portable blowers, lawnmowers, or similar devices would be limited to normal daytime hours and prohibited on holidays.

Because the project would be similar to the surrounding community, would not generate substantial noise increases above ambient noise conditions, and would comply with the SMMC, on-site noise sources would not expose adjacent noise-sensitive receptors to significant noise impacts. Noise levels from the project would not exceed existing ambient traffic noise along East Mission Road, which has an ambient 24-hour CNEL noise level of roughly 53 dBA CNEL (Ldn Consulting 2018). Therefore, the project's on-site operational noise would not substantially contribute to ambient noise and would have a less than significant impact. Further analysis of this issue is not warranted.

Off-site Traffic Noise

Primary noise sources in the vicinity of the project site originate from motor vehicle activities and traffic. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to areas sensitive to noise exposure. Vehicle trips associated with the project would permanently increase ambient noise from traffic on nearby street segments. For traffic-related noise, impacts would be significant if project-generated traffic results in exposure of sensitive receptors to unacceptable noise levels. Table 17 shows significance thresholds for increases in traffic related noise caused by the project.

Table 17 Significance of Changes in Operational Roadway Noise Exposure

Existing Noise Exposure (Ldn or Leq in dBA)	Noise Exposure Increase Threshold (Ldn or Leq in dBA)
45-50	7
50-55	5
55-60	3
60-65	2
65-75	1
75+	0

Source: FTA 2018

The Traffic Impact Analysis (TIA) prepared by Linscott, Law & Greenspan Engineers (LLG 2018) provides traffic volumes for the AM and PM peak hour for several roadways in the vicinity of the project site. The project is calculated to generate approximately 536 ADT with 43 AM peak hour trips (6 inbound/34 outbound) and 54 PM peak hour trips (38 inbound/16 outbound).

A noise exposure increase of 1 dBA or greater would result in a potentially significant traffic noise impact according to Table 17 since the combination of existing roadway and train activities generates noise levels between 66 dBA CNEL and 72 dBA CNEL. Table 18 summarizes the percent changes in daily traffic volumes on nearby roadway segments and the resulting estimated increase in noise levels.

Table 18 Projected Change in Daily Traffic

Street Segment	Existing ADT	Existing +Project ADT	Percent Increase in ADT	Noise Level Increase (dBA)
Woodward Street				
Mulberry Dr. to Borden Rd.	3,100	3,150	2%	<0.4
Vineyard Rd. to Mission St.	7,900	8,010	1%	<0.4
Vineyard Road				
Borden Rd. to Woodward St.	3,600	3,650	1%	<0.4
Mission Road				
Firebird Ln. to Woodward St.	15,100	15,130	<1%	<0.4
Woodward St. to Mulberry Dr.	23,500	23,660	<1%	<0.4
San Marcos Boulevard				
Twin Oaks Valley Rd. to Mission Rd.	16,800	16,800	No change	No Change
Twin Oaks Valley Road				
San Marcos Blvd. to SR-78 WB Ramps	36,100	36,340	1%	<0.4

Source: LLG 2018

As shown in Table 18, traffic noise due to the project would not increase by more than an estimated 0.4 dBA at any roadway segment or intersection. The estimated project traffic noise increase would not exceed the most conservative applicable noise exposure increase threshold of 1 dBA. Therefore, traffic noise impacts would be less than significant and further analysis of this issue is not warranted.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S. The City has not yet adopted any thresholds or regulations addressing vibration. The US Department of Transportation Federal Transit Administration (FTA) provides criteria for acceptable levels of groundborne vibration for various types of special buildings that are sensitive to vibration, which were used to analyze construction vibration impacts for the proposed project.

The FTA has set guidelines for evaluating human response to vibration, shown in Table 19. The FTA guidelines are based on the frequency of events as well as the receiving uses. The FTA standard of 85 VdB for infrequent vibration events applies as the vibration threshold for existing residential uses adjacent to the project site.

Table 19 Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Response
65 VdB	Approximate threshold of perception for many humans.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration tolerable only if there are an infrequent number of events per day.

[1] "Frequent events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional events" is defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent events" is defined as fewer than 30 vibration events of the same source per day.

Source: FTA 2018

The nearest vibration-sensitive uses are the residences located to the east of the project site, 100 feet or more from proposed construction. The vibration analysis assumed trucks would travel along with western portion of the project site at a minimum distance of 100 feet from vibration-sensitive land uses. Table 20 lists the average vibration levels that would be experienced at the nearest vibration-sensitive land uses to the east from temporary construction activities.

Table 20 Vibration Levels from Construction Activities (Residential Receptors)

	Approximate VdB	
Equipment	25 feet	100 feet
Small bulldozer	58	40
Jackhammer	79	61
Loaded trucks	86	68
Large bulldozer	87	69

Source: Ldn Consulting 2018

Vibration at the nearest receptors 100 feet from the project site would not exceed 85 VdB. Project construction would be temporary, occurring for approximately 20 months, and would be restricted to daytime hours in accordance with the City's Noise Ordinance. Vibration would not occur during recognized sleep hours for nearby residents and would not exceed 85 VdB. Residential uses are not typically associated with the generation of substantial vibration. Consequently, operation of the proposed project would not perceptibly increase groundborne vibration or groundborne noise on the project site above existing conditions. Therefore, vibration impacts generated from temporary project construction activities would be less than significant and further analysis of this issue is not warranted.

Blasting Vibration

Some rock blasting (blasting) would be necessary during project construction. The location, duration, and extent of blasting activities are undetermined at this time. The purpose of blasting is to sufficiently break the rock in order for it to be excavated and removed from the site, or to be crushed and reused as aggregate on site. To accomplish this, the blaster drills a pattern of boreholes distributed evenly throughout the rock to be shattered. These boreholes are then filled with a predetermined amount of explosives. These explosives release energy in the form of shock waves and high gas pressure. The energy confined in the rock shatters the surrounding rock, but a small amount of the gas pressure escapes into the atmosphere and produces noise. The force exerted on the rock causes the desired fracturing effect and at the same time, produces a shock wave. It is this shock wave, or ground vibration, that radiates out from the blast site and can be felt by people or cause buildings to vibrate.

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 Director and an Operations Permit issued by the Fire Chief. Additional relevant sections of the City's Code for Blasting are provided below:

- 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 Director. Any resident or business receiving such notice may request of the Building Director that a notice of impending blasting be given by the blaster at the time of the 12 hour advance notice given to the Building Director. 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 Director 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.
- Blasting shall only be permitted between the hours of 9:00 a.m. and 4:00 p.m. 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 Director and Fire Chief.

Blasting for construction projects typically results in an average vibration velocity of about 100 VdB at 50 feet from the blast based on FTA findings. This is equivalent to a peak particle velocity of about 0.4 inch per second. The shortest distance between blasting activity and nearest sensitive receptor was assumed to be 100 feet. Given attenuation of vibration velocities with distance, the average intensity vibration velocity and peak particle velocity at the nearest existing residence would be about 91 VdB and 0.05 inch per second, respectively.

Based on the construction vibration damage criteria published by the FTA, the threshold vibration levels for damage to "Non-engineered timber and masonry buildings" are 94 VdB and 0.20 inch per second. Therefore, the effect of the blasting activity on nearby residential structures will not be significant. On the other hand, the human annoyance criterion of 85 VdB would be exceeded when blasting occurs within about 250 feet of existing residences. If blasting is required within 250 feet of existing residences, the potential annoyance may not be completely avoided, but can be minimized by following the City's blasting procedures as stated above and annoyances can be avoided with proper notice. Therefore, vibration impacts from blasting activities during project construction would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not located near an airport or airstrip. The nearest airport to the project site is the McClellan-Palomar Airport, which is approximately seven miles west of the project site in the City of Carlsbad. According to the McClellan-Palomar Airport Compatibility Plan, the site is located outside of the 60 dBA noise contour from airport activities (SD County Airport Land Use Commission 2010). Therefore, the proposed project would not expose persons residing or working in the project site to excessive noise levels associated with air traffic. There would be no impact and further analysis of this issue is not warranted.

NO IMPACT

14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned 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)?	☐	☐	■	☐
b. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Based on the California Department of Finance estimate for the City's average persons per household rate of 3.13, the proposed 67 dwelling units would generate an estimated 209 additional residents in the City (DOF 2018). According to demographic and socioeconomic estimates provided by the SANDAG Data Surfer database, the City of San Marcos is forecast to add 7,233 multi-family residential units by between 2012 and 2050, a 74 percent increase that would bring the overall multi-family residential inventory from 9,738 units to 16,971 units (SANDAG 2015). The 67 proposed units would account for 0.9 percent[5] of the additional multi-family residential units forecast by SANDAG and would not induce substantial population growth in the City.

To meet the regional housing needs, San Marcos has a remaining 2,452 housing units to build in the extremely- and very-low, low, and above moderate income categories (General Plan, 2012). The 67 housing units with this project have the potential to constitute 2.7 percent of the regional housing needs for the City. The project would not induce substantial population growth in the City as the project would not involve development that would substantially increase the population over what is expected. Therefore, impacts related to population would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

[5] Project residential units as percentage of SANDAG multi-family unit forecast for City of San Marcos (67 project units / [16,971 2050 units – 9,738 2012 units]) * 100 = 0.9 percent.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project site is vacant and does not contain residential units or people. Consequently, there would be no displacement of housing or people. There would be no impact and further analysis of these issues is not warranted.

NO IMPACT

15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	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:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	■	☐
	4 Parks?	☐	☐	■	☐
	5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection 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?

The San Marcos Fire Department (SMFD) responds to a 33 square mile area inclusive of about 95,000 existing residents. SMFD has an ISO Rating 2 and currently operates 4 Fire Stations, 4 Paramedic assessment engine companies, 1 Paramedic assessment truck company, 5 24-hour Paramedic transport ambulances, 1 Battalion Chief, and 1 on-call duty Chief (City of San Marcos 2018). SMFD average response time is seven minutes for 90 percent of the emergency calls received, and within 10 minutes for 90 percent of the non-emergency calls received (J. Nailon, personal communication. July 3, 2018). The project site is located approximately 0.26 miles from San Marcos Fire Station No. 1, at 180 W Mission Road, which would likely be the station serving the project site in an emergency. The additional estimated 209 residents of the proposed project would not exceed the capacity of the Fire Department to provide protective services. Additionally, the proposed 67-unit residential development is required to comply with all applicable fire codes and regulations stated by the State Fire Marshall, SMFD, and building codes.

The proposed development may minimally increase the demand for emergency services; however, the applicant will be required to submit and annex into the applicable Community Facilities District (CFD) or pay an in-lieu fee due to the proposed new development. Property owners within CFDs are taxed annually for their share to finance local public facilities and services. This would reduce impacts for the additional demand of fire services from the project. The 67-unit development would not exceed the capacity of SMFD to serve the region and provide fire protection services or create the need for new or expanded fire protection facilities. The impact would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The nearest police station is located at 182 Santar Place, approximately 0.73 miles from the project site. The City of San Marcos partners with the San Diego County Sheriff's Department to provide law enforcement and police services (San Diego County Sheriff's Department 2018). The San Diego County Sheriff's San Marcos Station serves about 100 square miles.

The project would increase demand for emergency police services with the construction of 67 residential units and the addition of approximately 209 residents. The project would be required to annex the site into a CFD for police services or make an in-lieu fee, which would offset the cost of increased services. The project is also located in a developed area that is already served and patrolled by the Sheriff. The proposed 67 units would not exceed the capacity of the Sheriff Department to provide police services to the area. With the payment of applicable taxes and/or fees, impacts would be less than significant and further analysis is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The project would be served by Richland Elementary (1.38 mi away), Woodland Park Middle School (1.65 mi away), and Mission Hills High (0.92 mi away) within the San Marcos Unified School District. Richland Elementary School has a design capacity of 454 students with an enrollment total of 767 students in 2018. Woodland Park Middle School has a design capacity of 1,260 with an enrollment total of 1,377 in 2018. Mission Hills High School has a design capacity of 2,551 with an enrollment total of 2,547 in 2018 (San Marcos Unified School District 2018). The proposed project would add 67 new units to the City. Using the student generation rate for multi-family residential units provided in the San Marcos Unified School District (SMUSD) of 0.3679 students per units, the project would add approximately 24 students.

As detailed above, the nearby schools, especially the elementary and middle school, are currently over capacity. As stated by the Facilities Planning and Development Department of the San Marcos Unified School District, the project applicant is required to pay the District's Residential Dwelling Unit Fee (currently $5.61 per square foot) (SMUSD 2019). This fee serves to offset any significant

impacts on school facilities and would reduce project's impacts on schools to a less than significant level. Further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The 2013 San Marcos General Plan sets a parkland standard of 5 acres per 1,000 residents. The City currently provides approximately 270 acres of developed parkland for 95,261 residents. The closest parks to the project site are Hollandia Park (0.89 mi away, 30 acres), Buelow Park (0.8 mi away, 1.9 acres), Connors Park (0.58 mi away, 3.63 acres), and a small neighborhood park (0.08 mi away) across the street. The 2013 City of San Marcos General Plan: Parks, Recreation, and Community Health Element describes 75 acres of future Community Park space, 2 acres of future Neighborhood Park space, 21 acres of future Mini-Park space, and 17 acres of future trails around the City. Approximately 357.79 acres of general future parkland has been allotted through the Planning Department, to create a total of 697.84 acres of parkland within the City of San Marcos (City of San Marcos 2013).

Although the existing parkland alone does not satisfy the City standard, the total planned and existing parkland will exceed the standard to satisfy over 139,568 residents. It is anticipated that the estimated increase of 209 residents may increase demand on local recreational facilities and other public facilities, but the net addition of residents represents a small impact on the overall population. The total planned and existing parkland will exceed the City standard of 5 acres of parkland per 1,000 residents. Furthermore, the minimal impact of increased demand would be offset through the payment of Public Facility Fees (PFF), as detailed in Section 17.44.060 of the San Marcos Municipal Code. A portion of the PFF fees for the proposed multi-family project would go to parks. Therefore, the proposed project would not necessitate the construction of new or expanded parks. Impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.5. 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 other public facilities?

The proposed project would be served by the San Marcos Branch of the San Diego County Library system, which is located at 2 Civic Center Drive (approximately 0.08 mi away). The San Marcos Branch Library is 15,394 feet and has a Community Meeting Room and 3D Printer, as well as being ADA accessible. San Marcos residents can also use the California State University San Marcos Library and the Palomar Community College Library for additional resources. The estimated net addition of 209 residents would incrementally increase the demand for library use, but would not require the construction or expansion of new library facilities. Additionally, the City of San Marcos Public Works Department facilitates maintenance of public parks, streets, traffic signals, and stormwater management initiatives (City of San Marcos 2018). Because the project site does not require the

construction of public roads, parks, or libraries, the impacts of the project would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	■	☐

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Reference Item 14.a.4 to see relevant park locations and current parkland guidelines for the City of San Marcos. Because San Marcos has over 357 acres of planned parkland to be constructed over the next several years, the City will exceed its standard of 5 acres per 1,000 residents by providing over 7 acres per 1,000 residents (City of San Marcos 2013). The estimated net addition of 209 residents would not cause a significant increase in use of parkland, so it would not contribute to the accelerated deterioration of parks or recreational facilities, nor would it require the construction or expansion of new park facilities. The project also proposes 33,889 square feet of common open space which includes gathering areas, barbeque counters, turf areas, and seating areas and shade structures. This will reduce the need for residents to utilize public recreation areas. *The project would also be subject to Public Facility Fees (PFF), as detailed in Section 17.44.060 of the San Marcos Municipal Code, to offset impacts from additional residents from the project.* Due to the amount of existing and proposed parkland in the City, the proposed common open space areas, and the payment of PFFs, the project would result in a less than significant impact and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

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17 Transportation

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

a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Linscott, Law, & Greenspan (LLG) prepared a Traffic Impact Analysis (TIA) for the project, dated July 31, 2018, to assess traffic impacts. The TIA evaluated potential project-related traffic impacts at six key intersections in the vicinity of the project site, plus the two proposed driveways:

- Mulberry Drive and Woodward Street
- Vineyard Road and Borden Road
- East San Marcos Boulevard-Woodward Street and East Mission Road
- Twin Oaks Valley Road and San Marcos Boulevard
- Twin Oaks Valley Road and SR-78 Westbound (WB) ramps
- Twin Oaks Valley Road and SR-78 Eastbound (EB) ramps
- Woodward Street and Project Driveway #1
- East Mission Road and Project Driveway #2

The project's trip generation was estimated using trip generation rates for condominiums outlined in SANDAG's *(Not so) Brief Guide of Vehicular Rates for the San Diego Region*. The project would generate an estimated 536 average daily trips with 43 AM peak hour trips and 54 PM peak hour trips (LLG, 2018). The project was analyzed based on its impacts to intersections, roadway segments, and freeways. Table 21 details the thresholds based on the San Diego Traffic Engineer's Coucil (SANTEC) guidelines, which were used to analyze the project's impacts on local roadways, consistent with the City of San Marcos policy.

Table 21 Significant Impact Threshold for Intersections

Level of Service with Project	Allowable Increase Due to Project Impacts					
	Freeways		Roadway Segments		Intersections Delay (sec)	Ramp Metering Delay (min)
	V/C	Speed (mph)	V/C	Speed (mph)		
D/E/F	0.01	1	0.02	1	2	2

V/C = Volume to Capacity Ratio

Speed = Arterial speed measured in miles per hour

Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters

Source: LLG 2018

Table 22 details the existing, existing plus project, and horizon year (2035) plus project operational levels for the intersections in the study. As shown, none of the intersections would operate at unacceptable LOS levels with traffic from existing and project increases. Under horizon year plus project traffic impacts, only San Marcos Boulevard and N. Twin Oaks Valley Road would operate at an unacceptable level. However, this is not a significant impact because the delay from the project would not exceed the allowable thresholds. Therefore, impacts would be less than significant and further analysis of these issues is not warranted.

Table 22 Existing, Project, and Horizon Year Intersection Operations

Intersection	Existing LOS	Existing + Project		Horizon Year 2035 + Project		Significant Impact
		Delay Change	LOS	Delay Change	LOS	
Woodward St./Mulberry Dr.						
AM	A	4.0	B	4.0	B	No
PM	A	4.2	B	4.2	B	No
Borden Rd./Vineyard Rd.						
AM	B	0.0	B	0.0	C	No
PM	B	0.0	B	0.1	C	No
San Marcos Blvd./Woodward St.						
AM	D	0.8	D	1.6	D	No
PM	C	0.3	C	0.4	C	No
San Marcos Blvd./N. Twin Oaks Valley Rd.						
AM	D	0.0	D	0.5	E	No[1]
PM	D	0.0	D	0.0	E	No[1]
SR-78 WB Ramps/Twin Oaks Valley Rd.						
AM	B	0.0	B	0.0	B	No
PM	C	0.1	C	0.1	C	No
SR-78 EB Ramps/Twin Oaks Valley Rd.						
AM	C	0.2	C	0.2	D	No
PM	B	0.2	B	0.2	C	No
Woodward St./Project Dwy. #1						
AM	N/A	N/A	B	N/A	B	No
PM	N/A	N/A	B	N/A	B	No
E. Mission Rd./Project Dwy. #2						
AM	N/A	N/A	C	N/A	C	No
PM	N/A	N/A	B	N/A	C	No

[1] Not a significant cumulative impact since the increase in delay due to the Project is less than the allowable threshold of 2.0 seconds.

Source:Transportation Impact Analysis

Table 23 Existing, Project, and Horizon Year Street Segment Operations

Intersection	Capacity	Existing		Existing + Project			Horizon Year 2035 + Project			Significant Impact?
		ADT	LOS	ADT	LOS	ΔV/C	ADT	LOS	ΔV/C	
Woodward St.										
Mullberry Dr. to Borden Rd.	8,000	3,100	A	3,150	A	0.003	2,650	A	0.004	No
Vineyard Rd. to Mission St.	8,000	7,900	D	8,010	A	0.004	4,710	A	0.004	No
Vineyard Rd.										
Boden Rd. to Woodward St.	8,000	3,600	B	3,650	A	0.003	6,150	B	0.003	No
Mission Rd.										
Firebird Ln. to Woodward St.	40,000	15,100	A	15,130	B	0.000	9,630	A	0.001	No
Woodward St. to Mulberry Dr.	60,000	23,500	A	23,660	A	0.002	24,660	A	0.003	No
San Marcos Blvd.										
Twin Oaks Valley Rd. to Mission Rd.	40,000	16,800	A	16,800	B	0.000	27,950	C	0.009	No
Twin Oaks Valley Rd.										
San Marcos Blvd. to SR-78 WB Ramps	60,000	36,100	B	36,340	C	0.004	55,940	E	0.004	No[1]

[1] Not a significant impact since the increase in the V/C ratio due to the Project is less than the allowable threshold of 0.02.

Source: Transportation Impact Analysis

As show in Table 23 above, the project would not have a significant impact on local street segments under project-generated traffic or horizon year plus project traffic. The project would also not conflict with any adopted plan for bicycle or pedestrian infrastructure. The project would not remove the bike path in front of the project site and would not result to impacts to the City's plan for bike lanes. The project could result in temporary impacts to areas of sidewalk surrounding the project site. Impacts would be temporary and the sidewalks would be constructed back to standards after construction. Therefore, impacts would be less than significant and further analysis is not warranted.

LESS THAN SIGNIFICANT IMPACT

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

Neither the City of San Marcos nor County of San Diego have adopted thresholds for vehicle miles travelled pursuant to 15064.3(b)(1). As discussed above, the project would not have a significant impact on traffic delays on surrounding intersections and roadways. Moreover, the project site is also located in near major transit stops and corridors. There is one bus stop in each direction of travel along Mission Road, less than ¼ mile from the project site, which served North Coast Transit District (NCTD) Route 305. Similarly, the Civic Center SPRINTER Station is located less than ¼ mile

from the proposed project site. Pursuant to CEQA Guidelines 15064.3 (b)(1), projects within one-half miles of a major transit stop or corridor should be presumed to have a less than significant impact. As the project is located closer than one-half mile to major bus stops and commuter rail lines, the project would not conflict with CEQA Guidelines 15064.3 (b). Impacts would be less than significant and further analysis is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The project proposes to provide two access driveways; one on Woodward Street and the other on East Mission Road. The East Mission Road driveway would share access with the Mission 316 East development. The access driveway on East Mission Road will be a right-in-right-out only. The Woodward Street driveway would be a full-access driveway and is not proposed to include a signal. The posted speed limit along East Mission Road is 45 miles per hour and 35 miles per hour along Woodward Street. The driveways would provide adequate site distances to and from on-coming traffic. Moreover, all internal roadways would comply with roadway width requirements and require the approval of the San Marcos Fire Department. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

The project provides adequate emergency access. There are two entry points to the project site, a 24-foot wide main circulation road, and eight 20-foot wide alley roads to access the residential units. These street widths and the project building designs would be reviewed by the San Marcos Fire Department for consistency with applicable health and safety codes. Construction of the project would not result in the closure of local roadways which would impede emergency access. Off-site sewer improvements along Woodward Street and Mission Road would comply with applicable regulations and encroachment permit conditions for work within the City right-of-way. Therefore, impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	■	□	□	□
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	■	□	□	□

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. 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
2. 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 these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 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)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 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 2024.1?*

The project site is undeveloped and, as discussed in Section 5, *Cultural Resources*, there is potential for the project to impact unidentified cultural resources. As of the publication of the Initial Study, AB 52 consultation has been initiated between the City of San Marcos and Native American tribes. In addition, the project would involve land use changes through a Specific Plan Amendment and would require compliance with SB 18. Although resources of tribal or Native American importance are not known to be present on-site, as yet undiscovered resources could potentially be uncovered during excavation and grading. Impacts would be potentially significant and this issue will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	■	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	■

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed residential development would bring approximately 209 people which would generate additional water, wastewater, and electricity demand. As discussed in the Energy Conservation section, the project would not generate electrical demand requiring additional sources of electricity production by the utility provider. The project site is located next to existing utility facilities and would not require the construction or relocation of facilities in order to serve the project. The project would include the installation of water and sanitary sewer lines. Water service,

potable and wastewater, to the project site would be provided by Vallecitos Water District (VWD). The water line would connect to an existing eight-inch water line under Mission Road. The excavation would occur in areas previously disturbed and would not result in impacts on biological resources, cultural resources, or other environmental resources. Therefore, the project would have a less than significant impact and further analysis of these issues is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project site is within the service area of VWD which provides water to approximately 94,000 customers in a 45-square mile service area (VWD 2015). VWD currently obtains 100 percent of its water supply from the San Diego County Water Authority (SDCWA), which obtains a majority of its water via the State Water Project and the Colorado River Aqueduct. Recently, VWD has increased its portfolio to include at least 1,140 million gallons of desalinization water from SDCWA and 120 million gallons to be supplied to existing reservoirs. These additional water supply sources are indirectly from SDCWA.

In 2015, the average daily water use for residential, commercial, light industrial, landscaping, and agriculture was 11.1 million gallons per day and VWD's total water demand for the year was 4.349 million gallons. This was a reduction from the water demand in 2010, which was 5,315 million gallons, due to mandatory water use restrictions. The projected annual water use was estimated in five year increments up to 2035, which is expected to be 10,644 million gallons in 2020 up to 12,330 million gallons in 2035. VWM estimated the available supply and demands in normal years, single dry years, and multiple dry years as required. If water demands develop as projected in the Master Plan, there is a projected shortfall of supplies in each of the categories as shown in Table 24, Table 25, and Table 26 (VWD 2015).

Table 24 Normal Year Supply and Demand

	2020	2025	2030	2035
Supply Totals	6,914	8,011	6,794	9,198
Demand Totals	10,644	11,187	11,569	12,330
Difference	(3,730)	(3,176)	(2,775)	(3,132)

Units in million gallons

Source: Vallecitos Water District Urban Water Management Plan, 2015

Table 25 Single Dry Year Supply and Demand

	2020	2025	2030	2035
Supply Totals	7,362	8,539	9,359	9,799
Demand Totals	11,399	11,985	12,398	13,225
Difference	(4,037)	(3,446)	(3,039)	(3,462)

Units in million gallons

Source: Vallecitos Water District Urban Water Management Plan, 2015

Table 26 Multiple Dry Years Supply and Demand

		2020	2025	2030	2035
First Year	Supply Totals	7,359	8,533	9,349	9,781
	Demand Totals	11,389	11,970	12,379	13,193
	Difference	(4,030)	(3,437)	(3,030)	(3,412)
Second Year	Supply Totals	7,494	8,691	9,518	9,958
	Demand Totals	11,623	12,216	12,633	13,464
	Difference	(4,129)	(3,525)	(3,115)	(3,506)
Third Year	Supply Totals	7,691	8,922	9,763	10,216
	Demand Totals	11,953	12.563	12,992	13,847
	Difference	(4,262)	(3,641)	(3,229)	(3,631)

Units in million gallons

Source: Vallecitos Water District Urban Water Management Plan, 2015

Since VWD has a deficit of supplies during normal, single-dry, and multiple dry years, according to the 2015 UWMP, VWD completed a Water Systems Analysis for the project to determine if the District has adequate supplies and capacity to serve the project. According to the report, the project would increase the average water demand by 12,705 gallons per day. The project site is located in VWD 920 pressure zone, which has limited capacity to store potable water for development in the zone. According to the Water Systems Analysis, there is sufficient water storage capacity to serve the proposed project. The proposed project would require 63,525 gallons of additional reservoir storage in the zone, which would be covered with the payment of Water Capital Facilities Fees. These fees would be used by VWD to expand water storage facilities within their service area, and VWD considers payment of the Water Capital Facility Fees as mitigation for the increase in water storage demand. Therefore, the VWD would have sufficient water supplies to serve the project and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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

The project would be served by VWD and the associated wastewater treatment facilities Encina Water Pollution Control Facility (EWPCF) and Meadowlark Water Reclamation Facility (MRF). The VWD prepared a Wastewater Systems Analysis to determine if there is sufficient capacity to serve the project. VWD has a solid treatment capacity of 10.47 million gallons per day (MGD) at EWPCF, a liquid capacity of 12.67 MGD at EWPCF and MRF, and an ocean disposal capacity of 10.47 MGD at EWPCF (VWD 2018). The average wastewater flow rate in 2014 was 7.2 MGD. The project is expected to generate approximately 7,623 gallons per day (GPD). Therefore, the wastewater analysis concluded that there is adequate solid and liquid treatment capacity, as well as adequate ocean disposal capacity to serve the project.

The Wastewater Systems Analysis also looked at lift station and land outfall capacity with the project. The project is not located in a sewer shed served by a lift station (VWD, 2018). Therefore, there is no lift station upgrades required by the project. VWD's existing land outfall collection

capacity is 20.10 MGD. As the 2014 average wastewater flow was 7.2 MGD and the project would generate approximately 7,623 GPD, the District determined there is sufficient current capacity to serve the project. VWD 2008 Master Plan estimated that buildout under the approved land uses at the time would result in a peak wet weather flow of 29.5 MGD, which exceeds current capacity. To accommodate the additional wastewater flows, the 2008 Master Plan recommended conveyance of peak flows through a parallel land outfall. The 7,623 GPD from the project was not accounted for in the 2008 Master Plan capacity estimates. While the VWD determined that there is current capacity for the project, the project would have to pay Wastewater Capital Facility Fees to be used towards design and construction of a parallel land outfall.

The project would pay applicable Wastewater Capital Facility Fees and follow the conditions in the VWD Wastewater Systems Study. Therefore, the project would have a less than significant impact on wastewater treatment capacity at VWD.

LESS THAN SIGNIFICANT IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Solid waste service would be provided by EDCO Waste and Recycling Services, which handles residential, commercial, and industrial collections in the City of San Marcos. EDCO transports collected waste to the Escondido Transfer Station, where it is then transferred to the Sycamore Sanitary Landfill located in Santee. The Sycamore Landfill has a permitted capacity of 5,000 tons/day and a remaining capacity of 113,972,637 cubic yards (CalRecycle 2018). The average daily weight received during September 2018 was 3,356 tons (Sycamore Landfill, Inc. 2018).

The California Department of Resources Recycling and Recovery (CalRecycle) estimates the per capita disposal rate under SB 1016's system to be 4.9 pounds per resident per day (CalRecycle, 2018b). The proposed project of 67 dwelling units would add approximately 209 residents, based on the City's average household size established by the Department of Finance. The project, therefore, is anticipated to generate 1,024 pounds of solid waste per day, or 12,289 pounds per year. This would not exceed the permitted daily capacity when combined with the current average daily disposal rates at the landfill. Furthermore, the amount does not consider any recycling or waste diversion. AB 939 requires that local governments divert 50 percent of the community's solid waste. The City has a disposal rate target of 8.9 pounds per person per day to meet this target and is currently exceeding the goal with a disposal rate of 5.1 per person per day in 2015 (CalRecycle, 2018c). Assuming a conservative 50 percent diversion rate (as the City is currently exceeding 50 percent), the project would generate 512 pounds per day of solid waste, which is within the available daily capacity. Considering the permitted daily capacity of the Sycamore Sanitary Landfill and the remaining overall capacity, the project's solid waste generation can be accommodated. Impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Solid waste facilities require solid waste facility permits to operate, and the San Diego County Department of Environmental Health issues the facility permits. The Sycamore Landfill currently has active permit 37-AA-0023 and undergoes quarterly inspections. As the project would utilize the

Sycamore Landfill for solid waste disposal, it would comply with existing regulations related to solid waste. The City of San Marcos currently exceeds AB 939 requirements of solid waste diversion and is close to meeting AB 341 requirements of diverting 75 percent of solid waste by 2020. The project would comply with applicable solid waste diversion programs; therefore, it would have no impact related to solid waste regulations.

NO IMPACT

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	■	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes

or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not located within a State Responsibility Area (SRA) (Cal Fire 2012). According to the Fire Hazard Severity Zones Maps, the project is also not located in a very high fire hazards zone (Cal Fire 2009). The project site is located approximately 0.5 miles southeast from a very high fire hazard zone, which is located in the Santa Fe Hills (San Marcos 2013). While the project is located 0.5 miles of an area designated as very high fire hazard, the area of the Santa Fe Hills most near to the project site have been partially developed by single-family residences. Multiple major roads, as well as existing residential and commercial development, are located between Santa Fe Hills and the project location, which would limit the ability of wildfire to reach the project site. The project would include a fuel modification zone providing the development with a defensible space for combatting potential fire hazards adjacent to the property. The fuel modification zone would be approved by the City Fire Department. Additionally, the project is preparing a Fire Prevention Plan to further reduce risks of fire on the project. The project site is also located less that one half mile from San Marcos Fire Station No. 1. Due to the distance from the nearest very high fire hazard zone, the proximity to fire prevention services, and the implementation of the necessary fuel modification zone, impacts related to wildfire would be less than significant and no further analysis is warranted.

LESS THAN SIGNIFICANT IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	□	□	□
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	□	□	□
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	□	□	□

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The project site contains Coastal Sage Scrub and Cooper's Hawk and California gnatcatchers have been observed to occur on-site. Therefore, implementation of this project would have potentially significant impacts on sensitive biological species. In addition, there is potential for the project to encounter and adversely affect cultural and tribal cultural resources during ground disturbing activities. Since there is the potential to impact wildlife and important examples of major periods of California history or prehistory, these impacts are potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

As described in the discussion of Environmental Checklist Sections 1 through 20, the proposed project has potentially significant impacts requiring further analysis in an EIR for the following environmental issues: biological resources, cultural resources, noise, and tribal cultural resources. Therefore, the potential cumulative impacts of these environmental issues may also be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

In general, impacts to human beings are related to air quality, geology and soils, hazards and hazardous materials, noise, and traffic. As detailed in the environmental checklist portion of this Initial Study, the project would not have a significant impact on air quality, geology and soils, hazards and hazardous materials, or traffic. The project would have potential impacts to noise and, therefore, would have the potential to cause substantial adverse effects, directly or indirectly, on human beings. Therefore, this issue is potentially significant and will be further addressed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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