DRAFT

Carpinteria Rincon Trail Project Environmental Impact Report

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Acronyms and Abbreviations

Acronym or Abbreviation	Definition
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
ADT	average daily trip
AFY	acre-feet per year
amsl	above mean sea level
APE	area of potential effect
APN	Assessor's Parcel Number
ARB	Architectural Review Board
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measure
BAR	Board of Architectural Review
Basin Plan	Water Quality Control Plan for the Central Coast Basin
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
CalEEMOD	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CalOES	Governor's Office of Emergency Services
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAWet	California Waste Extraction Test
CBC	California Building Code
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDB	coastal development permit
CDD/P&D	Community Development Department/Planning & Development
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	California Fire Code
CGS	California Geological Survey
CH4	methane
CHRIS	California Historical Resources Information System
CIDH	cast-in-drilled hole
City	City of Carpenteria

Acronym or Abbreviation	Definition
CGP	Construction General Permit
CLUP	Coastal Land Use Plan
CNCL	California Natural Community List
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Santa Barbara
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CRTP	Cultural Resource Treatment Plan
CSFPD	Carpinteria-Summerland Fire Protection District
CUP	conditional use permit
CUPAs	Certified Unified Program Agencies
CVWD	Carpenteria Valley Water District
CY	cubic yards
dB	decibel
dBA	A-weighted decibel
DOC	California Department of Conservation
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DVP	development plan permit
ECAP	Energy and Climate Action Plan
EERP	Enforcement and Emergency Response Program
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESH	environmentally sensitive habitat
ESHA	environmentally sensitive habitat area
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FE	federally endangered
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FP	fully protected

Acronym or Abbreviation	Definition
FPPA	Farmland Protection Policy Act
FRA	Federal Railroad Administration
FT	federally threatened
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
HCFCs	hydrochlorofluorocarbons
HERO	Human and Ecological Risk Office
HFC	hydrofluorocarbons
HHRA	Human Health Risk Assessment
Hz	Hertz
IEPR	Integrated Energy Policy Report
IPCC	Intergovernmental Panel on Climate Change
kBTU	thousand British thermal units
LCP	local coastal plan
L_{dn}	average A-weighted noise level
L_{eq}	equivalent noise level
L_{max}	maximum A-weighted sound level
L_{min}	minimum A-weighted sound level
LOS	Level of Service
LUDC	Land Use Development Code
LUST	leaking underground storage tank
MCV2	Manual of California Vegetation, 2nd edition
mg/kg	milligrams per kilogram
MLD	most likely descendant
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric ton
MND	Mitigated Negative Declaration
MS4	Municipal Separate Storm Sewer System
MT	metric ton
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
O_3	ozone
OPR	Governor's Office of Planning and Research
PCRs	Post Construction Requirements
PFCs	perfluorocarbons
PGA	peak ground acceleration
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns

Acronym or Abbreviation	Definition
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
Preserve	Carpinteria Bluffs Nature Preserve
PSR	Project Study Report
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RHNA	Regional Housing Needs Allocation
RMS	root mean square
ROC	reactive organic compound
RPS	Renewables Portfolio Standard
RSLs	Residential Screening Levels
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAB	State Allocation Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SBCCO	Santa Barbara County Code of Ordinance
SCCAB	South Central Coast Air Basin
SBCOEM	Santa Barbara County Office of Emergency Management
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SDL	state delisted
SE	state endangered
SF_6	sulfur hexafluoride
SLF	Sacred Lands File
SLPC	short-lived climate pollutants
SLRVA	Sea Level Rise Vulnerability Assessment
SLs	screening levels
SNA	state not applicable
SNR	state no rank
SO_2	sulfur dioxide
SO_x	sulfur oxides
SPCC	Spill Prevention, Control and Countermeasure
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
ST	state threatened
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCM	Transportation Control Measures
TCR	Tribal Cultural Resource
TDM	transportation demand management

Acronym or Abbreviation	Definition
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Planning Act
VdB	vibration decibel
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Workers Environmental Awareness Program
WL	Watch List
WQO	water quality objectives
ZEV	zero emissions vehicle

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1 Executive Summary

This Environmental Impact Report (EIR) is an informational document intended for the use by the City of Carpinteria (City), other public agencies, and members of the general public in evaluating the potential environmental effects of the proposed Carpinteria Rincon Trail Project (project).

California Environmental Quality Act (CEQA) Section 21002 requires that an EIR identify the significant effects of a project on the environment and provide measures or alternatives that can mitigate or avoid these effects. This Draft EIR evaluates the environmental effects associated with development of the project and discusses the manner in which the project's significant effects can be reduced or avoided through the implementation of mitigation measures or feasible alternatives to the proposed project. In accordance with Section 15130 of the CEQA Guidelines, this EIR also includes an examination of the effects of cumulative development.

This summary provides a brief synopsis of (1) the proposed project, (2) results of the environmental analysis contained within this environmental document, (3) alternatives to the proposed project that were considered, and (4) major areas of controversy and issues to be resolved by decision makers. This summary does not contain the extensive background and analysis found throughout the individual chapters within the EIR. Therefore, the reader should review the entire document to fully understand the proposed project and its environmental consequences.

1.1 Project Location and Project Site

The project is located on lands within the jurisdiction of the City and the County of Santa Barbara (Figure 2-1, Project Location). Carpinteria is a quaint seaside town located about 12 miles east of Santa Barbara; the project site is near the intersection of Highway 150 and U.S. Highway 101, at the eastern end of Carpinteria and near the Ventura County line.

The proposed trail would provide a dedicated connection from Carpinteria Avenue to Rincon Beach County Park. The trail would begin near the eastern terminus of Carpinteria Avenue, and would proceed eastward along the existing benched slope adjacent to U.S. Highway 101. However, to achieve compliance with pathway surface slope limitations under the Americans with Disability Act (ADA), the existing benched slope would be regraded. The trail would then cross the Union Pacific Railroad (UPRR) alignment on a proposed new bridge. South of the UPRR alignment, the trail would be aligned along another existing benched slope/bluff face adjacent to the Pacific Ocean; again, to achieve compliance with ADA standards, the existing benched slope would be regraded. Figure 2-2 illustrates the overall alignment of the proposed Carpinteria Rincon Trail. The trail would terminate at the western terminus of the Rincon Beach County Park parking lot.

U.S. Highway 101 is located to the north of the proposed trail alignment, the Pacific Ocean is located to the south below the Carpinteria bluffs; the UPRR rail corridor bisects the central portion of the trail alignment. Currently undeveloped bluff open space designated for visitor-serving commercial use (City of Carpinteria 2003) is located adjacent to the western end of the trail on Carpinteria Avenue, with the Rincon Beach County Park and Rincon Point residential community located adjacent the eastern terminus of the trail. Surrounding land uses are shown in Figure 2-2. Figure 2-2 also illustrates jurisdictional boundaries for the City of Carpinteria, County of Santa Barbara, Ventura County, and Caltrans right-of-way relative to the trail alignment.

The majority of the proposed trail route is located on old terraced road and rail cuts. Most of the area's natural landforms have been mechanically manipulated over the years as a result of road, highway and railroad construction activities dating back to at least the late 1800s. A small unsanctioned trail exists in some areas of the proposed trail, including the portion of the proposed trail from the railroad crossing to the Rincon Beach County

Park parking lot. At both ends of the trail are pre-existing parking areas; Rincon Beach County Park has a paved lot and at Carpinteria Avenue there is an existing dirt lot, which would continue to provide informal parking for the proposed project. On-street parking near the eastern terminus of Carpinteria Avenue is also present and can serve the proposed project. The southerly shoulder of Carpinteria Avenue from SR 150 to the terminus is approximately 600 feet in length, which could accommodate approximately 24 passenger cars or light trucks.

1.2 Project Description

The proposed project consists of a 16-foot-wide (10-foot-wide path with a 3-foot-wide paved shoulder along both sides) and approximately 2,800-foot-long shared-use trail that would provide safe access for bicyclists and pedestrians traveling from Carpinteria Avenue in the City of Carpinteria to Rincon Beach County Park in Santa Barbara County at the Ventura County line. A bridge is also proposed over the UPRR alignment to accommodate the trail. Figure 2-4 illustrates the proposed trail alignment.

The initial approximately 850 feet of the trail alignment (starting from the eastern Carpinteria Avenue terminus and heading east) is within the City of Carpinteria jurisdiction. The remaining approximately 1,950 feet of the trail alignment, including the bridge crossing over the railroad corridor, is located within the County of Santa Barbara jurisdiction.

A safety fence would also be proposed to prevent users from encountering the slope below the trail. The proposed fencing would be approximately 3.5 feet in height, and consisting either of three-rail post and rail with a concrete base, chain link or other design of similar dimensions consistent with trail fencing in the community. A 6-foot-wide swale would also be provided along the path where cut slopes are present to capture and convey stormwater.

1.2.1 Project Objectives

The proposed trail was identified by the City to meet critical safety and public access needs. Objectives of the proposed project include:

- Improve pedestrian and bicyclist safety, as well as vehicular safety, by significantly reducing unsafe and/or illegal use of the railway corridor and the U.S. Highway 101 shoulder.
- Enhance regional mobility for cyclists and pedestrians, while enhancing support of regional initiatives to promote alternative transportation modes between Carpinteria, Santa Barbara County and Ventura County, by providing a continuous bike and pedestrian path connecting Santa Barbara County to Ventura County.
- Reduce air pollution from vehicle-related air quality emissions and traffic congestion on local and regional transportation systems by promoting pedestrian and bicycle access to coastal resources and recreation opportunities via a scenic multi-use trail, as an alternative to use of motorized vehicles to access and experience such coastal resources.
- Improve the local coastal bluff environment through improved water quality of surface water run-off through stabilization of bluff slope faces that are currently eroding into the Pacific Ocean, and enhancement of sensitive coastal bluff scrub habitats in the project area. Also, avoid deposits of petroleum fuels or lubricants associated with typical motor vehicle use for transportation in close proximity to the ocean, preventing such pollutants from stormwater run-off entering the adjacent marine environment.
- Complete a critical missing link in the California Coastal Trail consistent with the goals of Senate Bill 908, including provision of a continuous trail as close to the ocean as possible, with connections to the shoreline at appropriate intervals and sufficient access to encourage public use. The California Coastal Trail is intended to offer scenic coastal vistas, wildlife viewing areas, recreational or interpretive facilities, and

other points of interest, and is recognized in regions throughout the state as a key resource or opportunity for these coastal-oriented experiences.

- Provide a coastal-oriented pathway that supports the broadest use by the public through a design that complies with standards established via the Americans with Disabilities Act (ADA).
- Provide new scenic coastal access and coastal tourism opportunities in the City of Carpinteria, Santa Barbara County, and Ventura County.

1.2.2 Discretionary Actions

A discretionary action is an action taken by an agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. The proposed project would require consideration of the following discretionary actions by the City and by the County:

- City of Carpinteria: A conditional use permit (CUP) and coastal development permit (CDP) for the portion of the trail within the City of Carpinteria.
- County of Santa Barbara: A development plan permit (DVP), CUP and CDP for the portion of the trail within the County of Santa Barbara.

1.3 Areas of Controversy

Pursuant to Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) dated October 30, 2020, to begin a 30-day public scoping period, to interested agencies, organizations, and individual parties. The NOP was also sent to the State Clearinghouse at the California Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2020100582) to this EIR.

The NOP is intended to encourage interagency communication regarding the proposed action so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR. A public scoping meeting was held on November 17, 2020, to gather additional public input.

Comments received during the NOP public scoping period were considered during the preparation of this EIR. The NOP and comments are included in Appendix A to this EIR. In response to the NOP and public scoping meeting, 76 comment letters were received. Comments covered a variety of topics, including aesthetics, biology, cultural resources, geology, hydrology/water quality, land use/policy, noise, public services, recreation, and transportation.

1.4 Issues to Be Resolved by the City Planning Commission

The issues to be resolved by the decision-making body are whether to approve the proposed project and whether the potential significant impacts of the project with respect to aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and tribal cultural resources have been fully mitigated below a level of significance, or if additional measures are required. Lastly, the City would determine whether any alternative might meet the key objectives of the project while reducing its environmental impact.

1.5 Project Alternatives

Pursuant to the CEQA, Guidelines, EIRs are required to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6[a]). This EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR 15126.6[a]). The consideration of alternatives is required even if the alternatives "would impede to some degree the attainment of the project objectives, or would be more costly" (14 CCR 15126.6[b]).

1.5.1 No Project/No Build Alternative (Alternative 1)

CEQA Guidelines Section 15126.6 requires the inclusion of a No Project/No Build Alternative (Alternative 1) to be analyzed. Under Alternative 1, no development would occur on the project site. Accordingly, the site characteristics of this alternative would be equivalent to the existing conditions for each category analyzed in Chapter 3, Environmental Analysis, of this EIR.

1.5.2 Maximize Existing Benchwork/Topography Alternative (Alternative 2)

The Maximize Existing Benchwork/Topography Alternative (Alternative 2) would involve development of the originally proposed trail, as described and analyzed in the 2015 Mitigated Negative Declaration (MND). Per the 2015 MND, development under Alternative 2 would consist of a 12-foot wide and approximately 4,000-foot-long pedestrian and bicycle shared use trail, that would also extend from the eastern end of Carpinteria Avenue, in the City of Carpinteria (City), to the Rincon Beach County Park in Santa Barbara County (see Figure 6-1, Proposed Alternatives), but following a different alignment than the proposed project. The trail alignment under Alternative 2 was configured to largely follow existing topographic benches that were originally created (and since abandoned) for previous railroad and highway alignments within the project site. Using the existing benches for the alignment was assumed to minimize the need for topographic modification and earthwork volumes. Under Alternative 2, the northern portion of the trail, from the eastern terminus of Carpinteria Avenue to the Union Pacific Railroad (UPRR) corridor, which crosses the middle of the site, traverses an engineered slope, cut during construction of the U.S. Highway 101. The trail proposed under Alternative 2 would cross the UPRR tracks in an area that consists of engineered slopes cut during construction of the UPRR. On the southern side of the UPRR alignment, new grading not associated with an existing bench was proposed, accompanied by extensive retaining walls, to connect the trail to an existing informal trail on an existing cut bench extending westward from Rincon Beach County Park that was abandoned by the UPRR in the late 1960s. The Alternative 2 trail route would be relatively flat in this area.

1.5.3 Steeper Slopes/Reduced Earthwork Alternative (Alternative 3)

Under the proposed project, to achieve compliance with pathway surface slope limitations under the Americans with Disability Act (ADA), the existing benched slope would be regraded along the entire trail alignment. On some portions of the trail, the proposed project also includes creation of a second earthwork bench on the new slope above the trail to reduce erosion potential. The Steeper Slopes/Reduced Earthwork Alternative (Alternative 3) would remove one of the earthwork benches that was originally proposed on the slope above the trail alignment, for a

portion of the trail length. The cross sections proposed under Alternative 3 are shown in Illustration 6-1, Steeper Slopes/Reduced Earthwork Alternative (Alternative 3) Trail Cross Section. Alternative 3 would result in 15,000 less cubic yards of earthwork, compared to the proposed project. Under Alternative 3, the proposed alignment would be the same as the proposed project. Similar to the proposed project, a bridge would be provided to provide safe crossing for trail users over the UPRR. However, the cross section of the trail south of the UPRR crossing, on the eastern portion of the trail alignment, would be different. More specifically, Alternative 3 would not provide benches above the trail (to control drainage and rockfall).

1.5.4 Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4)

Under the Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4), the proposed trail alignment would be the same as the proposed project in the area north of UPRR and within the UPRR crossing. However, south of the UPRR crossing, the proposed alignment would be shifted to the north to remain on the north side of the ridge, and adjacent to the U.S. Highway 101 corridor, compared to the proposed project which locates this segment on the slopes on the south side of the same ridge, and facing the Pacific Ocean. Further, the trail proposed under Alternative 4 would extend further to the southeast, past the Rincon Beach County Park, and terminate at Bates Road (see Figure 6-1). The proposed UPRR crossing would not change under Alternative 4 compared to the proposed project. Under Alternative 4, most of the storm water down drains proposed along the southern side of the UPRR trail crossing (see Illustration 2-6, Major Storm Drainage Components of the Project, in Chapter 2, Introduction & Project Description), would not be constructed.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Would the project have a substantial adverse effect on a scenic vista?	Potentially Significant	**MM-AES-1: Board of Architectural Review.** The Owner/Applicant shall obtain City Architectural Review Board (ARB) and County Board of Architectural Review (BAR) approval for project design. All project elements (e.g., design, scale, character, colors, materials, and landscaping shall be compatible with vicinity development and shall conform in all respects to ARB/BAR approval. ***Plan Requirements and Timing:*** The Owner/Applicant shall submit architectural drawings of the project including photo renditions from the beach of the storm drains proposed along the bluff face for review and shall obtain final City ARB and County BAR approval prior to issuance of the Development Plan, Conditional Use Permit and Coastal Development Permit. Grading plans, if required, shall be submitted to the City's Planning Department concurrent with or prior to ARB/BAR plan filing with the Carpinteria Community Development Department or County Planning and Development. ***Monitoring***: The Owner/Applicant shall demonstrate to Community Development Department staff and Planning & Development Department compliance monitoring staff that the project has been built consistent with approved ARB/BAR design and landscape plans prior to Final Building Inspection Clearance.	Less than Significant
Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Potentially Significant	**MM-AES-1** (see above)	Less than Significant
In non-urbanized areas, would the project substantially degrade the existing visual	Potentially Significant	**MM-AES-1** (see above)	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a 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?			
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on aesthetic resources?	Less than Significant	None required	Less than Significant
Agriculture and Forestry Resources			
Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact	None required	No Impact
Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	None required	No Impact
Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact	None required	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project result in the loss of forest land or conversion of forest land to non-forest use?	No Impact	None required	No Impact
Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No Impact	None required	No Impact
Would the project have a cumulative effect on agriculture and forestry resources?	No Impact	None required	No Impact
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant	None required	Less than Significant
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant	None required	Less than Significant
Would the project expose sensitive receptors to substantial pollutant concentrations?	Less than Significant	None required	Less than Significant
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on air quality resources?	Less than Significant	None required	Less than Significant
Biological Resources			
Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or	Potentially Significant	**MM-BIO-1: Workers Environmental Awareness Program (WEAP).** The City shall fund an approved biologist to prepare and implement a worker education and awareness program (WEAP) specific	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		to the project. The program shall be presented to all individuals involved in the construction of the project. The program shall include information focused on sensitive vegetation communities, sensitive wildlife and plant species, and common wildlife species and their habitats and shall include, but not be limited to, the following: • Description of sensitive vegetation communities. • Workers shall be provided with photographs of sensitive biological resources including sensitive wildlife and plant species. • Workers shall be informed verbally and in writing of the various project tasks that require biological surveys and monitoring for resource protection. • Workers shall be provided with a photograph or description of the markers for active bird nests, trees, or other mitigation areas, so that they shall know these are not to be disturbed without a biological monitor present. • Workers shall be informed not to litter. All trash and litter shall be picked up and removed from the construction sites at the end of each day. • Workers shall be informed to obey a speed limit of 15 miles per hour while traveling on the project site to avoid collisions with wildlife. • Workers shall avoid driving over or otherwise disturbing areas outside the designated construction areas. ***Plan Requirements and Timing:*** The applicant shall submit the WEAP to the City of Carpinteria (City) and County of Santa Barbara (County) for review and approval prior to implementation. All workers, contractors, and visitors shall attend the WEAP prior	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		to entering the project site and performing any work. The applicant shall provide copies of the training attendance sheets to City of Carpinteria and County staff as a record of compliance with this measure on a monthly basis. The WEAP shall be reviewed and approved by the City of Carpinteria and County prior to Zoning Clearance approval. Implementation of the WEAP training shall occur prior to the start of construction and as new crew members are added to the project. ***Monitoring:*** The City of Carpinteria and County permit compliance staff will ensure compliance with the WEAP throughout construction by review of attendance sheets and hardhats, inspection of the site, and interviewing workers, as appropriate. **MM-BIO-2: Fencing.** To prevent inadvertent impacts on adjacent sensitive vegetation communities including County ESH and City ESHA, native vegetation, special-status species, and common wildlife species and their habitats, construction limits will be fenced with highly visible fencing and staked. Wildlife-safe highly visible construction fencing shall be installed to identify the limits of grading/disturbance, which would reduce potential human trampling outside of the construction limits and minimize the potential spread of non-native weeds or invasive plant species. Wildlife-safe construction fencing and flagging shall remain in place during construction and replaced as needed. ***Plan Requirements and Timing:*** The detailed fencing plan, showing the location of required fencing shall be reviewed and approved by City of Carpinteria and County staff prior to Zoning Clearance approval. This	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		condition shall be printed on all project plans. The detailed fencing plan, showing the location of fencing shall be submitted to City of Carpinteria and County staff for review and approval prior to Zoning Clearance approval. The fence shall be installed prior to the start of ground disturbing activities. ***Monitoring:*** The City of Carpinteria and County staff will inspect the project plans and site, to ensure compliance with this measure as appropriate. **MM-BIO-3: Pre-construction California Legless Lizard Survey and Relocation**. Prior to initiation of construction, capture and relocation efforts for California legless lizards shall be conducted. Trapping shall be conducted by a qualified biologist and shall include the following steps: 1. Prior to initiation of capture and relocation, a suitable receptor site shall be located. This site shall include areas with loose, moist soils occurring in scrub habitat with high coverage of deerweed (*Lotus scoparius*) or California goldenbush, in arroyo willow (*Salix lasiolepis*) thickets or in other suitable scrub or woodland habitat. 2. Capture and relocation shall take place no more than five days prior to the initiation of construction. 3. These surveys shall be performed by lightly raking loose soil, sand and leaf litter with a wooden rake for a sufficient period to determine that no legless lizards are present, or all legless lizards have been captured.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		4. Any lizards found shall be placed in a receptacle with sand and a wet towel and relocated to the previously designated receptor site. ***Plan Requirements and Timing***: Prior to initiation of construction, capture and relocation efforts for California legless lizards shall be conducted where appropriate. Trapping shall be conducted by a qualified biologist. ***Monitoring***: The City of Carpinteria and County staff shall ensure the pre-construction survey and relocation efforts, if required, are completed prior to commencement of any earth-moving activities. **MM-BIO-4: Pre-construction Woodrat Survey and Relocation**. Prior to initiation of construction, capture and relocation efforts for woodrat shall be conducted. Trapping shall be conducted by a qualified biologist and shall include the following steps: 1. Prior to initiation of capture and relocation, a suitable receptor site shall be located. This site shall be within similar habitat and an adequate distance away from any locations that might be subject to increased human disturbance, such as adjacent to a walking path. 2. These pre-construction surveys shall be performed searching all coastal sage scrub or coastal bluff scrub within the disturbance area for middens or other sign of the species. 3. Any middens and woodrats found shall be live-trapped and relocated to the pre-determined receptor site. The midden shall be dismantled and the materials placed at the relocation site.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Plan Requirements and Timing: Prior to initiation of construction, capture and relocation efforts for woodrat shall be conducted where appropriate. Trapping shall be conducted by a qualified biologist. ***Monitoring***: The City of Carpinteria and County staff shall ensure the pre-construction survey and relocation efforts, if required, are completed prior to commencement of any earth-moving activities.	
Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially Significant	**MM-BIO-1** through **MM-BIO-3** (see above) **MM-BIO-5: Habitat Mitigation and Monitoring Plan.** Prior to approval of a coastal development permit, the City shall contract with a qualified biologist to develop a Habitat Mitigation and Monitoring Reporting Plan (Plan) to mitigate for impacts to County ESH/City ESHA vegetation communities. The Plan shall outline efforts to restore or enhance coastal sage scrub and coastal bluff scrub communities, and, therefore, preserve or provide wildlife habitat, in areas temporarily impacted by construction of the trail and within similar habitats adjacent to the impacted biological resources. The Plan may focus on the following: • In-kind, on-site restoration of areas where coastal sage scrub or coastal bluff scrub has been removed; • Enhancement of temporarily impacted areas on site currently occupied by ornamental, disturbed or developed areas; • Restoration of areas occupied by non-native habitats or native habitats with large components of non-native vegetation, within similar habitats adjacent to the impacted biological resources.	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Under the Plan, a total of 3.55 acres of County ESH/City ESHA native vegetation communities temporarily impacted by vegetation clearance shall be restored on site in kind at 1:1. A total of 0.76 acres of County ESH/City ESHA native vegetation communities permanently impacted shall be mitigated on site in kind at 3:1. As mitigation potential within the project area may be insufficient for mitigating 0.76 acres of permanent impacts to County ESH/City ESHA native vegetation communities at 3:1, any additional mitigation required shall be carried out on areas within adjacent land controlled by the City or County,. Off-site mitigation for permanent impacts shall be implemented in-kind at 3:1. A qualified biologist/botanist shall develop the Plan, which shall provide specific measures to restore or enhance habitat to replace the loss of coastal sage scrub and coastal bluff scrub communities. This Plan shall be focused on adaptive management principles, and shall identify detailed enhancement areas and strategies based on the parameters outlined below, with long-term timing and monitoring requirements. The Plan shall: 1. Provide an up-to-date inventory of on-site native vegetation resources. 2. Define attainable and measurable goals and objectives to achieve through implementation of the Plan. Goals and objections shall focus on replacement of coastal sage scrub, coastal bluff scrub and rare plants removed during construction. 3. Provide site selection and justification.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		4. Detail a restoration work plan including methodologies, restoration schedule, plant materials (seed and container plant) sourcing – locally genetic stock, and implementation strategies. 5. Provide a detailed maintenance plan to include removal of invasive non-native species. 6. Define performance standards. 7. Provide a monitoring plan to include methods and analysis of results. Also, include goal success or failure criteria, and an adaptive management plan and suggestions for failed restoration efforts. ***Plan Requirements and Timing:*** Prior to issuance of a grading permit, the City of Carpinteria shall contract with a qualified biologist to develop a Plan. The Plan shall outline efforts to restore or enhance coastal sage scrub and coastal bluff scrub communities in areas temporarily and permanently impacted by construction of the project. ***Monitoring***: The City of Carpinteria and County staff shall ensure development of the Plan and adherence to Plan measures are completed prior to commencement of any earth-moving activities. City and County staff shall periodically conduct site inspections to ensure compliance on site. Restored areas shall be monitored for five years following planting. Annual reports and the final report shall be submitted to the City and County.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact	None required	No Impact
Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially Significant	**MM-BIO-1,** and **MM-BIO-2** (see above) **MM-BIO-6: Pre-construction Nesting Bird Surveys.** Within 30 days prior to any vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically mid-February through August in the project region, or as determined by a qualified biologist), the City shall have weekly surveys conducted by a qualified biologist to determine if active nests of special-status bird species, or of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code, are present in the disturbance zone or within 300 feet (500 feet for raptors) of the area to be disturbed. The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance is delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. The City or contractor shall provide the biologist with plans detailing the extent of proposed ground disturbance prior to the survey effort.	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		If active nests are found, including any nests for Cooper's hawk, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with highly visible construction fencing, and construction personnel shall be instructed on the sensitivity of nest areas. The results of the surveys, including graphics showing the locations of any nests detected, and any avoidance measures recommended, shall be submitted to the City and County within 14 days of completion of the pre-construction surveys to document compliance with applicable state and federal laws pertaining to the protection of native birds. ***Plan Requirements and Timing***: Pre-construction nesting bird surveys shall be completed within 30 days prior to any vegetation clearing or ground disturbance associated with construction or grading during the bird nesting season (typically mid-February to August). The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of disturbance work. ***Monitoring***: The City of Carpinteria and County staff shall ensure the pre-construction nesting bird surveys and any avoidance requirements are completed prior to commencement of any earth-moving activities.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant	**MM-BIO-1, MM-BIO-2** and **MM-BIO-5** (see above)	Less than Significant
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?	No Impact	None required	No Impact
Would the project have a cumulative effect on biological resources?	Potentially Significant	**MM-BIO-1** through **MM-BIO-6** (see above)	Less than Significant
Cultural Resources			
Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	Less than Significant	None required	Less than Significant
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant	**MM-CR-1: Cultural Resource Treatment and Inadvertent Discovery Plan.** Potential impacts to cultural resources shall be minimized through development of protocols for practical adherence of mitigation measures CR-2 and CR-3 prior to and after ground disturbing construction activities associated with the proposed project. These protocols shall be outlined in a Cultural Resource Treatment Plan (CRTP). The CRTP shall be developed by a City-qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification standards, prior to the implementation of ground disturbing activities and include wording of each mitigation measure CR-2-4, specific and detailed explanation for implementation of each mitigation measure and contact protocol. The CRTP shall be provided to all agency personnel, consulting tribes,	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		contractors and archaeological personnel. The existence and necessity for adherence to the CRTP shall be noted on plans, handbooks, or the like associated with tasks that may incur ground disturbance either intentionally or inadvertently. **Plan Requirements and Timing**: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to develop the required CRTP in accordance with the above criteria. **Monitoring:** City of Carpinteria/County of Santa Barbara staff shall review and authorize the CRTP prior to the commencement of ground disturbance activities to ensure that the CRTP adheres to the criteria established in CR-1. **MM-CR-2: Workers Environmental Awareness Program (WEAP) Training**. All personnel participating in tasks that may incur ground disturbance either intentionally or inadvertently shall be briefed regarding unanticipated discoveries prior to the start of said activities. A basic presentation shall be prepared by a City-qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards to inform all personnel working on the project about the archaeological sensitivity of proposed project areas. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during project activities and explain the importance of and legal basis for the protection of cultural resources. Each personnel shall also be instructed on the proper procedures to follow in the event that cultural resources or human remains are	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		encountered. These procedures include work curtailment or redirection, and the immediate contact of the site supervisor, qualified archaeologist and if human remains are encountered, the County coroner. **Plan Requirements and Timing**: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to develop and conduct the required WEAP Training in accordance with the above criteria. **Monitoring:** City of Carpinteria/County of Santa Barbara staff shall ensure the required WEAP training has been conducted by attending the WEAP Training and documenting attendance of required personnel by means of a sign in sheet completed by all attendees of the WEAP Training. **MM-CR-3: Initial ground disturbing activities shall be monitored by a County-qualified/City-approved archaeologist in accordance with the following specifications:** <u>Temporary Impact Areas</u> (equipment staging and materials storage outside trail alignment) - a County-qualified/City-approved archaeologist shall monitor transport and placement activities until such time that it is reasonable to ascertain that no additional prehistoric archaeological/cultural resources are located within areas of temporary disturbance of the proposed project site. <u>Permanent Impact Areas not including bridge piling installation</u> (all areas of the trail alignment excepting the bridge approach areas on both sides of the	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		UPRR alignment) – a County-qualified /City-approved archaeologist shall monitor project implementation during the initial grading and excavation activities until such time as sufficient subsurface soil has been uncovered/excavated to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area. Bridge piling installation – a County-qualified/City-approved archaeologist shall monitor the installation of bridge pilings within intact soils and/or any soils deeper than 10 feet below current ground surface to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area. The monitor shall immediately inform equipment operators in the event archaeological resources are encountered, and shall be empowered to immediately halt construction activity in the area of the discovery until assessment can be completed, and materials recovered as appropriate (refer to CR-2 for additional detail). Monitoring reports shall be provided to the City of Carpinteria/County of Santa Barbara on a monthly basis during construction, with a final monitoring report produced at the conclusion of construction activities and provided to both the City and County. ***Plan Requirements and Timing***: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to monitor initial ground disturbance activities in accordance with the above criteria. ***Monitoring***: City of	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Carpinteria/County of Santa Barbara staff shall ensure the contracted archaeologist provides monitoring of initial ground disturbance activities in accordance with the above criteria through receipt of field documentation describing each day of monitoring, construction activity occurring during the monitoring, and observed soil profile conditions related to the potential for presence of archaeological resources. **MM-CR-4: In the event cultural resources are encountered, construction shall be redirected to another area of the project while data/resource assessment and recovery is accomplished.** Grading/construction shall be immediately suspended in the immediate area (no less than 50 feet from the area of the discovery) where cultural resources are encountered and temporarily redirected to another portion of the project area to allow the archaeologist to assess the nature, extent and significance of any discoveries and develop appropriate management recommendations for archaeological resource treatment consistent with Santa Barbara County Guidelines for the Implementation of California Environmental Quality Act of 1970 (as amended May 25, 2010). It is anticipated that recovery of artifacts would occur where project elements (such as pilings) would conflict with in situ artifact locations, and such artifacts would be properly archived in accordance with the project CEQA, City of Carpinteria and Santa Barbara County guidelines and the CRTP protocol. Identified remedial action for the discovery shall be completed prior to allowing construction to re-	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		commence in the area, no less than 50 feet from the area of the discovery. The project sponsors shall be responsible for funding the assessment of archaeological resources encountered during construction, and for the proper archiving or preservation of such resources. A Phase 3 Archaeological Resources Assessment and Data Recovery Report shall be prepared to document any archaeological resources encountered during construction. ***Plan Requirements and Timing***: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to provide archaeological assessment and recovery of any archaeological resources encountered during project construction, in accordance with the above criteria. ***Monitoring***: City of Carpinteria/County of Santa Barbara staff shall ensure the contracted archaeologist assess the nature, extent and significance of any archaeological discoveries occurring during project construction and develop appropriate management recommendations for archaeological resource treatment in accordance with the project CEQA, City of Carpinteria and Santa Barbara County guidelines and the CRTP protocol.. The contracted archaeologist shall assess the nature, extent and significance of any archaeological discoveries occurring during project construction and develop appropriate management recommendations for archaeological resource treatment.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on cultural resources?	Potentially Significant	**MM-CR-1** through **MM-CR-4**	Less than Significant
Energy			
Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant	None required	Less than Significant
Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on energy resources?	Less than Significant	None required	Less than Significant
Geology and Soils			
Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? b. Strong seismic ground shaking?	Potentially Significant	**MM-GEO-1: Seismicity.** The pedestrian bridge shall adhere to the recommendation identified in Appendix E to this Environmental Impact Report to withstand a peak ground acceleration (PGA) at the site of 0.8g generated by an earthquake of moment magnitude Mw=7.4. ***Plan Requirements and Timing:*** Prior to issuance of a grading or building permit, the City of Carpinteria/County of Santa Barbara shall verify the engineering plans include this bridge design specification. ***Monitoring***: City of Carpinteria/County of Santa Barbara public works staff or construction inspector retained for the project shall inspect bridge construction to verify conformance with this specification.	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
c. Seismic related ground failure including liquefaction? d. Landslides?		**MM-GEO-2: Differential Settlement of Pedestrian Bridge Foundations.** Bridge foundation construction shall adhere to the recommendation identified in Appendix E to this Environmental Impact Report, which specifies a deep foundation employing cast-in-drilled hole (CIDH) piles. Based on the anticipated loadings, Caltrans Standard Plan 24" CIDH Concrete Piles with 200 kips design capacity are recommended in the geotechnical report. Should hard cemented bedrock be encountered during the installation of the CIDH piles, coring may be necessary. ***Plan Requirements and Timing:*** Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall verify the engineering plans include this bridge foundation specification. ***Monitoring***: City of Carpinteria/County of Santa Barbara public works staff or construction inspector retained for the project shall inspect foundation construction to verify conformance with this specification. **MM-GEO-3: Soil Erosion/Slope Stability.** Slope construction shall adhere to the recommendations in the geotechnical report, summarized below. 1. All new fills placed along the trail alignment shall be placed as engineered geotextile-reinforced soils with subsurface/back drains. Manufactured slope profiles shall be no steeper than as specified in the Bengal 2019 geotechnical report (Appendix E), or any updated version thereof which has been prepared to address final trail design. 2. Install adequate surface drainage facilities to collect and dispose of surface runoff properly, consistent with the drainage system designs included in 30%	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Project Plans for Rincon Multi-Use Trail (Appendix E), or as updated to address final trail design. 3. Hydro-seed the exposed newly cut and fill surfaces. Periodic watering and re-application of hydro-seed shall occur as necessary until vegetation on slope surfaces has been successfully established. These measures, in conjunction with the slope flattening and load reduction resulting from the proposed slope cutbacks, should substantially reduce the hazards associated with both slope erosion and local/surficial slope instability under both static and seismic loading conditions. ***Plan Requirements and Timing:*** Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall verify the engineering plans include the above specifications. ***Monitoring***: City of Carpinteria/County of Santa Barbara public works staff or construction inspector retained for the project shall inspect slope and drainage system construction to verify conformance with these specifications.	
Would the project result in substantial soil erosion or the loss of topsoil?	Potentially Significant	**MM-GEO-3** (see above)	
Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Potentially Significant	**MM-GEO-3** (see above)	
Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than Significant	None required	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No impact	None required	No impact
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on geology and soils resources?	Potentially Significant	**MM-GEO-1 to MM-GEO-3** (see above)	Less than Significant
Greenhouse Gas Emissions			
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant	None required. However, **MM-BIO-3** (see above) would further reduce emissions related to sequestrated carbon.	Less than Significant
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant	None required. However, **MM-BIO-3** (see above) would further reduce emissions related to sequestrated carbon.	Less than Significant
Would the project have a cumulative effect on greenhouse gas emissions?	Less than Significant	None required	Less than Significant
Hazards and Hazardous Materials			
Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No Impact	None required	No Impact
Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant	**MM-WAT-2** (see Hydrology and Water Quality, below)	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact	None required	No Impact
Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant	**MM-HAZ-1: Aerially Deposited Lead (ADL).** Surface soils within the trail alignment segment north of the UPRR corridor shall be tested for potential ADL presence to determine if such soils may be used as fill, or must be disposed in a properly licensed landfill. Using the risk based screening levels developed by California Office of Environmental Health Hazard Assessment (OEHHA), excavated soils with a lead concentration less than or equal to 80 mg/kg total lead (analyzed by USEPA Method 6010 or 6020) would be acceptable for reuse without restrictions, including as fill material within the Rincon Trail project. Excavated soils that are considered a California hazardous waste (total lead concentration greater than or equal to 1,000 mg/kg or a soluble lead concentration greater than or equal to 5 milligrams per liter [mg/L] as determined by the California Waste Extraction Test [CAWet]) or are a RCRA hazardous waste and must be disposed of in a Class I hazardous waste landfill. Excavated soils with lead concentrations below 1,000 mg/kg but above 80 mg/kg total lead may be eligible for reuse with specific restrictions to reduce or eliminate exposure, with prior written approval from DTSC, or may be disposed of at an appropriately permitted landfill. ***Plan Requirements***: ADL testing requirements and soil re-use restrictions according to identified ADL concentration shall be shown on grading and	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		building plans. Since excess soil material would be generated through proposed grading activities, soils containing greater than 80 mg/kg total lead shall not be used as fill material for the project but shall be exported off site. Soil containing total lead greater than 1,000 mg/kg shall be disposed in a Class I hazardous waste landfill. ***Timing***: Condition shall be adhered to throughout all grading and construction activities. ***Monitoring***: City of Carpinteria and County staff shall ensure measures are on plans. City and County Grading Inspectors shall spot check and ensure compliance on site.	
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	None required	No Impact
Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	None required	No Impact
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	No Impact	None required	No Impact
Would the project have a cumulative effect on hazards or hazardous materials?	Potentially Significant	**MM-HAZ-1** and **MM-WAT-1**	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Hydrology and Water Quality			
Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Potentially Significant	**MM-WAT-1 : Obtain Coverage Under Construction General Permit.** The project shall obtain coverage under a Construction General Permit via the State Water Resources Control Board (SWRCB) (Water Quality Order 99-08-DWQ). ***Plan Requirements***: The requirement to obtain coverage from the SWRCB under a Construction General Permit shall be indicated on grading plans. ***Timing***: Evidence of coverage under a Construction General Permit shall be provided to the City of Carpinteria Public Works Department and County of Santa Barbara Public Works Division prior to the initiation of grading. ***Monitoring***: City and County Public Works staff shall confirm evidence of the Construction General Permit issuance prior to issuance of grading permits. **MM-WAT-2: Stormwater Pollution Prevention Plan.** The construction contractor shall prepare a Stormwater Pollution Prevention Plan that includes Best Management Practices (BMPs) to be implemented and monitored prior to and during construction. The following BMPs shall be incorporated into the SWPPP to minimize potential construction-related water quality impacts: 1. Disturbed areas shall be stabilized or re-vegetated prior to the start of the rainy season. The work area shall be flagged to identify its limits. Vegetation shall not be removed or intentionally damaged beyond these limits. 2. Construction materials shall be placed in designated areas where they could not enter	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		water bodies or storm drains due to spillage or erosion. 3. Waste and debris generated during construction shall be stored in designated waste collection areas and containers away from watercourses and shall be disposed of regularly. 4. During construction, washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site. Wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands. The concrete washout area shall be isolated from water bodies, and wash water and waste shall be removed from the project site. The location of the washout area shall be clearly noted at the construction site with signs. 5. All fueling of heavy equipment shall occur in a designated area removed from water bodies and other drainages, such that any spillage would not enter surface waters. The designated refueling area shall include a drain pan or drop cloth and absorbent materials to clean up spills. The location of the fueling area shall be clearly noted at the construction site with signs. 6. Vehicles and equipment shall be maintained properly to prevent leakage of hydrocarbons and coolant and shall be examined for leaks on a daily basis. All maintenance shall occur in a designated off-site area. The designated area shall include a drain pan or drop cloth and absorbent materials to clean up spills.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		7. Any accidental spill of hydrocarbons or coolant that may occur on the construction site shall be cleaned up immediately. Absorbent materials shall be maintained on the construction site for this purpose. 8. Special considerations for work during the rainy season: stockpiled soils should be covered at the end of the work day, and concrete pouring shall be avoided within 15 days of a forecasted rain event to allow full curing, due to its toxic nature until it has fully cured. ***Plan Requirements***: A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented prior to construction and shall include the above elements. The SWPPP shall be submitted to City and County Public Works for review and approval prior to the issuance of grading permits for the project. ***Timing***: The stormwater features and BMPs shall be installed and operational prior to initiation of grading. ***Monitoring***: City and County Public Works staff shall site inspect for installation and maintenance in accordance with the approved plan and periodically thereafter to ensure proper maintenance over the duration of construction activities. **MM-WAT-3: Erosion and Sediment Control Plan.** Best available erosion and sediment control measures shall be implemented and maintained during grading and construction. Best available erosion and sediment control measures may include, but are not limited to use of sediment basins, gravel bags, silt fences, geo-bags or gravel and geotextile fabric berms, erosion control blankets, coir rolls, jute net	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		and straw bales. Construction access points shall be stabilized using gravel beds, rumble plates or other measures to prevent sediment from being tracked onto adjacent roadways. Any sediment or other materials tracked off site shall be removed the same day as they are tracked using dry cleaning methods. ***Plan Requirements and Timing***: An erosion and sediment control plan shall be submitted to and approved by City and County Public Works prior to issuance of a grading permit. The plan shall be designed and implemented to address erosion and sediment control during all phases of development of the site. ***Monitoring***: City and County Public Works shall perform site inspections throughout construction. **MM-WAT-4: Planting of Vegetation.** As soon as practicable following the completion of trail construction, the contractor shall install native plantings for biological restoration and hydro-seed slope areas with an appropriate native plant seed mix, in order to provide long-term stabilization of soils disturbed during construction . Periodic watering and re-application of hydro-seed shall occur as necessary until vegetation on slope surfaces has been successfully established. ***Plan Requirements and Timing***: Landscaping plans including biological restoration areas and hydro-seeding of manufactured slope areas submitted to Community Development Department/Planning & Development (CDD/P&D) for review prior to approval of a coastal development permit. ***Monitoring***: CDD/P&D shall site inspect vegetation plantings and	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		hydro-seed application before issuing final clearance and acceptance of the trail project. **MM-WAT-5: Periodic Inspection and Maintenance of Storm Drain Components.** Staff from City and County Parks/Public Works departments shall perform an annual inspection of stormwater components annually, prior to the on-set of the rainy season (November 1) to ensure all components are in good repair and are not blocked by debris or sediment. Any materials found to be obstructing flow in the drainage system shall be removed prior to November 1 each year. The exposed vertical portion of each of the corrugated metal pipe drains shall be examined annually for signs of corrosion, damage or openings in the drain pipe wall. Corrosion visible on the exterior pipe wall shall be treated and sealed promptly, any holes through the pipe wall shall be patched, or the damaged/affected segment shall be replaced or modified. ***Plan Requirements and Timing***: The applicant shall include these inspection and maintenance requirements in the final drainage system design plans. The plans shall be submitted to Community Development Department/Planning & Development (CDD/P&D) and City and County Public Works for review prior to approval of a grading permit. ***Monitoring***: A memo with the annual inspection notes and corrective maintenance performed shall be prepared and submitted to the City and County Public Works Departments. **MM-WAT-6:** To minimize pollutants impacting the ocean, storm drain filters/inserts shall be installed	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		in the project area storm drain inlets. The filters/inserts shall be maintained in working order. **Plan Requirements:** Prior to approval of Grading or Building Permits, the applicant shall submit plans identifying the type and location of filters/inserts to Community Development Department/Planning & Development (CDD/P&D) and City and County Public Works for review and approval. The location of such filters/inserts shall be noted on grading and building plans Filters/inserts shall be installed prior to final clearance and shall be cleaned using approved methods at least twice a year, once immediately prior to November 1 (before the start of the rainy season) and once in January. **Monitoring:** CDD/P&D and City and County Public Works shall site inspect periodically throughout the construction phase to ensure proper installation. Records of maintenance shall be maintained by City/County and shall be submitted to CDD/P&D and City and County Public Works on an annual basis prior to the start of the rainy season and for five years thereafter. After the fifth year, the records shall be maintained by the City/County. CDD/P&D and Public Works shall review the maintenance records and site inspect as needed following completion of construction to ensure periodic cleanout	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant	None required	Less than Significant
Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: a. result in substantial erosion or siltation on or off site; b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or d. impede or redirect flood flows?	Less than Significant	**MM-WAT-1** (see above) **MM-WAT-2** (see above) **MM-WAT-3** (see above) **MM-WAT-5** (see above)	Less than Significant
In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	No Impact	None required	No Impact
Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact	None required	No Impact
Would the project have a cumulative effect on hydrology or water quality resources?	Potentially Significant	**MM-WAT-1** through **MM-WAT-5** (see above)	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Land Use and Planning			
Would the project physically divide an established community?	No Impact	None required	No Impact
Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially Significant	**MM-AES-1; MM-BIO-1** through **MM-BIO-6** ; **MM-CR-1** through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1** (see above)	Less than Significant
Would the project have a cumulative effect on land use resources?	Potentially Significant	**MM-AES-1; MM-BIO-1** through **MM-BIO-6** ; **MM-CR-1** through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1** (see above)	Less than Significant
Mineral Resources			
Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact	None required	No Impact
Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	No Impact	None required	No Impact
Would the project have a cumulative effect on mineral resources?	No Impact	None required	No Impact
Noise			
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise	Potentially Significant	**MM-NOI-1: Construction Hours.** Construction activity for site preparation and for future development shall be limited to the hours between 8:00 a.m. and 5:00 p.m., Monday through Friday. No construction shall occur on State holidays (e.g. Thanksgiving, Labor Day) or weekends. Construction equipment	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
ordinance, or applicable standards of other agencies?		maintenance shall be limited to the same hours. Non-noise generating construction activities are not subject to these restrictions. ***Plan Requirements*:** Two signs stating these restrictions shall be posted on-site at each end of the proposed trail. ***Timing***: Signs shall be in place prior to the beginning of and throughout all grading and construction activities. ***Monitoring***: City and County Grading Inspectors shall spot check and respond to complaints. **MM-NOI-2: Construction Equipment**. All construction equipment with engines must have original manufacturer's approved muffling devices. All stationary equipment shall be physically buffered from nearby sensitive receptors. ***Plan Requirements***: Plans shall indicate the requirement of OEM muffled equipment. ***Timing***: This condition applies when any engine driven equipment is in use at the project site during construction. ***Monitoring***: City and County Grading Inspectors shall spot check and respond to complaints**.**	
Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant	None required	Less than Significant
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact	None required	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a cumulative effect on noise resources?	No Impact	None required	No Impact
Population and Housing			
Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No Impact	None required	No Impact
Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	None required	No Impact
Would the project have a cumulative effect on housing and/or population resources?	No Impact	None required	No Impact
Public Services			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection?	Less than Significant	None required	Less than Significant
Police protection?	Less than Significant	None required	Less than Significant
Schools?	No Impact	None required	No Impact
Parks?	Less than Significant	None required	Less than Significant
Other public facilities?	No Impact	None required	No Impact
Would the project have a cumulative effect on public services resources?	No Impact	None required	No Impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Recreation			
Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less than Significant	None required	Less than Significant
Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on recreation resources?	Less than Significant	None required	Less than Significant
Transportation			
Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less than Significant	None required	Less than Significant
Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less than Significant	None required	Less than Significant
Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant	None required	Less than Significant
Would the project result in inadequate emergency access?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on transportation resources?	Less than Significant	None required	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Tribal Cultural Resources			
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Potentially Significant	**MM-CR-1** through **MM-CR-4** (see above) **MM-TCR-1: Initial ground disturbing activities shall be monitored by a Native American observer in accordance with the following specifications:** Temporary Impact Areas (equipment staging and materials storage outside trail alignment) - a Native American observer, ancestrally affiliated with the area, shall monitor transport and placement activities until such time that it is reasonable to ascertain that no additional prehistoric archaeological/cultural resources are located within areas of temporary disturbance of the proposed project site. Permanent Impact Areas not including bridge piling installation (all areas of the trail alignment excepting the bridge approach areas on both sides of the UPRR alignment) – a Native American observer, ancestrally affiliated with the area, shall monitor project implementation during the initial grading and excavation activities until such time as sufficient subsurface soil has been uncovered/excavated to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area. Bridge piling installation – a Native American observer, ancestrally affiliated with the area, shall monitor the installation of bridge pilings within intact soils and/or any soils deeper than 10 feet below current ground surface to ascertain that no additional prehistoric archaeological/cultural	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		resources are located on the proposed project improvement area. The monitor/observer shall immediately inform equipment operators in the event archaeological resources are encountered, and shall be empowered to immediately halt construction activity in the area of the discovery until assessment can be completed, and materials recovered as appropriate (refer to CR-2 for additional detail). Monitor reports shall be provided to the City of Carpinteria/County of Santa Barbara on a monthly basis during construction, with a final monitoring report produced at the conclusion of construction activities and provided to the City and County. ***Plan Requirements and Timing***: Prior to issuance of a grading permit, the City of Carpinteria shall contract with a Native American observer, ancestrally affiliated with the area, to monitor initial ground disturbance activities in accordance with the above criteria. ***Monitoring***: City of Carpinteria/County of Santa Barbara staff shall ensure the Native American observer, ancestrally affiliated with the area, provide monitoring of initial ground disturbance activities in accordance with the above criteria through receipt of field documentation describing each day of monitoring, construction activity occurring during the monitoring, and observed soil profile conditions related to the potential for presence of archaeological resources.	
Would the project have a cumulative effect on tribal cultural resources?	Potentially Significant	**MM-CUL-1** through **MM-CUL-4** (see above) **MM-TCR-1** (see above)	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Utilities and Service Systems			
Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Potentially Significant	**MM-WAT-1, MM-WAT-2, MM-WAT-3,** and **MM-WAT-4** (see above)	Less than Significant
Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less than Significant	None required	Less than Significant
Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than Significant	None required	Less than Significant
Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than Significant	None required	Less than Significant
Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than Significant	None required	Less than Significant
Would the project have a cumulative effect on utilities and/or service systems resources?	Potentially Significant	**MM-WAT-1, MM-WAT-2, MM-WAT-3,** and **MM-WAT-4** (see above)	Less than Significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Wildfire			
Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact	None required	No Impact
Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact	None required	No Impact
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?	No Impact	None required	No Impact
Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No Impact	None required	No Impact
Would the project have a cumulative effect on wildfire?	No Impact	None required	No Impact

2 Introduction and Project Description

This chapter of the Environmental Impact Report (EIR) describes the purpose, scope and legislative authority of the EIR, the intent of the California Environmental Quality Act (CEQA) and other pertinent environmental rules and regulations, and the environmental review process. The section also includes the structure, required contents, and relationship of the EIR to other potential responsible or trustee agencies. The section closes with the detailed project description, including purpose and objectives of the proposed Carpinteria Rincon Trail Project (project).

2.1 Environmental Procedures

2.1.1 California Environmental Quality Act Compliance

The California Public Resources Code (Section 21000 et seq.) requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. This EIR has been prepared in compliance with all criteria, standards, and procedures of the CEQA Guidelines (14 CCR Section 15000 et seq.).

2.1.2 Notice of Preparation and Scoping

CEQA establishes mechanisms whereby the public and decision makers can be informed about the nature of a proposed project, and the extent and types of impacts that the project and its alternatives would have on the environment, should the project or alternatives be implemented. Pursuant to Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) dated October 30, 2020 to begin a 30-day public scoping period, to interested agencies, organizations, and parties. The NOP was also sent to the State Clearinghouse at the California Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2020100582) to this EIR.

The NOP is intended to encourage interagency communication regarding the proposed action so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR. A public scoping meeting was held on November 17, 2020, to gather additional public input.

Comments received during the NOP public scoping period were considered during the preparation of this EIR. The NOP and comments are included in Appendix A to this EIR. In response to the NOP and public scoping meeting, 76 comment letters were received. Comments covered a variety of topics, including aesthetics, biology, cultural resources, geology, hydrology/water quality, land use/policy, noise, public services, recreation, and transportation.

Based on the scope of the proposed project as described in the NOP, the following issues were determined to be potentially significant and are addressed in Chapter 3, Environmental Analysis, of this EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Emissions
- Hydrology and Water Quality

- Land Use and Planning
- Noise
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

In addition, the following issues were determined to be not significant and are addressed in Chapter 4, Effects Found Not to be Significant, of this EIR:

- Agricultural and Forestry Resources
- Energy
- Mineral Resources
- Population and Housing
- Public Services
- Wildfire

2.1.3 Overview of the EIR Process

This EIR will be made available to members of the public, public agencies, and interested parties for a 45-day public comment period in accordance with Section 15105 of the CEQA Guidelines. Public comment of the EIR is intended to focus "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (14 CCR 15204). The Notice of Completion of the EIR will be filed with the State Clearinghouse as required by Section 15085 of the CEQA Guidelines. In addition, the Notice of Availability of the EIR will be distributed pursuant to Section 15087 of the CEQA Guidelines. Interested parties may provide comments on the EIR in written form. This EIR and all related technical appendices are available for review upon request during the 45-day public comment period. Due to COVID 19 shelter-in-place restrictions, all documents are available online at the City's website (https://carpinteria.ca.us/public-works/engineering-division/rincon-multi-use-trail/).

Once the 45-day public comment period has concluded, the City will review all public comments on the EIR, provide written responses to comments, and authorize revisions to the EIR text, if necessary. The final Mitigation Monitoring and Reporting Program (MMRP) will be incorporated into the Final EIR. Mitigation measures contained in the EIR consider future monitoring requirements and are written in sufficient detail to address impacts of the proposed project, referencing the appropriate implementing permits and plans. If one or more significant environmental impacts are determined, written findings for each of those significant effects, accompanied by an overriding justification and rationale for each finding in the form of a statement of overriding considerations will also be included in the Final EIR, if necessary. The Final EIR includes all comment letters received, final written response to comments, a Final EIR preface, if applicable, edits made to the EIR as a result of public review/comment, and findings of fact and statement of overriding considerations, if necessary.

2.2 Intended Uses of the EIR

According to Section 21002.1(a) of the Public Resources Code (CEQA), "[t]he purpose of an environmental impact report is to identify the significant effects of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided." This EIR provides relevant information concerning the potential environmental effects associated with construction and operation of the proposed project and identifies and evaluates potentially significant effects that may result from implementation of the proposed project. It is intended for use by decision makers and the public.

As the designated lead agency, the City has assumed responsibility for preparing this EIR. When deciding whether to approve the proposed project, the City will use the information provided in this EIR to consider potential impacts to the physical environment associated with the proposed project. The City will consider all written comments received on the EIR during the 45-day public comment period in making its decision to certify the EIR as complete and in compliance with CEQA and in making its determination whether to approve or deny the project. In the final review of the document, environmental considerations, and economic and social factors will be weighed to determine the most appropriate course of action.

After certification of the Final EIR, agencies with permitting authority over all or portions of the project, such as the County of Santa Barbara, will use the Final EIR as the basis for their evaluation of environmental effects related to the project and approval or denial of other applicable permits or authorizations.

2.3 Organization and Content of the EIR

This EIR is organized to provide a tiered project-level analysis of the potentially significant environmental impacts, mitigation measures, and alternatives for the proposed project. To describe the direct, indirect, and cumulative impacts, mitigation measures, and alternatives for the proposed project, this EIR is organized as follows:

- Chapter 1, Executive Summary, outlines the conclusions of the environmental analysis and a summary of the project as compared to the alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in this EIR along with the associated mitigation measures proposed to reduce or avoid each impact.
- Chapter 2, Introduction & Project Description, serves as a foreword to this EIR, introducing the project background and objectives, applicable environmental review procedures, and format of the EIR; describes the project location and physical environmental setting; and provides a thorough description of the proposed project and required discretionary approvals.
- Chapter 3, Environmental Analysis, provides an analysis of the potentially significant environmental impacts identified, and proposed mitigation measures to reduce or avoid any potentially significant impacts.
- Chapter 4, Effects Found Not to be Significant, address impacts that were determined to not be significant during the scoping process.
- Chapter 5, Other CEQA Considerations, discusses the project's potential Growth-Inducing Impacts, Significant and Irreversible Impacts, and Significant and Unavoidable Impacts.
- Chapter 6, Alternatives, analyzes a range of reasonable alternatives to the proposed project that would lessen or avoid significant environmental effects of the proposed project.
- Chapter 7, List of Preparers, provides a list of persons that contributed to the preparation of this EIR.
- Chapter 8, References, provides a compiled list of references cited in each section of the EIR.

2.3.1 Mitigation Monitoring and Reporting Program

The City will prepare a MMRP prior to project approval. The MMRP will include all mitigation measures outlined in the EIR, the responsible entity for implementation, implementation timing (prior to construction, during construction, post-construction), and any follow-up reporting requirements (such as submittal of materials to regulatory agencies). The City, as the designated lead agency, is responsible for enforcing and verifying that each mitigation measure is implemented as required.

2.4 Project Background and Purpose

2.4.1 Background

The City of Carpinteria is situated along the California coast where the Santa Ynez Mountains meet the Pacific Ocean. California State Highway 150 (Highway 150), U.S. Highway 101, and the coastal railroad all intersect in the southeastern entrance to the Carpinteria Valley. The transportation infrastructure improvements at this location have not included planning for or installation of a needed Class I bicycle route or pedestrian trail linking the urban area of the City of Carpinteria with the coastal resources of the County and State Beach Parks at Rincon Point as well as a connection to the newly opened bike path to Mussel Shoals. The proposed Carpinteria Rincon Trail will provide an important and desirable connection in this area and also serve as a link in the larger California Coastal Trail.

A Mitigated Negative Declaration (MND) was prepared for a proposed Carpinteria Rincon Trail in 2015. The 2015 MND analyzed a multi-use (shared-use) trail extending from the eastern terminus of Carpinteria Avenue to Rincon Beach County Park, 12–feet in width and approximately 4,000 feet in length. The design of the proposed trail analyzed in the 2015 MND would have necessitated approximately 1,000 feet of retaining wall, with a maximum height of 14 feet. Several look-out points, a stormwater cistern, and pathway lighting at sharp horizontal grade changes and within the parking areas for the trail were also proposed. Further investigation into the original design revealed that its constructability as originally designed was questionable due to unstable geologic conditions and critical US Highway 101 storm drain infrastructure in the vicinity of the original trail alignment's long switchback turn within the UPRR alignment. Further study also suggested that the entire trail alignment could not be designed to achieve an Americans with Disabilities Act of 1990 (ADA) compliant slope. Therefore, a Subsequent MND was prepared in 2019, which analyzed a simplification of the originally proposed design, including elimination of the long switch-back section within the alignment for the UPRR railway, elimination of parking lot improvements at the western trail terminus at Carpinteria Avenue, and elimination of the storm water cistern and any trail lighting. The Draft Subsequent MND was circulated for public comment, and a hearing was held by the Carpinteria Planning Commission to consider certification of the document. The Planning Commission voted to certify the Subsequent MND, and that decision was appealed to the City Council. Although the appeal of the Planning Commission's certification of the Subsequent MND was never heard by the City Council, the City Council decided to move forward with the preparation of this Focused EIR as the appropriate CEQA environmental review document in order to allow for a more in-depth analysis of key issue areas identified during consideration of the Subsequent MND.

Access between the City of Carpinteria and Rincon Beach County Park has primarily been provided by U.S. Highway 101, though the distance between the two destinations is less than one mile. The use of U.S. Highway 101 requires a bicyclist or pedestrian to travel along the highway shoulder. Many bicyclists and pedestrians use the railroad corridor as an alternative route, as evidenced by the unsanctioned trails that are present along the bluff face and along the railroad tracks connecting the City of Carpinteria with Rincon Beach County Park. Use of the unsanctioned trails in and along the railroad corridor, however, presents a public access and safety concern.

The proposed Carpinteria Rincon Trail would extend from the eastern end of Carpinteria Avenue, in the City of Carpinteria, to Rincon Beach County Park, in unincorporated Santa Barbara County. The new, shared-use trail would provide a strategic addition to Carpinteria's Coastal Vista Trail that upon completion, will connect Padaro Lane to the west and Rincon Beach County Park to the east. In addition to providing critical improvements in public safety, the completion of this trail segment would provide improved public coastal access and recreational opportunities, and enhancement of non-vehicular travel alternatives to the region's significant coastal resources. Completion of

the trail will also fill in a long-standing gap in the statewide California Coastal Trail. The trail further is a requirement of the Conditional Use Permit and Coastal Development Permit No. 09-1522-CUP/CDP granted to the California Department of Transportation (Caltrans) to construct the Linden Avenue and Casitas Pass Road Interchanges and Via Real Extension Project in order to promote regional alternative transportation objectives and to enhance recreation opportunities within the coastal zone and access to coastal resources. Regional vicinity and project site location are presented in Figures 2-1 and 2-2.

2.4.2 Purpose and Need

2.4.2.1 Purpose Statement

The fundamental purpose of the Carpinteria Rincon Trail is to establish a scenic, coastal trail offering a non-motorized ADA accessible recreational and alternative transportation trail option between the Carpinteria Bluffs and Rincon Beach County Park, consistent with the intent of the California Coastal Trail and as required by the California Department of Transportation's conditions of approval for the Linden Avenue and Casitas Pass Road Interchanges project (Conditional Use Permit and Coastal Development Permit No. 09-1522-CUP/CDP). In addition, the Carpinteria Rincon Trail shall be designed to achieve the purposes and objectives described further below.

2.4.2.2 Public Safety

Due to the lack of a direct, non-vehicular access corridor, the most traveled route to hike or bike to Rincon Beach County Park from the City of Carpinteria is along the railroad corridor, which presents a known safety risk. The railroad corridor in the City of Carpinteria is a major north-south rail route with freight and passenger trains running frequently each day. The continuous rail tracks that the Union Pacific Railroad (UPRR) recently installed are quieter than previous segmented rail track; thereby increasing safety hazards as rapidly approaching trains may not be audible. The geography of the area also constrains visual line of sight along the rail corridor such that it can be difficult to see oncoming trains far in advance. Despite these safety concerns, it is common to see individuals and groups walking and biking along the tracks from the City to Rincon Beach County Park or points in between. Many trail users are carrying surfboards and day packs, making them vulnerable to the speed of oncoming trains. Soaring recreationalists (such as parasailers and paragliders) also fly over and sometimes land on, or utilize the rail corridor to return to the launch point located on the bluff promontory above the railroad corridor. From 2015 to 2019, the Federal Railroad Administration Office of Safety records indicate that there were 25 rail incidents in Santa Barbara County, including 18 deaths and 7 injuries (FRA 2020). According to a grand jury report on rail incidents within Santa Barbara County, one railway fatality occurred within Carpinteria in the period from 2015 through 2018 (Santa Barbara County Grand Jury 2019).

2.4.2.3 Local Environmental Enhancement

Bicycling and walking are cost effective, energy efficient and provide an alternative means of travel to the use of motorized vehicles. The City of Carpinteria's mild Mediterranean climate coupled with its scenic coastal bluffs provide a favorable environment for bicycling and walking year-round. Bicycles also provide easy mobility for residents and tourists, and the proposed trail would offer a new direct, safe and efficient access route to Rincon Beach County Park, as well as a connection between Ventura and Santa Barbara counties.

Near the east end of the Coastal Vista Trail is the Carpinteria Bluffs Nature Preserve, which provides visitors with a unique overlook along one of the last remaining undeveloped coastal regions along the South Coast. In addition,

the 21 acre parcel adjacent to the eastern terminus of Carpinteria Avenue (formerly known as Carpinteria Bluffs Area III) has recently been purchased by the Land Trust for Santa Barbara County and subsequently deeded to the City of Carpinteria to be preserved in perpetuity as a public open space preserve (Rincon Bluffs Preserve) that will provide additional passive recreation and scenic enjoyment opportunities. Commonly seen from the bluffs are white-tailed kites, turkey vultures, red-tailed hawks, American kestrels, brush bunnies, bottlenose and common dolphins, California sea lions, Pacific harbor seals, California brown pelicans, western gulls, and migrating gray whales (City of Carpinteria 2009). Views of the Northern Channel Islands and Channel Islands National Marine Sanctuary are also afforded. The proposed trail provides an extension to the Carpinteria Bluffs trail system, allowing hikers and bicyclists to continue along the coastal bluffs into neighboring coastal resource areas of interest.

2.4.2.4 Recreational Opportunities

The City of Carpinteria is a popular year-round tourist attraction, with close to two million visitors a year (City of Carpinteria 2009). The City's beach is recognized as one of the safest and cleanest beaches in Santa Barbara County. Northeast of the City beach is the Carpinteria Salt Marsh Nature Park, which is one of the few remaining healthy coastal wetland systems in California, and a well-used hiking area. East of the City beach is Carpinteria State Beach Park, one of California's most popular camping and recreation areas.

Within the State Beach Park, Carpinteria Creek flows out to the ocean. This creek is currently the focus of a successful steelhead restoration effort. East of the State Beach, the coastal bluffs begin where the Casitas Pier is located. Part of the coastal bluff is also located within the Carpinteria Bluffs Nature Preserve and the newly created Rincon Bluffs Preserve. Located just east of the Casitas Pier is the Pacific harbor seal sanctuary, a natural haul out and pupping rookery where over 500 of these pinnipeds have been observed on shore at once (City of Carpinteria 2009).

Just east of the City of Carpinteria, Rincon Beach County Park exists and offers picnic areas, beach access, and parking areas for beach-goers and cyclists using the regional coastal bike path that connects to the City of Ventura. Rincon Beach County Park is operated by the County of Santa Barbara. Visitors to the City of Carpinteria, including campers at the State Beach, often travel to the Rincon Beach County Park for recreational activities and to view the world-famous Rincon surf break. The ocean bluffs along the eastern portion of the City and extending into the Rincon Beach County Park area also produce updrafts from ocean related winds, which create soaring opportunities generally above the top of the ocean bluffs alignment for paragliders and other soaring recreationalists. Offshore, the Channel Islands National Marine Sanctuary and Channel Islands National Park provide additional recreation opportunities. The City aims to complete the Carpinteria Coastal Vista Trail for the recreational use of the surrounding communities and to provide public access and connections to these natural places.

The proposed Carpinteria Rincon Trail would close a gap in the California Coastal Trail at a critical location. The function of the Carpinteria Rincon Trail as the local segment of the California Coastal Trail means the proposal must also align with the goals established for the California Coastal Trail. Some of the introductory information in the Senate Bill 908 Report (Completing the California Coastal Trail) is informative, and includes the stated goals for the trail, importantly the following:

1. Provide a continuous trail as close to the ocean as possible, with connections to the shoreline at appropriate intervals and sufficient transportation access to encourage public use.
5. Design the CA Coastal Trail to provide a valuable experience for the user by protecting the natural environmental and cultural resources while providing public access to beaches, scenic vistas, wildlife viewing areas, recreational or interpretive facilities, and other points of interest.

6. Create linkages to other trail systems and to units of the State Park system, and use the Coastal Trail system to increase accessibility to coastal resources from urban population centers.

   (Source: http://californiacoastaltrail.info/cms/pages/trail/done.html)

The proposed Carpinteria Rincon Trail would link the Carpinteria Bluffs and Rincon Beach County Park, and would also extend the Pacific Coast Bikeway, thereby improving recreation opportunities along the South Coast. Eventually, upon completion of other segments, the Carpinteria Coastal Vista Trail will connect to Carpinteria State Beach Park and the Carpinteria Salt Marsh Preserve and on to Padaro Lane, west of the City. The Pacific Coast Bikeway currently extends east to Seaside and eventually to Ventura's Seaside Wilderness Park and Emma Wood State Park. From Emma Wood State Park, cyclists and pedestrians can join the California Coastal Trail to the Ventura County Fairgrounds and the City of Ventura waterfront. Figure 2-3, Existing Trail Network, presents the proposed Carpinteria Rincon Trail segment in the context of the Carpinteria Coastal Vista Trail.

2.4.3 Objectives

The proposed trail was identified by the City to meet critical safety and public access needs. Objectives of the proposed project include:

- Improve pedestrian and bicyclist safety, as well as vehicular safety, by significantly reducing unsafe and/or illegal use of the railway corridor and the U.S. Highway 101 shoulder.
- Enhance regional mobility for cyclists and pedestrians, while enhancing support of regional initiatives to promote alternative transportation modes between Carpinteria, Santa Barbara County and Ventura County, by providing a continuous bike and pedestrian path connecting Santa Barbara County to Ventura County.
- Reduce air pollution from vehicle-related air quality emissions and traffic congestion on local and regional transportation systems by promoting pedestrian and bicycle access to coastal resources and recreation opportunities via a scenic multi-use trail, as an alternative to use of motorized vehicles to access and experience such coastal resources.
- Improve the local coastal bluff environment through improved water quality of surface water runoff through stabilization of bluff slope faces that are currently eroding into the Pacific Ocean, and enhancement of sensitive coastal bluff scrub habitats in the project area. Also, avoid deposits of petroleum fuels or lubricants associated with typical motor vehicle use for transportation in close proximity to the ocean, preventing such pollutants from stormwater runoff entering the adjacent marine environment.
- Complete a critical missing link in the California Coastal Trail consistent with the goals of Senate Bill 908, including provision of a continuous trail as close to the ocean as possible, with connections to the shoreline at appropriate intervals and sufficient access to encourage public use. The California Coastal Trail is intended to offer scenic coastal vistas, wildlife viewing areas, recreational or interpretive facilities, and other points of interest, and is recognized in regions throughout the state as a key resource or opportunity for these coastal-oriented experiences.
- Provide a coastal-oriented pathway that supports the broadest use by the public through a design that complies with standards established via the Americans with Disabilities Act (ADA).
- Provide new scenic coastal access and coastal tourism opportunities in the City of Carpinteria, Santa Barbara County, and Ventura County.

2.5 Location

The project is located on lands within the jurisdiction of the City of Carpinteria and the County of Santa Barbara (Figure 2-1). Carpinteria is a quaint seaside town located about 12 miles east of Santa Barbara near the intersection of Highway 150 and U.S. Highway 101, near the Ventura County line.

The proposed trail would provide a dedicated connection from Carpinteria Avenue to the Ventura County line through Rincon Beach County Park. The trail would begin near the eastern terminus of Carpinteria Avenue, and would proceed eastward along the existing benched slope adjacent to U.S. Highway 101. However, to achieve compliance with pathway surface slope limitations under the Americans with Disability Act (ADA), the existing benched slope would be regraded.

The proposed trail design includes a clear-span bridge over the UPRR alignment. The bridge would be approximately 160-feet-long, with a width of between 14-feet and 16-feet (clear width, measured inside the bridge rails).

At the south end of the UPRR bridge, the trail would continue eastward along a benched slope on the ocean-facing side of the bluff. The benched slope would be graded to be in compliance with ADA pathway slope requirements, and to provide long-term stability for the trail in accordance with engineering safety standards. Figure 2-2 illustrates the overall alignment of the proposed Carpinteria Rincon Trail. The proposed route is grade and horizontally separated from the U.S. Highway 101 freeway and the railroad corridor.

2.6 Surrounding Land Uses and Environmental Setting

Carpinteria and its surrounding area contain important natural resources, including outstanding beaches, the Carpinteria Salt Marsh Preserve, Carpinteria Reef, a Pacific harbor seal sanctuary, and coastal bluff, foothill and creek habitats supporting numerous plant communities and wildlife species.

U.S. Highway 101 is located to the north of the proposed trail alignment, the Pacific Ocean is located to the south below the Carpinteria bluffs; the UPRR rail corridor bisects the central portion of the trail alignment. Currently undeveloped bluff open space designated for visitor-serving commercial use (City of Carpinteria 2003) is located adjacent to the western end of the trail on Carpinteria Avenue, with the Rincon Beach County Park and Rincon Point residential community located adjacent the eastern terminus of the trail. Surrounding land uses are shown in Figure 2-2. Figure 2-2 also illustrates jurisdictional boundaries for the City of Carpinteria, County of Santa Barbara, Ventura County, and Caltrans right-of-way relative to the trail alignment.

The majority of the proposed trail route is located along and above U.S. Highway 101, and the alignment is completely within terrain that has been previously modified for transportation projects, which are now represented by old terraced road and rail cuts. Most of the area's natural landforms have been mechanically manipulated over the years as a result of road, highway and railroad construction activities dating back to at least the late 1800s. A small unsanctioned trail exists in some areas of the proposed trail, including the portion of the proposed trail from the railroad crossing to the Rincon Beach County Park parking lot. At both ends of the trail are pre-existing parking areas; Rincon Beach County Park has a paved lot and at Carpinteria Avenue there is an existing dirt lot, which would continue to provide informal parking for the proposed project.

The first portion of the trail, from the eastern terminus of Carpinteria Avenue to the UPRR corridor, traverses an engineered slope, cut during construction of U.S. Highway 101. The trail would cross the UPRR tracks in an area that

consists of engineered slopes cut during construction of the current railroad corridor. The second portion of the trail, from the UPRR crossing to the westernmost end of Rincon Beach County Park, is currently occupied by an existing informal trail on an existing cut bench that was abandoned by the railroad in the late 1960's. This informal trail is mostly flat in this area and its surface is mostly dirt; however, some original asphalt paving associated with the previous rail use remains in some areas. The top of the bluff formation in this area was also used for the previous alignment of State Route 2 (precursor to the current U.S. Highway 101 alignment) and abandoned in the 1960s. Remnants of the abandoned road alignment are still visible along the top of the bluff formation and overhang the existing informal trail. A few abandoned and current underground utilities and infrastructure exist in or nearby the proposed route, including but not limited to fiber optic lines, a sewer main, and storm drain infrastructure.

2.7 Project Description

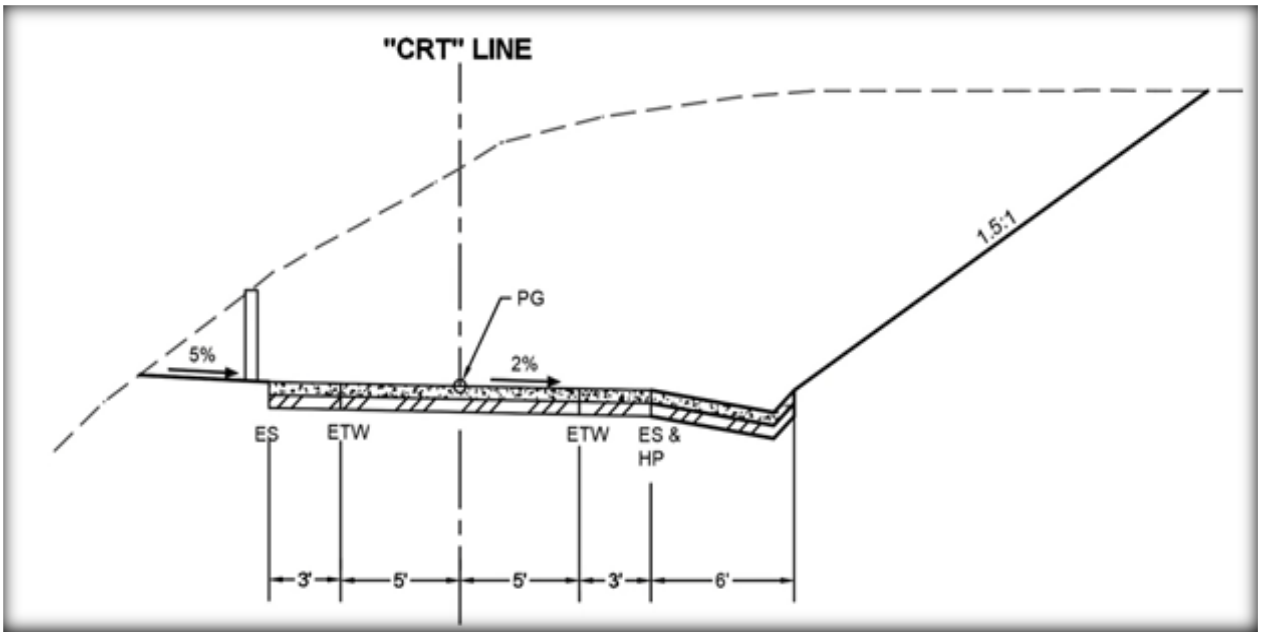
The proposed project consists of a 16-foot wide (10-foot wide path with a 3-foot wide paved shoulder along both sides) and approximately 2,800-foot long shared-use trail that would provide safe access for bicyclists and pedestrians traveling from Carpinteria Avenue in the City of Carpinteria to Rincon Beach County Park in Santa Barbara County at the Ventura County line. Figure 2-4, Site Plan, illustrates the proposed trail alignment.

The initial approximately 850 feet of the trail alignment (starting from the eastern Carpinteria Avenue terminus and heading east) is within the City of Carpinteria jurisdiction. The remaining approximately 1,950 feet of the trail alignment, including the bridge crossing over the railroad corridor, is located within the County of Santa Barbara.

The Rincon Trail is planned to function as the local section of the California Coastal Trail, connecting on the south end to the recently completed bicycle and pedestrian path constructed with the Caltrans HOV project from Carpinteria to the Mobil Pier in Ventura County. On the north, the Rincon Trail would currently connect with Carpinteria Avenue, which provides continuous bicycle and pedestrian travel from the eastern to western end of Carpinteria City limits. From Carpinteria Avenue an alternate route exists for cyclists and pedestrians south along Linden Avenue to 4th Street eastward through Carpinteria State Beach, and connecting with the Carpinteria Bluffs Trail, which is nearly continuous to the location of the Rincon Trail western trail head. The City is in the process of acquiring an easement over two parcels that would complete the Carpinteria Bluffs Trail from the Carpinteria State Beach to the Rincon Trail. In the near term, the City will also be completing additional trail and public parking improvements in conjunction with the recent acquisition of the Rincon Bluffs Preserve property, which is located immediately adjacent to the western terminus of the proposed Rincon Trail. The Rincon Bluffs Preserve improvements will serve to further enhance public recreational and alternative transit options in the area.

A cross-section illustrating the proposed trail configuration is provided below (following page). Note that the "travel" area of the path is intended to be 10 feet in width, but a paved 3-foot shoulder is provided along both sides (which allows additional space for pedestrians or cyclists to pass other trail users or navigate when opposite direction travelers are present). The paved 3-foot shoulder also improves access for emergency service and maintenance vehicles.

A safety fence is also illustrated (on the left) to prevent users from encountering the slope below the trail. The proposed fencing would be approximately 3.5 feet in height and consisting either of three-rail post and rail with a concrete base, chain link or other design of similar dimensions consistent with trail fencing in the community. A 6-foot wide swale would also be provided along the path where cut slopes are present to capture and convey stormwater, as shown in Illustration 2-1.



SOURCE: Bengal Engineering

Illustration 2-1 Rincon Trail Cross Section - Widths of Components

Legend for Illustration 2-1:

CRT Center of Route Travel
ETW Edge of Travel Way
ES Edge of Shoulder
HP High Point (of drain swale adjacent to path)
PG Path Guide

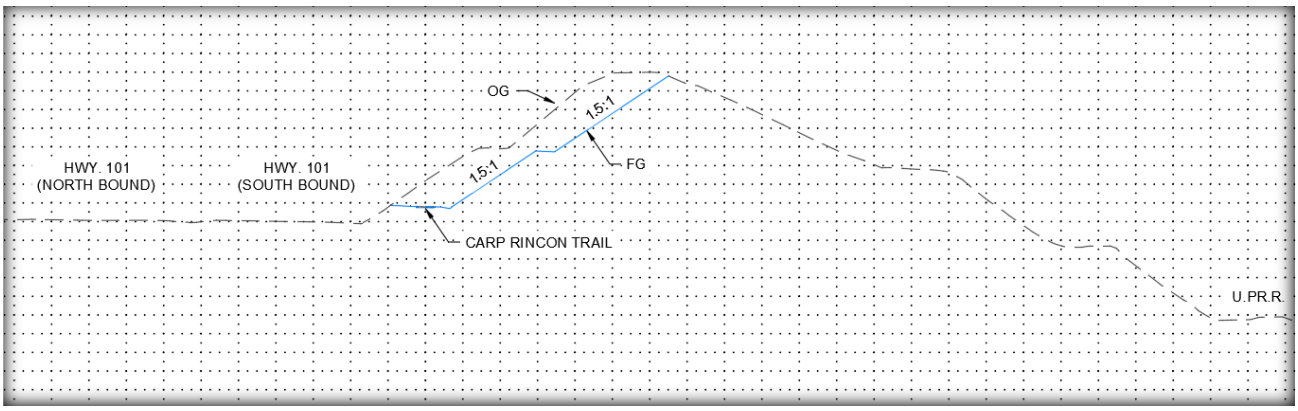
2.7.1 Earthwork

The trail design has been engineered to incorporate pathway travel slopes that are consistent with ADA standards. The design also avoids an area with deep landslides, south and west of the crossing point over the UPRR alignment, which were identified in geotechnical testing. The majority of project earthwork will occur on existing engineered slopes that were constructed as part of past road, highway and railroad projects; these manufactured slope faces in many instances are steeper than natural conditions, leading to increased erosion potential, which the project intends to correct though re-contouring to reduce slope angles. Construction of the proposed path design would involve a total of 107,386 cubic yards of cut, a total of 14,860 cubic yards of fill, and the export of a total of 92,526 cubic yards of earth material. The re-contouring of existing engineered topography along the path alignment to achieve more stable conditions is described in more detail below.

2.7.1.1 Pathway Slope Profiles Adjacent to U.S. Highway 101 (North of UPRR Alignment)

Cut slopes above the trail would have a slope ratio of 1.25:1, fill slopes (which would be present only adjacent to the bridge over the UPRR corridor) are proposed to have slope ratios between 2:1 and 4:1. The earthwork would alter the elevation of the bench on which the trail would be aligned, but would not alter the top elevation of the

existing hill/ridge as it remains from previous earthwork modification in this section of the alignment. Illustration 2-2 presents the existing versus proposed slope profile for earthwork modifications above and below the trail.



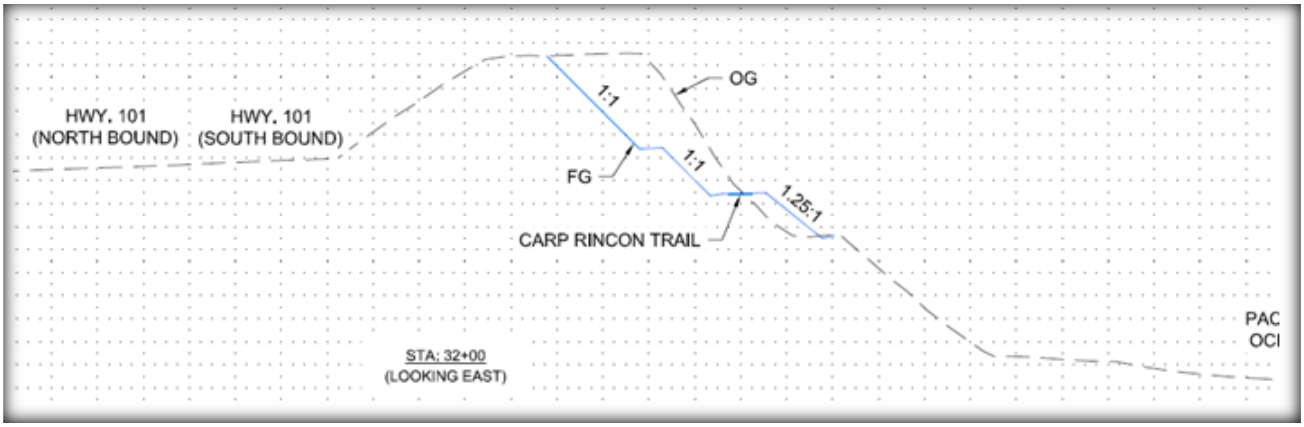
SOURCE: Bengal Engineering

Illustration 2-2 Pathway Grading Profile Adjacent to U.S. Highway 101

Note in Illustration 2-2 that the proposed cut-slopes are similar in profile to those created during the U.S. Highway 101 construction. Some portions of the trail along the north side of the UPRR alignment would not have the upper bench shown above, where Carpinteria Avenue is in close proximity to U.S. Highway 101.

2.7.1.2 Pathway Slope Profiles South of UPRR Alignment

For the portion of the path on the ocean side of the UPRR alignment, the regraded slopes for the trail "bench" would employ cut slopes with a ratio of 1:1 above the trail, while a ratio of 1.25:1 would be employed for the "reinforced" fill slopes below the trail. The earthwork would alter the elevation of the bench on which the trail would be aligned, but would not alter the top elevation of the hill/ridge. Illustration 2-3 presents an example of the existing versus proposed slope profile for earthwork modifications above and below the trail.



SOURCE: Bengal Engineering

Illustration 2-3 Pathway Grading Profile South of UPRR Alignment

Note in Illustration 2-3 that the proposed cut-slopes are less-steep than those constructed for the railroad alignment in this area (illustrated as "OG" above) in order to provide an adequate margin of safety for the long-term stability of the slopes. Note there is also a proposed bench above the trail that would intercept rainwater and also prevent rock fall on the path below. The bench would also provide maintenance access for the manufactured slopes and path.

2.7.2 Bridge Detail

The bridge design includes a clear-span bridge over the UPRR alignment. The bridge would be approximately 160-feet-long, with a width of between 14-feet and 16-feet (clear width, measured inside the bridge rails). The bridge would be supported on foundations using deep piles. The bridge would be a factory-built steel structure, painted to protect it from corrosion because of the proximity to the ocean. The bridge would be delivered substantially complete, likely in 2 sections. After the two "halves" of the bridge are bolted together this unit would be lifted into place, likely using two cranes, one situated on either side of the UPRR tracks. Once the "factory made" portion of the bridge is in place, a concrete bridge deck would be cast-in-place, and the wing walls and abutment back walls would be completed. Illustration 2-4 provides an example of a similar scale pre-fabricated steel bike path bridge. Note the bridge for the Carpinteria Rincon Trail will have some similar characteristics, except that UPRR requires high "safety fences" for the full length of the bridge to protect the trains from potential objects thrown from the bridge platform.

SOURCE: Bengal Engineering

Illustration 2-4 Representative Steel Framed Bike Path Bridge

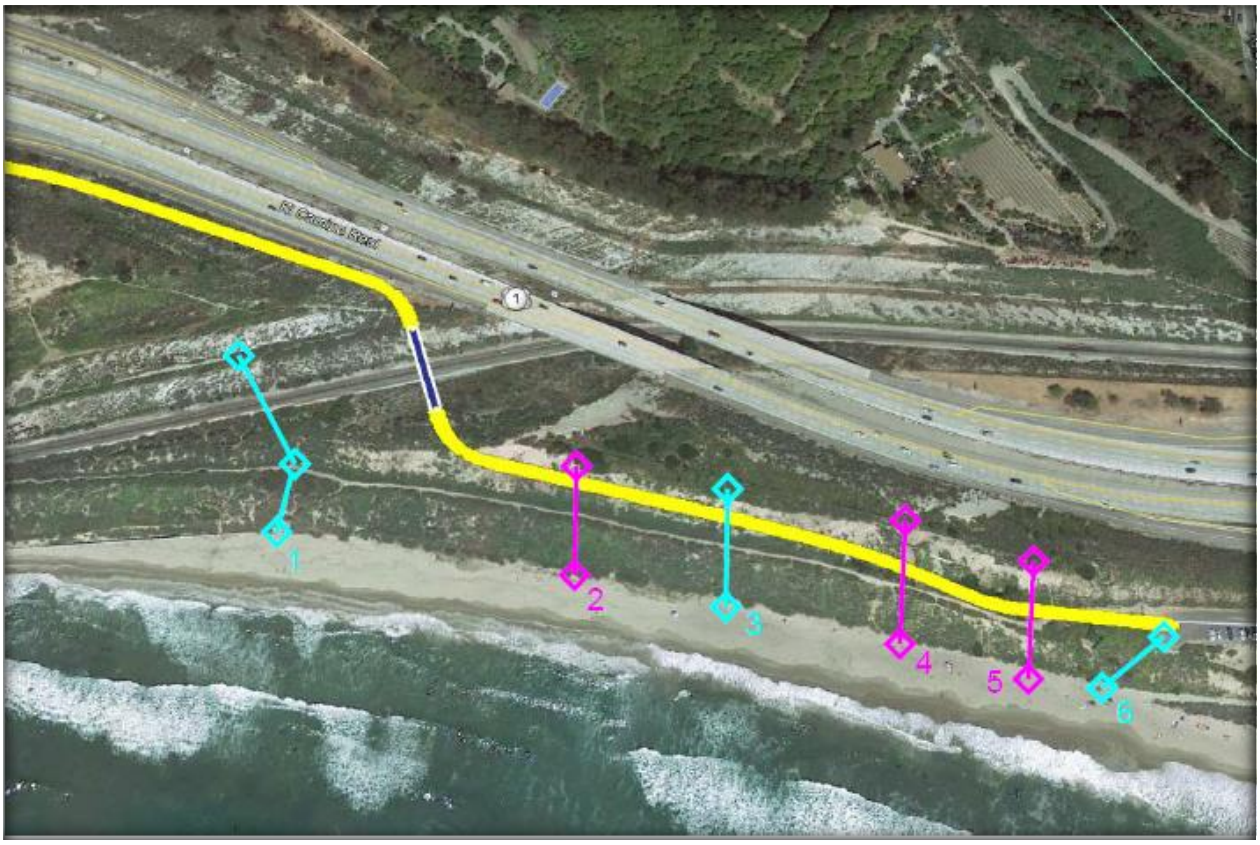
The approximate location of the Carpinteria Rincon Trail bridge over the UPRR alignment (the magenta colored line) is shown in Illustration 2-5. The relative elevation of the bridge can be compared to the U.S. Highway 101 bridge over the UPRR corridor (just above the elevation of the pictured train).

SOURCE: Bengal Engineering

Illustration 2-5 Approximate Profile and Location for Rincon Trail Bridge

2.7.3 Drainage

The proposed trail project includes an integrated storm drainage system to ensure stormwater runoff from the recontoured bluff face and the trail surface is conveyed to the ocean efficiently, avoiding potential erosion of slopes along the trail alignment. Along the portion of the trail north of the UPRR alignment, a concrete swale (v-ditch) would convey water along the trail edge, where it would be released into an existing surface drainage swale now serving U.S. Highway 101. This swale connects to an existing storm drain that crosses underneath the UPRR alignment, and then descends to the beach level. This storm drain is labelled as "1" in Illustration 2-6. No improvements are proposed to storm drain 1, and the trail storm drain volumes contributed to this storm drain would be negligible compared to existing flows already contributed from portions of U.S. Highway 101.



SOURCE: Bengal Engineering

Illustration 2-6 Major Storm Drainage Components of the Project

On the south side of the UPRR alignment, a concrete drainage swale would also carry surface runoff from the recontoured bluff face and trail, conveying such drainage along the side of the trail until it reaches one of the storm drain inlets lower in elevation. A total of 5 vertical storm drains would convey this stormwater from the trail to the beach elevation, for the trail segment south of the UPRR alignment (refer to Illustration 2-6). Drains No. 3 and No. 6 (shown in light blue in Illustration 2-6) are existing and would be re-used, including rehabilitation of existing piping; drains No. 2, No. 4, and No. 5 (shown in magenta in Illustration 2-6) would be newly developed for the project.

The new vertical storm drains would be installed during earth work for the trail and adjacent slopes, and would be buried to cross beneath the trail and then descend on the slope face to outlet at the beach elevation. Buried portions of the storm drain would be constructed of high-density plastic, transitioning to galvanized steel for the aboveground portions.

The majority of the length of the proposed trail is outside of the City of Carpinteria's and Santa Barbara County's respective 2013 Statewide Phase II Small Municipal Separate Storm Sewer (MS4) General Permit (2013 General Permit) boundaries, and thus the majority of the project is exempt from the Post Construction Requirements (PCRs) of the 2013 General Permit. Because the project is not regulated by the 2013 General Permit and PCRs therein, the project may not fully avoid potential water quality impacts unless it achieves compliance with active construction and post-construction requirements of the Statewide Construction General Permit (CGP). The proposed Rincon Trail drainage facilities are focused on the efficient collection and delivery of stormwater runoff from the trail surface to the ocean, no stormwater treatment components are included.

2.7.4 Trail/Path Features

The trail would be constructed of concrete to ensure longevity and low maintenance, including a concrete surface on the proposed bridge structure over the UPRR alignment. The trail width would be wide enough for bicyclists and hikers to easily ride and walk side-by-side, and pass others headed in the opposite direction. The 16-foot trail would also accommodate emergency and maintenance vehicle access to the project area. The bridge over the UPRR alignment would provide safe crossing for trail users over the railway and reduce the risk of accidents or fatalities associated with unsanctioned rail crossings. Additionally, the project would feature native plantings designed to transition to natural communities and restored native plant areas along the trail alignment. Vegetation and landscaping would consist of native trees and low-lying, native shrubs and groundcover. Native vegetation that would be removed along the immediate side of the trail for grading and improvements would be restored, and additional plantings to offset permanent removal of native vegetation beneath the trail alignment would be accomplished. Existing plant species in the project area that would have the potential to be restored include quail bush (*Atriplex lentiformis*), California sagebrush (*Artemisia californica*), California bush sunflower (*Encelia californica*) and lemonade berry (*Rhus integrifolia*).

Security fencing and/or railings would be provided along portions of the trail for safety and route guidance, and would also inhibit users from deviating off the designated path to ensure protection of adjacent native restoration plantings. The proposed fencing would be either three-rail post and rail with a concrete base, chain link or other design of similar dimensions consistent with trail fencing in the community, approximately 42 inches in height. A fence may be required along one or both sides of the trail depending on the characteristics of that segment's location, such as adjacency to bluff or slope features. As mentioned above, the bridge crossing would include chain link fence and a safety rail along both sides of the trail that lead up to the bridge.

Vehicle parking at the trailhead on the western end would be provided via an existing dirt lot adjacent to the Carpinteria Avenue terminus; no improvements to the informal dirt parking lot are proposed. The southern shoulder of Carpinteria Avenue, from SR 150 to the existing cul-de-sac terminus, provides parking for approximately 24 vehicles, and would be a short walk from the proposed western trail head. Signage would be installed to delineate parking and direct users toward the trail. Visitors traveling both northbound and southbound on U.S. Highway 101 would access Carpinteria Avenue from exit 84 for Highway 150 towards Ojai/Lake Casitas. Carpinteria Avenue is paved for approximately one-tenth of a mile past the existing dirt parking lot. The Rincon Beach County Park parking lot is also accessible from U.S. Highway 101 to the east. Exit 83 for Bates Road off of Highway 101 provides access to Rincon Point Road. Parking facilities and other park amenities are currently provided at Rincon Beach County Park; as such, no additional amenities are proposed in that location. A public parking lot within the eastern portion of the newly acquired Rincon Bluffs Preserve (a separate, future project in the same vicinity) would also serve both the open space preserve and the Rincon Trail once completed.

A sign providing a map of the trail and trail rules (including on-leash requirements for dogs) would be placed near the existing dirt parking lot at the western end of the trail. Additional wayfinding signs would be provided along the trail and up to four interpretive nature signs to illustrate surrounding biology, local geography and history of the area would also be provided.

Fire hydrants are currently provided at Rincon Beach County Park; no additional fire hydrants would be provided along the proposed trail. In the event of a wildfire, Carpinteria-Summerland Fire Protection District crews could access the trail from the west via Carpinteria Avenue or from the east via Rincon Beach County Park parking lot. Restrooms are also available at Rincon Beach County Park, which would serve users of the proposed trail as no additional restrooms would be provided along the trail. Restrooms are also contemplated as part of the future improvements to the Rincon Bluffs Preserve.

2.7.5 Construction

The shared-use trail would be 16 feet in paved width, including 10-feet for the travel lanes and a three-foot paved shoulder along each side (which would be available as additional travel way for navigating around pedestrians or cyclists that are within the main travel lanes). During construction of the trail, an additional one to four feet of area may be potentially impacted during grading for a total impact width of up to 20 feet depending on the trail location. However, virtually the entire trail length would be located on abandoned road or railway cuts or existing terraces that have been disturbed previously rather than on natural landforms and slopes.

To prepare the site for trail construction, the trail bench and slopes above and below the trail alignment would be rough graded to meet the proposed finished grade surface. The first stage would involve separate crews performing earthwork on the north side and south side of the UPRR alignment; the northern crew would use the Carpinteria Avenue extension for access, while the southern crew would access the earthwork areas from the Rincon Beach County Park parking area. Storm drain construction would be integrated with the rough grading activities. The second stage would involve bridge construction. Construction would begin with the bridge foundations, using deep piles. The bridge would be a factory-built steel structure. The bridge would be delivered substantially complete but in two sections. After the two "halves" of the bridge are bolted together this unit would be lifted into place using two cranes, one situated on either side of the UPRR tracks. Once this "factory made" portion of the bridge is in place, the concrete bridge deck will be cast-in-place, and the wing walls and abutment back walls will be completed. After the bridge is in place, finish grading of the path will occur. Next, the path surfacing, consisting of aggregate base under concrete paving would be completed. The final major stage would include the landscaping installation, habitat restoration activities, and erosion protection. Other final touches would include fencing, signing, and the path striping

Cut material on site would be utilized for the necessary fill material, as feasible. Excess cut volume would be exported from the site by haul trucks and transferred to the closest available receiver site. The quality of the excess graded material is anticipated to be suitable for fill material, which could be utilized by local on-going and future construction projects; several landowners in close proximity to the project site have also expressed interest in receiving soil. However, if at the time of project construction there are no local receiver sites for fill material, the project graded material would be transported to the closest transfer station or transported directly to the regional landfill.

It is anticipated that construction of the proposed project would commence in March 2022 and reach completion by March 2024, for a total construction window of approximately two years. The trail would be constructed using common earthwork equipment such as a dozer, excavator, dump truck, and roller. Removal of vegetation located within or adjacent to the proposed trail route would be conducted using a crawler tractor or similar small loader or backhoe. A haul truck would transport removed vegetation to the Marborg Construction and Demolition Recycling Center, located at 119 N. Quarantina Street in Santa Barbara, California or other green waste collection facility; construction waste would also be delivered to Marborg or another similar recycling facility in Ventura County.

Temporary fencing would be installed where necessary and would be removed after construction activity in the area is complete. Permanent safety rails and fencing would consist of wood and cement for the post and rail fences and steel for the chain link fences and would be installed using small tractors, such as a skid steer, and other hand tools. A small excavator would also be used to construct the proposed concrete v-trench that would guide runoff water to the proposed storm drain system. Paving of the proposed trail would take approximately one to three weeks and would require use of medium-sized tractors and trucks.

The proposed bridge structure would be fabricated off site. The bridge would be delivered by truck and installed using cranes, also delivered by truck. Additional smaller pieces of equipment, including welders and concrete saws, may also be utilized to link the bridge to the trail ramps. Construction of the overhead bridge would not interfere with railroad use in accordance with UPRR requirements, and may occur at night if required by UPRR to avoid daily train operations.

Signs would be installed after completion of the trail and bridge. Signs would be installed using a jackhammer and hand tools. Landscaping along the proposed trail would also occur after completion of trail construction. Revegetation of native plants and planting of the new slope faces would be achieved by hydroseeding using hydroseed trucks. Container plants would also be incorporated in the landscape palette. To ensure successful establishment of plantings, the planted vegetation would be watered weekly or bi-monthly depending on the season during the first two years of project operation through use of a water truck.

2.7.6 Operation

The proposed trail would accommodate multiple users including bicyclists and pedestrians. With the exception of "power-driven mobility devices" for persons with disabilities and maintenance or emergency vehicles, motorized vehicles would be prohibited on the proposed trail.

As with the majority of public trails in the City, access to the trail would be provided 24 hours a day, seven days a week. Trail closure would occur, however, during unsafe or emergency conditions, such as the unlikely event of a landslide or for some maintenance operations. No additional staffing for maintenance would be needed; instead, any trail maintenance needs would be accommodated by existing City of Carpinteria or County of Santa Barbara work crews on their respective portions of the trail.

Trash and recycling cans would be provided in the existing dirt parking lot at the western trail terminus. Waste collection services would be provided by E. J. Harrison and Sons or other local service provider and would occur weekly. As on-leash dogs would be allowed on the proposed trail, a dog waste bag dispenser and waste receptacle would be provided at the western end of the trail near the proposed parking lot. The dispenser would be similar to those currently provided by the City of Carpinteria's dog waste disposal bag program. Trash and recycling cans, and dog waste bag dispensers are currently available in Rincon Beach County Park and would serve trail users.

2.7.7 Acquisition of Right-of-Ways

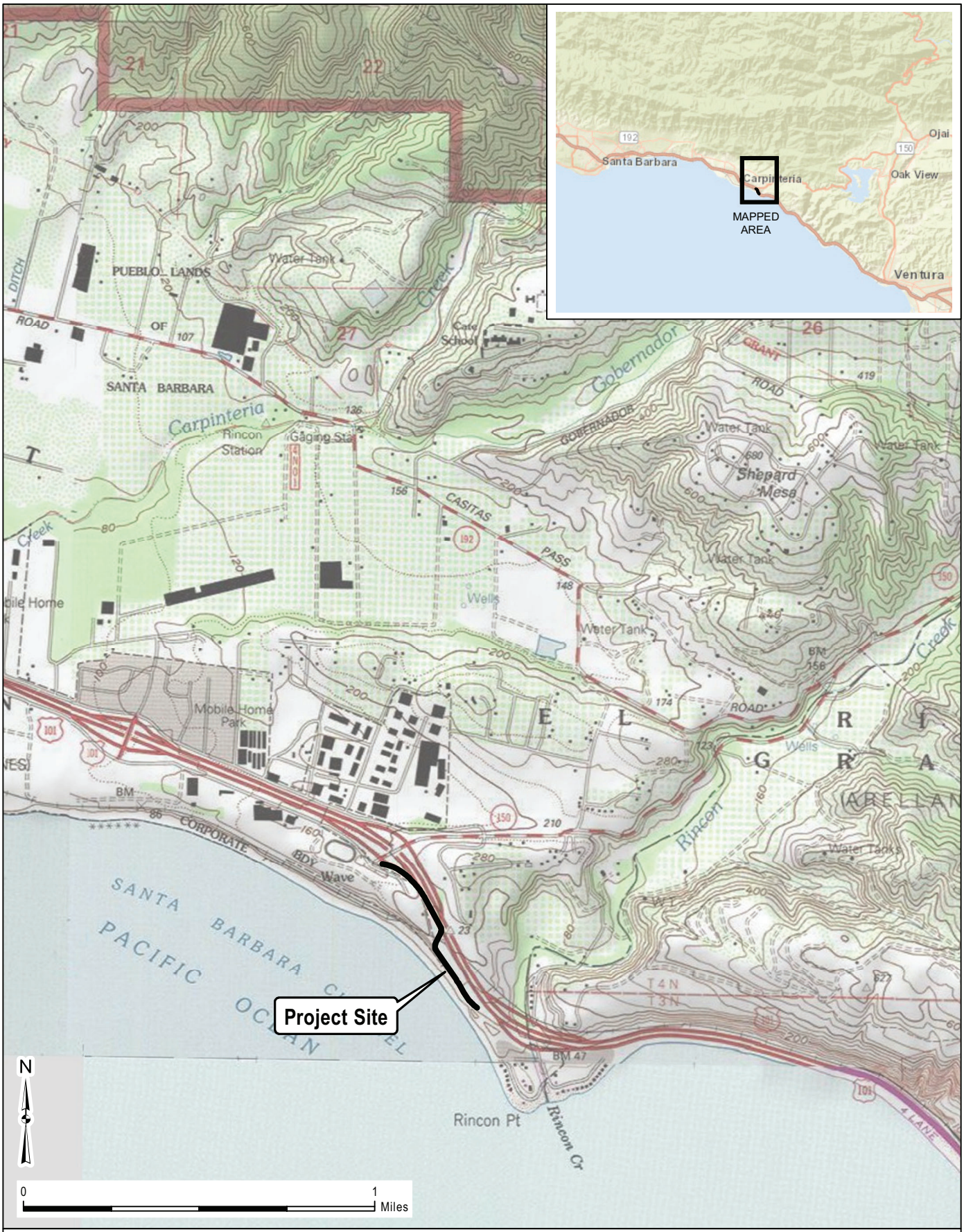
The proposed trail route crosses several parcels of land owned by public agencies. The trail parking lot location on Carpinteria Avenue is owned by the City of Carpinteria; trail implementation would require no easements for this portion. Heading east, the next portion of the trail, which courses down a hill parallel to the highway, is owned by the State of California as part of the U.S. Highway 101 right-of-way. For this portion of the route Caltrans will transfer in fee title these two parcels to accommodate placement of the trail and bridge structure on this property.[1] From there, the proposed trail route crosses two parcels of land owned by UPRR (APN 001-010-032 and APN 001-220-092); an encroachment permit and approval from the California Public Utilities Commission (CPUC) are in process for construction and maintenance of the bridge structure within the UPRR parcels. The trail then connects to a parcel of land owned by the County of Santa Barbara as part of Rincon Beach County Park; trail implementation would also require no easements for this portion.

[1] The process for transferring ownership interest in real property from Caltrans to another public entity typically entails several months, and is subject to approval by the California Transportation Commission. Transfer of the two parcels would be completed prior to any construction commencing on the trail and in compliance with CEQA.

2.8 Discretionary Actions

A discretionary action is an action taken by an agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. The proposed project would require consideration of the following discretionary actions by the City and by the County:

- City of Carpinteria: A conditional use permit (CUP) and coastal development permit (CDP) for the portion of the trail within the City of Carpinteria.
- County of Santa Barbara: A development plan permit (DVP), CUP and CDP for the portion of the trail within the County of Santa Barbara.



SOURCE: USGS 1:24,000 Topological Survey

FIGURE 2-1

Regional Location

Carpinteria Rincon Trail EIR

INTENTIONALLY LEFT BLANK

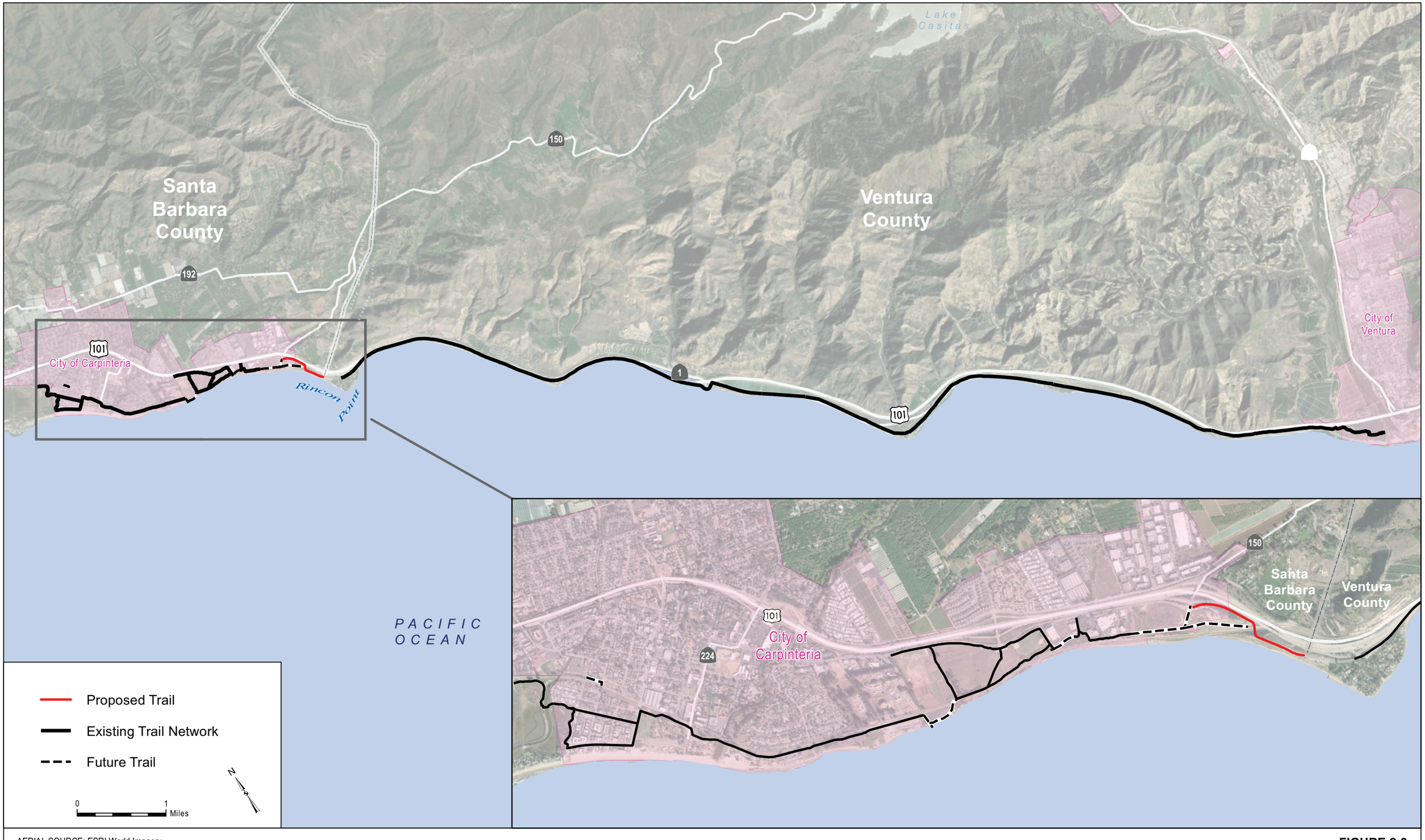
AERIAL SOURCE: CIRGIS 2017

FIGURE 2-2

Project Vicinity

Carpinteria Rincon Trail EIR

INTENTIONALLY LEFT BLANK



AERIAL SOURCE: ESRI World Imagery

FIGURE 2-3

Existing Trail Network

Carpinteria Rincon Trail EIR

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AERIAL SOURCE: CIRGIS 2017
ENGINEERING SOURCE: Dudek 2010

FIGURE 2-4
Site Plan

Carpinteria Rincon Trail EIR

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3 Environmental Analysis

The following sections analyze the potential environmental impacts that may occur as a result of implementation of the proposed Carpinteria Rincon Trail Project (project). Each issue analysis section includes a description of existing conditions, the criteria for the determination of impact significance, evaluation of potential project impacts including mitigation measures (if applicable), and a conclusion of significance after mitigation for impacts identified as requiring mitigation (if applicable).

The environmental issues addressed in this chapter include the following:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

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3.1 Aesthetics

This section describes the existing visual conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.1.1 Existing Conditions

3.1.1.1 Existing On-Site Conditions

The project site is currently mostly undeveloped and includes seven vegetation communities and areas that are developed or otherwise unvegetated. Five of the seven vegetation communities found are native scrub communities that qualify as coastal sage scrub or coastal bluff scrub. Long stretches of the proposed shared-use trail are dominated by native scrub vegetation. Between Rincon Beach County Park, located directly to the southeast of the project alignment site, and the Union Pacific Railroad (UPRR) pedestrian bridge crossing, which traverses the middle of the project alignment, native quail bush (*Atriplex lentiformis*) dominates much of the project alignment. Additional native vegetation borders the parking lot in the Rincon Beach County Park and occupies portions of the proposed trail alignment. Between the eastern terminus of Carpinteria Avenue, located to the northwest of the proposed alignment, and the UPRR crossing, California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*) and quail bush are the dominant plants.

3.1.1.2 Surrounding Land Uses

The project site is located within the City of Carpinteria (City), and within the County of Santa Barbara (County). The City's coastal location affords visual and recreational opportunities not readily available to inland communities. In addition, the City and surrounding area are situated against the Santa Ynez Mountain range that further contributes to the aesthetic appeal of the community. The creeks that are formed out of the hills, as well as the wetlands that they feed are valuable as visual resources, as well as functioning as recreational and open space areas. Carpinteria's streams, beaches, open spaces, foothills, agricultural lands, urbanized areas, landscapes and landforms all contribute to scenic views.

The City's bluffs provide visitors with a unique overlook along one of the few remaining undeveloped coastal bluffs of the South Coast of Santa Barbara County. Commonly seen from the bluffs are white-tailed kites, turkey vultures, red-tailed hawks, American kestrels, brush bunnies, bottlenose and common dolphins, California sea lions, Pacific harbor seals, California brown pelicans, western gulls, and migrating gray whales (City of Carpinteria 2009). Views of the Channel Islands National Marine Sanctuary and the Northern Channel Islands are also afforded from the proposed trail alignment.

The majority of the proposed trail alignment is located along abandoned roadways, or old terraced road and railroad cuts, and most of the area has been mechanically manipulated over the years. The informal existing trail extending north from Rincon Beach County Park has been graded flat and is currently mostly dirt, with original asphalt associated with the previous rail use remaining in some areas. Figure 3.1-1 provides photographs of the entire trail alignment illustrating existing visual conditions within and adjacent to the alignment.

3.1.1.3 Scenic Vistas and Resources

The City's General Plan and Local Coastal Plan designates the Carpinteria Bluffs as both scenic vistas and resources, for providing outstanding views of the Pacific Ocean and Channel Islands (City of Carpinteria 2003). In addition, the proposed project alignment, is located within a Scenic Corridor Overlay Designation for the County (County of Santa Barbara 2009), which is intended to give additional protection to areas where there are views from a major coastal road to the Pacific Ocean.

3.1.1.4 Scenic Highways

Currently there are no officially designated scenic highways in the City or within the project area located within the County (Caltrans 2020a). Designation of "Official Scenic Highways" is governed by Article 2.5 of the California Streets and Highways Code and pertains to State Highway Routes. Section 263.1 and 263.6 of the California Streets and Highways Code identifies Highway 150, which extends east from the northernmost portion of the proposed trail alignment, and US Highway 101, located directly to the east of the site, as eligible for designation as state scenic highways (Caltrans 2020a; City of Carpinteria 2003; County of Santa Barbara 2009). Lastly, as discussed under Section 3.1.1.3, Scenic Vistas and Resources, US Highway 101 adjacent to the project is located within the Scenic Corridor Overlay Designation for the County (County of Santa Barbara 2009), which is intended to provide development restrictions to avoid the blockage of important scenic views afforded from a highway or major roadway corridor.

3.1.2 Relevant Plans, Policies, and Ordinances

3.1.2.1 Federal

There are no federal regulations related to aesthetics relevant to the proposed project.

3.1.2.2 State

California Coastal Act

Facilities proposed within the state's coastal zone are subject to the visual resources policies of the Coastal Act, as described in the Public Resources Code (PRC) Division 20, California Coastal Act, Article 6, Development (2018) and summarized below. Each municipality within the jurisdiction of the California Coastal Commission is required to have a certified local coastal plan (LCP) in place that guides development in coastal zones to ensure compliance with Sections 30251.

Section 30251 Scenic and Visual Qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

California State Scenic Highway Program

The California Scenic Highway Program was created in 1963 with the intent "to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment." The state laws that govern the Scenic Highway Program are Sections 260 through 263 of the Streets and Highways Code. A highway may be designated scenic based on the natural landscape visible by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the views of the highway. The Scenic Highway Program includes both officially designated scenic highways and highways that are eligible for designation. It is the responsibility of local jurisdictions to apply for scenic highway approval, which requires the adoption of a Corridor Protection Program (Caltrans 2020b). In addition, once a scenic highway is designated, the local jurisdiction is responsible for regulating development within the scenic highway corridor. As discussed under Section 3.1.1.4, Scenic Highways, there are no officially designated scenic highways in the City or within the project area located within the County (Caltrans 2020a). However, Highway 150, which extends east from the northernmost portion of the alignment, and US Highway 101, located directly to the east of the site, are eligible for designation as state scenic highways (Caltrans 2020a; City of Carpinteria 2003).

3.1.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

City objectives and policies related to visual resources and aesthetics are provided in the Open Space, Recreation & Conservation Element, and Community Design Element of the City's General Plan/Local Coastal Land Use Plan. Applicable objectives and policies are as follows:

Objective OSC-13 Preserve Carpinteria's visual resources.

Policy OSC-13a Preserve broad, unobstructed views from the nearest public street to the ocean, including but not limited to Linden Avenue, Bailard Avenue, Carpinteria Avenue, and U.S. Highway 101. In addition, design and site new development on or adjacent to bluffs, beaches, streams, or the Salt Mash to prevent adverse impacts on these visual resources. New development shall be subject to the following measures:

Height and siting restrictions to avoid obstruction of existing views of visual resources from the nearest public areas.

In additional to the bluff setback required for safety, additional bluff setbacks may be required for oceanfront structures to minimize or avoid impacts on public views from the beach. Blufftop structures shall be set back from the bluff edge sufficiently far to ensure that the structure does not infringe on views from the beach except in areas where existing structures already impact public views from the beach.

Special landscaping requirements to mitigate visual impacts.

Policy OSC-13c Other than permitted development, discourage activities which could damage or destroy open space areas, including off-road vehicle use and unauthorized collecting of natural objects.

Policy OSC-13e Promote the safety of the community through the use of open space lands.

Policy OSC-13f Where appropriate, use open space lands as buffers for noise and visual nuisances and as transitions between incompatible uses.

Policy OSC-13g Require new development to protect scenic resources by utilizing natural landforms and native vegetation for screening structures, access roads, building foundations, and cut and fill slopes in project design which otherwise complies with visual resources protection policies.

Policy OSC-13h Plans for development shall minimize cut and sill operations. Plans that do not minimize cut and fill shall be denied.

Policy OSC-13i Design all new development to fit the site topography, soils, geology, hydrology, and other existing conditions and be oriented so that grading and other site preparations is kept to an absolute minimum. Preserve all-natural landforms, natural drainage systems, and native vegetation. Require all areas on the site not suited to development, as evidenced by competent soils, geology and hydrology investigations and reports remain as open space.

Policy OSC-13j Establish a "night-sky" ordinance that provides standards for the reduction of direct and ambient light in the night sky.

Objective CD-13 Ensure that lighting of new development is sensitive to the character and natural resources of the City and minimizes photo pollution to the maximum extent feasible.

Policy CD-13b Lighting shall be low intensity and located and designed so as to minimize direct view of light sources and diffusers and to minimize halo and spillover effects.

Additionally, the northern portion of the proposed project site falls within Bluffs Area 3 of Subarea 6, also known as the Bluffs, of the City's Community Design Subareas. The following objectives and policies for Subarea 6 are relevant to the proposed project and its potential aesthetic impacts:

Objective CDS6-1 Maintain the Carpinteria Bluffs Access, Recreation & Open Space Master Program as the coordinated plan for the Carpinteria Bluffs area that will allow development of uses identified in the Land Use Plan herein, so as to complement one another and preserve and enhance the site's coastal environment. The plan should be maintained so as to include information adequate to define the environmental resources and hazards within the Carpinteria Bluffs, and to delineate precise and appropriate policies for their management.

Policy CDS6-a Provide a clear direction for the future development of the Carpinteria Bluffs that:

1. Protects unique and sensitive environmental resources within the Bluffs.
2. Is compatible with the small-town character of Carpinteria, enhances the community's image, and contributes to a pleasant visual experience for travelers entering Carpinteria on U.S. 101 from the south.
3. Provides appropriate development opportunities for landowners within the Carpinteria Bluffs.

Objective CDS6-2 Ensure that development is controlled to avoid impacts to significant viewsheds, vistas, and view corridors.

Policy CDS6-b Development on the Bluffs shall not obstruct existing view corridors of the ocean and bluff top edge. In addition, views of the ocean and mountains for

users of the Carpinteria Bluffs Nature Park and coastal trail(s), for bluffs area property owners and visitors, and for passing motorists, shall be maintained.

Implementation Policy 59 Development that is located on or adjacent to bluffs, beaches, or streams shall be designed and sited to prevent adverse impacts on the visual quality of these resources.

Implementation Policy 60 New development shall maintain existing topographic variations of the Carpinteria Bluffs, such as the ridgeline in Bluffs I and the terracing of Bluffs III. Development of Bluffs I should be designed to respect the viewshed from the bluff trail looking north toward the mountains and from the Bluffs Nature Park looking west. Location and design of buildings shall respect the topography and follow topographic forms whenever possible, visible variations in the ground plane are to be retained, avoiding a flat, mass graded appearance. These variations in the ground plane are also to be reflected in variations in the roof lines of individual buildings.

Policy 65 As a part of development project plan submittals for the bluffs, tools such as physical or computer models, perspectives, or photographs, shall be included in order to demonstrate compliance with these measures and more generally the protection of Bluffs visual resources.

County of Santa Barbara Coastal Land Use Plan

The County of Santa Barbara's Coastal Land Use Plan guides planning and development in the coastal areas of the county, and is intended to protect coastal resources while still allowing for development. Where there is conflict between the Coastal Land Use Plan and the Comprehensive Plan, the Coastal Land Use Plan takes precedence. Applicable policies of the Coastal Land Use Plan include:

Policy 4-1 Areas within the coastal zone which are now required to obtain approval from the County Board of Architectural Review, because of the requirements of the "D"- Design Supervision Combining Regulations or because they are within the boundaries of Ordinance #453, shall continue to be subject to design review. In addition, developments in all areas designated on the land use plan maps as Commercial, Industrial, or Planned Development and residential structures on bluff top lots shall be required to obtain plan approval from the County Board of Architectural Review.

Policy 4-3: In areas designated as rural on the land use plan maps, the height, scale, and design of structures shall be compatible with the character of the surrounding natural environment, except where technical requirements dictate otherwise. Structures shall be subordinate in appearance to natural landforms; shall be designed to follow the natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen from public viewing places.

3.1.3 Thresholds of Significance

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

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, conflict with applicable zoning and other regulations governing scenic quality.
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
e) Result in cumulatively considerable impacts with regard to aesthetic and visual considerations.

3.1.4 Impact Analysis

a) Would the project have a substantial adverse effect on a scenic vista?

As discussed under Section 3.1.1.4, the City's General Plan and Local Coastal Plan designates the Carpinteria Bluffs as scenic vistas, for providing outstanding views of the Pacific Ocean and Channel Islands (City of Carpinteria 2003). In addition, the proposed trail alignment, is located within a Scenic Corridor Overlay Designation for the County, which is intended to give additional protection to areas where there are views from a major coastal road to the ocean (County of Santa Barbara 2009). However, the proposed trail is designed to take advantage of the area's scenic views and is set into the existing major ridge element present in this vicinity. The project would provide pedestrians and bicyclists traveling along the trail expansive views of the Santa Ynez mountain range backdrop (from trail sections north of the UPRR alignment), and of the Pacific Ocean, the local coastline and the Northern Channel Islands in the Santa Barbara Channel (from trail segments south of the UPRR alignment). Fencing along the trail would be only the maximum height necessary to provide safety (anticipated to be no more than three feet six inches), would be visually permeable (anticipated to be composed of a post and three rail fence with vinyl-clad chain link backing, that has often been used in local recreation areas to restrict access as necessary), and would use materials and colors that would blend with the natural environment. In addition, the proposed trail would be required to comply with County Policy, which requires that all development in these areas shall be reviewed by the County Board of Architectural Review. Nonetheless, due to the project's location within a scenic vista, impacts to a scenic vista would be potentially significant. In order to ensure compliance with this policy requirement for all segments of the trail, implementation of **Mitigation Measure (MM) AES-1** would be required (see Section 3.1.5, Mitigation, for details), and would reduce potentially significant impacts to **less than significant with mitigation.**

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

As discussed in Section 3.1.1.4, currently there are no officially designated scenic highways in the City of Carpinteria or within the project area located within the County (Caltrans 2020a). However, both Highway 150, which extends east from the northernmost portion of the alignment, and US Highway 101, located directly to the

east of the site, are eligible for designation as state scenic highways (Caltrans 2020a; City of Carpinteria 2003; County of Santa Barbara 2009). In addition, the trail alignment and adjacent US Highway 101 are located within a Scenic Corridor Overlay Designation for the County. The Scenic Corridor Overlay designation is a special tool, which is intended to give additional protection to areas where there are views from a highway or major road to important visual resources, including mountains, ocean, and unspoiled open spaces. US Highway 101, which parallels the ocean throughout much of the South Coast, affords many thousands of traveler's scenic mountain and ocean vistas. Lastly, there are no historic buildings within the project area and the proposed project would not remove trees that contribute to the overall aesthetic character of the project area.

Motorists traveling along US Highway 101 northbound have brief (a few seconds) glimpses of blue water views of the Pacific Ocean between the terraced and vegetated hillsides flanking the UPRR corridor. The ocean bluffs dominate this view toward the south, while mountains are visible in the distance to the north. Travelers headed southbound would need to glance over their shoulder to capture the same brief glimpses of the ocean between the hillsides along the UPRR Corridor. The proposed shared use trail would be visible to travelers in both directions as it would initially traverse the highway side of the terraced hill above the US Highway 101 southbound shoulder before turning northwest along the existing cut to connect with the proposed pedestrian bridge.

With implementation of the proposed project this southward view from US Highway 101, which currently contains steeper vegetated slopes and minimal visible development (namely a chain link fence, and highway lights and signage), would contain human-scale activity, including pedestrians and bicyclists as well as brief views of the concrete pathway and safety fencing, as well as the more notable pedestrian bridge spanning the UPRR corridor as indicated in the conceptual visual simulation presented in Figure 3.1-2. More specifically, Photos 2, 3, and 4, shown on Figure 3.1-2, illustrate the UPRR bridge feature, including perspectives looking toward the ocean and toward US Highway 101. Although the deck of the bridge would be at the same height as the US Highway 101 bridge over the UPRR corridor, the open metal truss structure would span the middle-ground view. However, these views are considered short duration and as shown in Figure 3.1-2, the new trail and bridge would not substantially modify or block any significant vistas or blue water ocean views. In addition, to the extent feasible, fencing and other man-made elements along the trail would be composed of materials and/or painted colors that would blend with the natural environment. The trail has been designed to be subordinate to the natural context and environment surrounding it and to enhance the scenic views and resources available in the area. Nonetheless, because the proposed project would result in alterations of a highly scenic resource, impacts to scenic resources would be potentially significant**.** County Policy requires that all development in View Corridor Overlay designation areas shall be reviewed by the County Board of Architectural Review. In order to ensure compliance with this policy requirement for all segments of the trail, **MM-AES-1** would be required and would reduce impacts to **less than significant with mitigation**.

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

The CEQA Guidelines define "urbanized area" as an incorporated city that meets either of the following criteria:

(1) Has a population of at least 100,000 persons.

(2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons.

The City has a population of 13,385 (U.S. Census Bureau 2020) and is surrounded by unincorporated Santa Barbara and Ventura County areas. Therefore, the project site is considered non-urbanized for CEQA purposes and this section analyzes whether or not the project would substantially degrade the existing visual character or quality of public views of the site and its surroundings.

As discussed above, the proposed trail would be visible from public areas such as US Highway 101 and would be partially visible from the public beach located directly west of the proposed trail. Although the proposed trail would be designed to be subordinate to the natural context and environment surrounding it, the view southward from US Highway 101, which currently contains steeper vegetated slopes and minimal visible development (namely a chain link fence, and highway lights and signage), would be transformed to contain human-scale activity, including pedestrians and bicyclists as well as brief views of the concrete pathway and safety fencing, as well as the more notable pedestrian bridge spanning the UPRR corridor as indicated in the conceptual visual simulation presented in Figure 3.1-2. In addition, under the proposed project, approximately 0.75 acres of the vegetation communities located within the proposed trail alignment would be permanently removed, while an additional 9.01 acres would be temporarily disturbed during construction. Additional plants occurring within the proposed trail alignment could also be accidentally destroyed during construction or damaged from runoff and erosion caused by construction.

In general, it should be noted the proposed trail alignment is situated on slopes that were previously graded to accommodate the construction of either US Highway 101 or the Union Pacific Railroad. Figure 3.1-2 provides low altitude aerial photograph exhibits of the entire trail alignment. As illustrated in the Figure 3.1-2, the existing slopes along the trail alignment have the common characteristic appearance of a manufactured slope, where the slope face is relatively planar and at a uniform slope angle, rather than a more undulating form normally present in natural slopes. With regard to the proposed trail design, the western portion of the trail (beginning at the eastern terminus of Carpinteria Avenue and extending to the UPRR alignment), would involve creation of an 18-foot wide bench for the trail, and re-grading of the existing slope above the trail to produce a shallower (more stable) slope. A second bench above the trail elevation would also be created on the eastern portion of this segment, to reduce erosion over the slope face of this segment with higher relative slope elevation (i.e., longer vertical face). Refer to Appendix G for earthwork cross-sections/profiles illustrating the slope re-working. The top elevation of this ridge would not be affected by the re-grading, and the overall area would continue to have the same general appearance as the existing condition (i.e., a manufactured slope along a road cut).

Under the proposed trail alignment, the location for the railroad crossing bridge would be located in close proximity to US Highway 101, consolidating bridge structures in one area, thereby lowering the noticeability of this new structure. Refer to Figures 3.1-2 for renderings of the bridge crossing shown from several different perspectives.

The eastern portion of the proposed trail would involve regrading of the slope above the former UPRR track alignment, to include a fill slope below the new trail bench, and a cut slope with mid-elevation bench above the trail bench (Refer to Appendix G for earthwork cross-sections/profiles illustrating the slope re-working). Again, the top elevation of the ridge within this segment of the trail alignment would not be modified and the overall area would continue to have the same general appearance as the existing condition (i.e., a manufactured slope along the original cut made for the railroad alignment).

The project also involves the construction of new vertical storm drains. As discussed in Section 2.7.3, the proposed storm drains would be installed during earth work for the trail and adjacent slopes, and would be buried to cross beneath the trail and then descend on the slope face to outlet at the beach elevation. Buried portions of the storm drain would be constructed of high-density plastic, transitioning to galvanized steel for the aboveground portions.

Due to the size of the proposed above ground components, the visibility of the above ground storm drain system would be minimal and would not substantially degrade the existing visual character or quality of public views of the site and its surroundings.

Temporary adverse effects during construction due to the loss of mature vegetation would occur over a limited time period, given new landscaping and restoration of native plants are proposed as part of the project. The project would enhance area aesthetics via native landscape installations along the perimeter of the trail and ongoing landscape maintenance. Where feasible, the project would remove the invasive weeds along the proposed trail alignment that could suppress native plants. Native plants, once established, would live without need for supplemental water, helping to ensure their ongoing success. The reduction of slope angle (making the slope gentler) would slow water runoff, improve soil water retention, and support more extensive vegetation cover on the sloped areas, compared to existing conditions. Nonetheless, the project would have a potentially significant adverse impact on visual character or quality of the site and its surroundings because of the removal of mature vegetation and addition of new human-scale development. Therefore, impacts would be potentially significant. **MM-AES-1**, which requires County Board of Architectural Review, and **MM-BIO-5**, which requires restoration or enhancement of coastal sage scrub and coastal bluff scrub communities in areas temporarily impacted by construction of the trail or adjacent area, would be required. Impacts would be **less than significant with mitigation incorporated.**

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

Materials used in the construction of the proposed trail, including metal railings for the bridge structure, would be finished in non-reflective coatings. No lighting is incorporated in the proposed trail design. Therefore, the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be **less than significant.**

e) Would the project result in cumulatively considerable impacts with regard to aesthetic and visual considerations?

Future development throughout the Carpinteria Valley has the potential to convert open space and natural landforms into built environment including structures, parking areas, roadways, etc., thereby adversely impacting the visual quality of scenic resources in the City of Carpinteria and County of Santa Barbara. With respect to the visual quality within the US Highway 101 corridor in the Carpinteria Valley, Caltrans concluded that proposed improvements under the South Coast 101 High Occupancy Vehicle project would result in substantial visual changes throughout much of the highway corridor due to loss of vegetation, increased paving and potential soundwalls, and because of the inherent alteration of scale, increase of hard surface, and loss of vegetative character, visual impacts would be significant and unavoidable (Caltrans 2014).The proposed project would not result in the blockage of available views to the ocean from US Highway 101, would incrementally change the character of the manufactured slopes upon which it would be placed, and is subject to architectural review and required restoration of existing vegetation. As such, limited visual impacts of the proposed project would be mitigated to less than significant levels, and the project would not have a considerable contribution to identified cumulatively significant visual impacts in the project region.

3.1.5 Mitigation

The project would require the implementation of **MM-AES-1** to reduce impacts to scenic vistas, scenic resources, and visual character or quality of public views of the site and its surroundings.

MM-AES-1 **Board of Architectural Review.** The Owner/Applicant shall obtain City Architectural Review Board (ARB) and County Board of Architectural Review (BAR) approval for project design. All project elements (e.g., design, scale, character, colors, materials, and landscaping shall be compatible with vicinity development and shall conform in all respects to ARB/BAR approval. ***Plan Requirements and Timing:*** The Owner/Applicant shall submit architectural drawings of the project including photo renditions from the beach of the storm drains proposed along the bluff face for review and shall obtain final City ARB and County BAR approval prior to issuance of the Development Plan, Conditional Use Permit and Coastal Development Permit. Grading plans, if required, shall be submitted to the City's Planning Department concurrent with or prior to ARB/BAR plan filing with the Carpinteria Community Development Department or County Planning and Development. ***Monitoring***: The Owner/Applicant shall demonstrate to Community Development Department staff and Planning & Development Department compliance monitoring staff that the project has been built consistent with approved ARB/BAR design and landscape plans prior to Final Building Inspection Clearance.

The project would require the implementation of **MM-BIO-5** to reduce impacts to visual character or quality of public views of the site and its surroundings.

MM-BIO-3 See Section 3.3.5.

3.1.6 Level of Significance After Mitigation

After implementation of **MM-AES-1** and **MM-BIO-3** impacts to aesthetics would be less than significant.

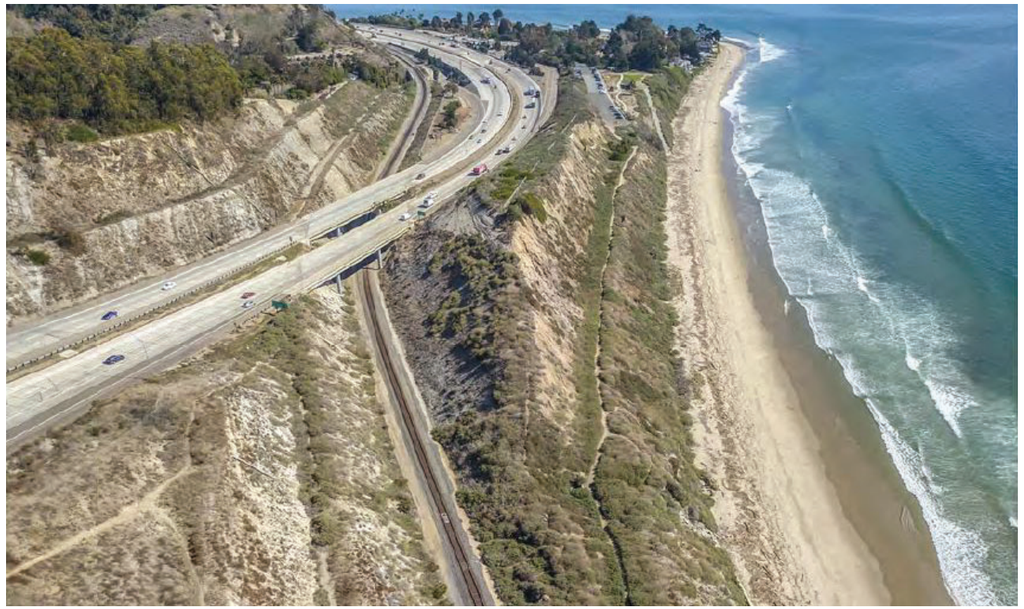

Photo 1: Existing Conditions from the Middle of the Proposed Alignment Looking Southeast

Photo 2: Existing Conditions Looking Southeast

Photo 3: Existing Conditions Looking Southeast Towards the Proposed Alignment

Photo 4: Existing Conditions Looking Southeast from the Middle of the Proposed Alignment

SOURCE: Carpinteria Rincon Trail MND Appendix A

FIGURE 3.1-1

Existing Conditions of Proposed Trail Alignment

Carpinteria Rincon Trail EIR

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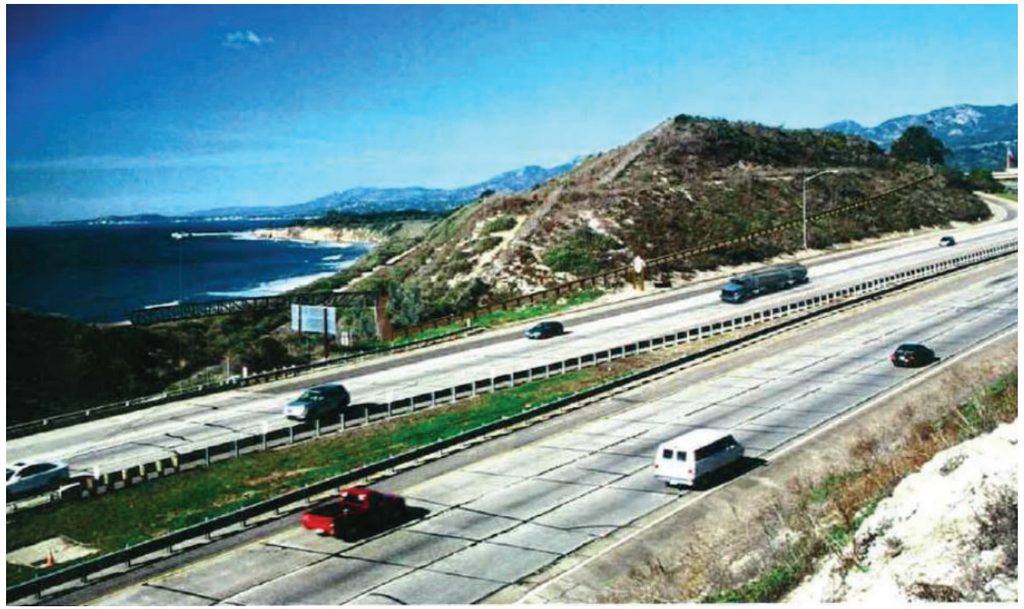

Photo 1: Proposed Trail As Seen from Across the U.S. 101 Looking Northwest

Photo 2: Proposed Trail Looking Towards the Pacific Ocean Across the UPRR Bridge

Photo 3: Proposed Trail Looking Towards the U.S. 101 Across the UPRR Bridge

Photo 4: Proposed Trail Looking Southeast from the North

SOURCE: Carpinteria Rincon Trail MND

DUDEK

FIGURE 3.1-2
Visual Simulations
Carpinteria Rincon Trail EIR

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3.2 Air Quality

This section describes the existing air quality conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

3.2.1 Existing Conditions

3.2.1.1 Climate and Topography

The weather of the Santa Barbara region, as in most of Southern California, is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average temperature ranges (in degrees Fahrenheit) from the mid-40s to the mid-70s. Most of the region's precipitation falls from November to April, with infrequent (approximately 10%) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches; the amount increases with elevation as moist air is lifted over the mountains (WRCC 2020).

The topography in the Santa Barbara region varies greatly, from beaches on the south to mountains and valleys in the north; along with local meteorology, it influences the dispersal and movement of pollutants in the basin. The mountains to the north prohibit dispersal of pollutants in that direction and help trap them in inversion layers.

The interaction of ocean, land, and the Pacific High Pressure Zone maintains clear skies for much of the year and influences the direction of prevailing winds. Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

3.2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards (criteria) for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, NO_2, CO, sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly NO_x and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists

[1] The descriptions of each of the criteria air pollutants and associated health effects are based on the EPA's (2016a) Criteria Air Pollutants and the CARB (2016a) Glossary of Air Pollutant Terms.

in the upper atmosphere O_3 layer (stratospheric ozone) and at the Earth's surface in the troposphere (ozone).[2] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is, thus, considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

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

Nitrogen Dioxide and Oxides of Nitrogen. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016b).

NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources of NO_x are transportation and stationary fuel combustion sources, such as electric utility and industrial boilers.

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

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

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

[2] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about five miles at the poles and about 10 miles at the equator.

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

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

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

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

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

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power

plants are the primary sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

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

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment and reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor that has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in the air can cause nervous system effects such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$, described above.

3.2.1.3 Non-Criteria Air Pollutants

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

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than one micrometer in diameter (about 1/70th the diameter of a human hair) and, thus, is a subset of $PM_{2.5}$ (CARB 2016a). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016a). CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines, including on-road diesel engines from trucks, buses, and cars; and off-road diesel engines from locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

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

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The fungus is very prevalent in the soils of California's San Joaquin Valley, particularly in Kern County. Kern County is considered a highly endemic county (i.e., more than 20 cases annually of Valley Fever per 100,000 people) based on the incidence rates reported through 2019 (California Department of Public Health 2019). The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils.

Santa Barbara County is not considered a highly endemic region for Valley Fever as the latest report from the California Department of Public Health listed Santa Barbara County as having 16.5 cases per 100,000 people (California Department of Public Health 2019). Furthermore, according to a Santa Barbara County Department of Public Health study, most of Valley Fever patients lived in North (85%) or Central (9%) Santa Barbara County with only 7% living in South County (Santa Barbara County Public Health Department 2018). Of the cases living in South County, half of them had traveled to areas outside of South County where cases of Valley Fever more commonly occur.

3.2.1.4 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The Santa Barbara County Air Pollution Control District (SBCAPCD) defines a sensitive receptor as a school, daycare facility, hospital, residence, or care facility (SBCAPCD 2020). The closest sensitive receptors to the project site are residences of the Rincon Point community. The closest residence to the proposed trail is located approximately 180 feet away (55 meters) at the eastern end of the trail.

3.2.1.5 Regional and Local Air Quality Conditions

South Central Coast Air Basin (SCCAB) Attainment Designation

Pursuant to the 1990 federal Clean Air Act Amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. As previously discussed, these standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on California Ambient Air Quality Standards (CAAQS) rather than the NAAQS.

The criteria pollutants of primary concern that are considered in this analysis are O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O_3.The SCCAB is currently designated nonattainment for PM_{10} under the CAAQS. It is designated attainment for the CAAQS for O_3, CO, PM_{10}, NO_2, SO_2, lead, and sulfates. The SCCAB is designated attainment for all NAAQS.

Table 3.2-1 summarizes the SCCAB's federal and state attainment designations for each of the criteria pollutants.

Table 3.2-1. SCCAB Attainment Classification

Pollutant	Federal Designation[a,b]	State Designation[c]
O_3 (1-hour)	Attainment[d]	Attainment
O_3 (8-hour)	Unclassifiable/Attainment	Attainment
CO	Attainment (Maintenance)	Attainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Unclassifiable/Attainment	Unclassified
NO_2	Unclassifiable/Attainment	Attainment

Table 3.2-1. SCCAB Attainment Classification

Pollutant	Federal Designation[a,b]	State Designation[c]
SO_2	Unclassified	Attainment
Lead[e]	Unclassifiable/Attainment	Attainment
Sulfates	(no federal standard)	Attainment
Hydrogen Sulfide	(no federal standard)	Attainment
Visibility-Reducing Particles	(no federal standard)	Unclassified
Vinyl chloride[e]	No federal standard	No designation

Notes:

[a] EPA 2016c.

[b] At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

[c] CARB 2016b.

[d] The federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in SIPs.

[e] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The Santa Barbara County Air Pollution Control District (SBCAPCD) monitors local ambient air quality at the project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2017 to 2019 are presented in Table 3.2-2. The Carpinteria monitoring station, located at Gobernador Canyon Rd., is the nearest air quality monitoring station to the project site, located approximately 2.1 miles northeast from the project site. The data collected at this station are considered representative of the air quality experienced in the project vicinity. Air quality data for O_3 and NO_2 from the Carpinteria monitoring station are provided in Table 3.2-2. Because CO, SO_2, PM_{10}, and $PM_{2.5}$ are not monitored at the Carpinteria monitoring station, CO measurements were taken from the Las Flores Canyon monitoring station located in El Capitan, California, approximately 33.5 miles west of the project site; SO_2 measurements were taken from the Isla Vista monitoring station located at the University of California, Santa Barbara, approximately 23.4 miles west of the project site; and PM_{10} and $PM_{2.5}$ measurements were taken from the Santa Barbara monitoring station located at 700 East Canon Perdido, Santa Barbara, approximately 12.8 miles north-west of the project site. The number of days exceeding the ambient air quality standards are also shown in Table 3.2-2.

Table 3.2-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2017	*2018*	*2019*	*2017*	*2018*	*2019*
Ozone (O_3)										
Carpinteria	ppm	Maximum 1-hour concentration	California	0.09	0.072	0.084	0.086	0	0	0
	ppm	Maximum 8-hour concentration	California	0.070	0.061	0.070	0.071	0	0	1
			National	0.070	0.060	0.070	0.071	0	0	1
Nitrogen Dioxide (NO_2)										
Carpinteria	ppm	Maximum 1-hour concentration	California	0.18	0.017	0.029	0.018	0	0	0
			National	0.100	0.017	0.029	0.018	0	0	0
	ppm	Annual concentration	California	0.030	0.001	0.002	0.001	0	0	0
			National	0.053	0.001	0.002	0.001	0	0	0
Carbon Monoxide (CO)										
Las Flores Canyon	ppm	Maximum 1-hour concentration	California	20	1.7	0.8	0.6	0	0	0
			National	35	1.7	0.8	0.6	0	0	0
	ppm	Maximum 8-hour concentration	California	9.0	1.3	0.6	0.5	0	0	0
			National	9	1.3	0.6	0.5	0	0	0
Sulfur Dioxide (SO_2)										
Isla Vista	ppm	Maximum 1-hour concentration	National	0.075	0.003	0.002	0.001	0	0	0
	ppm	Maximum 24-hour concentration	National	0.14	0.001	0.002	0.0005	0	0	0
	ppm	Annual concentration	National	0.030	0.0001	0.0005	0.00001	0	0	0

Table 3.2-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2017	*2018*	*2019*	*2017*	*2018*	*2019*
Coarse Particulate Matter (PM_{10})[a]										
Santa Barbara	µg/m³	Maximum 24-hour concentration	California	50	355.4	128.3	72.1	— (18)	11.1 (11)	4.3 (4)
			National	150	338.2	123.1	70.6	— (7)	0.0 (0)	0.0 (0)
	µg/m³	Annual concentration	California	20	—	26.6	21.5	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a]										
Santa Barbara	µg/m³	Maximum 24-hour concentration	National	35	231.6	37.7	22.5	— (13)	1.0 (1)	0.0 (0)
	µg/m³	Annual concentration	California	12	—	8.5	6.8	—	—	—
			National	12.0	—	8.5	6.8	—	—	—

Sources: CARB 2020; EPA 2020.

Notes: — = not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value; ppm = parts per million

Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (https://www.epa.gov/outdoor-air-quality-data) represent the highest concentrations experienced over a given year.

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

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

3.2.2 Relevant Plans, Policies, and Ordinances

3.2.2.1 Federal

3.2.2.1.1 Criteria Pollutants

The federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the CAA, including the setting of the National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions.

Under the CAA, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The CAA requires the EPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan (SIP) that demonstrates how those areas will attain the standards within mandated time frames.

3.2.2.1.2 Hazardous Air Pollutants

The 1977 federal CAA amendments required the EPA to identify national emission standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 CAA amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

3.2.2.2 State

3.2.2.2.1 Criteria Air Pollutants

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

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 3.2-3.

Table 3.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day Average	1.5 μg/m³	—	—
	Calendar Quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates	24 hours	25 μg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016b; EPA 2016d.

Notes: O_3 = ozone; ppm = parts per million by volume; μg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³= milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the three-year average of the annual 98th percentile of the one-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the three-year average of the annual 99th percentile of the one-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[l] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over three years.

[j] California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling three-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

3.2.2.2.2 Toxic Air Contaminants

A TAC is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Federal laws use the hazardous air pollutants to refer to the same types of compounds that are referred to as TACs under state law. California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588).

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. Pursuant to AB 2588, existing facilities that emit air pollutants above specified levels were required to (1) prepare a TAC emission inventory plan and report; (2) prepare a risk assessment if TAC emissions were significant; (3) notify the public of significant risk levels; and (4) if health impacts were above specified levels, prepare and implement risk reduction measures.

The following regulatory measures pertain to the reduction of DPM and criteria pollutant emissions from off-road equipment and diesel-fueled vehicles.

Idling of Commercial Heavy Duty Trucks (13 CCR 2485)

In July 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to control emissions from idling trucks. The ATCM prohibits idling for more than five minutes for all commercial trucks with a gross vehicle weight rating over 10,000 pounds. The ATCM contains an exception that allows trucks to idle while queuing or involved in operational activities.

In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.)

In July 2007, CARB adopted an ATCM for in-use off-road diesel vehicles. This regulation requires that specific fleet average requirements are met for NO_x emissions and for particulate matter emissions. Where average requirements cannot be met, best available control technology requirements apply. The regulation also includes several recordkeeping and reporting requirements.

In response to AB 8 2X, the regulations were revised in July 2009 (effective December 3, 2009) to allow a partial postponement of the compliance schedule in 2011 and 2012 for existing fleets. On December 17, 2010, CARB adopted additional revisions to further delay the deadlines reflecting reductions in diesel emissions due to the poor economy and overestimates of diesel emissions in California. The revisions delayed the first compliance date until no earlier than January 1, 2014, for large fleets, with final compliance by January 1, 2023. The compliance dates for medium fleets were delayed until an initial date of January 1, 2017, and final compliance date of January 1, 2023. The compliance dates for small fleets were delayed until an initial date of January 1, 2019, and final compliance date of January 1, 2028. Correspondingly, the fleet average targets were made more stringent in future compliance years. The revisions also accelerated the phaseout of older equipment with newer equipment added to existing large and medium fleets over time, requiring the addition of Tier 2 or higher engines starting on March 1, 2011, with some exceptions: Tier 2 or higher engines on January 1, 2013, without exception; and Tier 3 or higher engines on January 1, 2018 (January 1, 2023, for small fleets).

On October 28, 2011 (effective December 14, 2011), the Executive Officer approved amendments to the regulation. The amendments included revisions to the applicability section and additions and revisions to the definition. The initial date for requiring the addition of Tier 2 or higher engines for large and medium fleets, with some exceptions, was revised to January 1, 2012. New provisions also allow for the removal of emission control devices for safety or visibility purposes. The regulation also was amended to combine the particulate matter and NO_x fleet average targets under one, instead of two, sections. The amended fleet average targets are based on the fleet's NO_x fleet average, and the previous section regarding particulate matter performance requirements was deleted completely. The best available control technology requirements, if a fleet cannot comply with the fleet average requirements, were restructured and clarified. Other amendments to the regulations included minor administrative changes to the regulatory text.

In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025)

On December 12, 2008, CARB adopted an ATCM to reduce NO_x and particulate matter emissions from most in-use on-road diesel trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. The original ATCM regulation required fleets of on-road trucks to limit their NO_x and particulate matter emissions through a combination of exhaust retrofit equipment and new vehicles. The regulation limited particulate matter emissions for most fleets by 2011, and limited NO_x emissions for most fleets by 2013. The regulation did not require any vehicle to be replaced before 2012 and never required all vehicles in a fleet be replaced.

In December 2009, the CARB Governing Board directed staff to evaluate amendments that would provide additional flexibility for fleets adversely affected by the struggling California economy. On December 17, 2010, CARB revised this ATCM to delay its implementation along with limited relaxation of its requirements. Starting on January 1, 2015, lighter trucks with a gross vehicle weight rating of 14,001 to 26,000 pounds with 20-year-old or older engines need to be replaced with newer trucks (2010 model year emissions equivalent as defined in the regulation). Trucks with a gross vehicle weight rating greater than 26,000 pounds with 1995 model year or older engines needed to be replaced as of January 1, 2015. Trucks with 1996 to 2006 model year engines must install a Level 3 (85% control) diesel particulate filter starting on January 1, 2012, to January 1, 2014, depending on the model year, and then must be replaced after eight years. Trucks with 2007 to 2009 model year engines have no requirements until 2023, at which time they must be replaced with 2010 model year emissions-equivalent engines, as defined in the regulation. Trucks with 2010 model year engines would meet the final compliance requirements. The ATCM provides a phase-in option under which a fleet operator would equip a percentage of trucks in the fleet with diesel particulate filters, starting at 30% as of January 1, 2012, with 100% by January 1, 2016. Under each option, delayed compliance is granted to fleet operators who have or will comply with requirements before the required deadlines.

On September 19, 2011 (effective December 14, 2011), the Executive Officer approved amendments to the regulations, including revisions to the compliance schedule for vehicles with a gross vehicle weight rating of 26,000 pounds or less to clarify that *all* vehicles must be equipped with 2010 model year emissions equivalent engines by 2023. The amendments included revised and additional credits for fleets that have downsized; implement early particulate matter retrofits; incorporate hybrid vehicles, alternative-fueled vehicles, and vehicles with heavy-duty pilot ignition engines; and implement early addition of newer vehicles. The amendments included provisions for additional flexibility, such as for low-usage construction trucks, and revisions to previous exemptions, delays, and extensions. Other amendments to the regulations included minor administrative changes to the regulatory text, such as recordkeeping and reporting requirements related to other revisions.

California Health and Safety Code Section 41700

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

3.2.2.3 Local

San Barbara County Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The project Site is located within the SCCAB and is subject to the guidelines and regulations of the SBCAPCD. The SBCAPCD operates monitoring stations in the County, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections.

In Santa Barbara County, O_3 and particulate matter are the pollutants of main concern, since exceedances of state ambient air quality standards for those pollutants are experienced here in most years. For this reason, the SCCAB has been designated as a nonattainment area for the state PM_{10} standard. Santa Barbara County was designated

unclassifiable/attainment for the 2015 revised federal 8-hour ozone standard on April 30, 2018 and attainment for the state O_3 standard. The County is also unclassifiable/attainment for the federal $PM_{2.5}$ standard and unclassified for the state $PM_{2.5}$ standard. However, the County is currently in nonattainment for the state PM_{10} standard.

Clean Air Plans

Since 1992, Santa Barbara County has adopted or amended rules implementing over twenty five control measures controlling stationary source emissions. This has resulted in substantial amounts of reductions in ozone precursor pollutants (nitrogen oxides and reactive organic compounds). Prior to 1999, the County exceeded the national 1-hour O_3 standard, and in response to Clean Air Act requirements, the SBCAPCD prepared plans designed to bring the County into attainment of this standard. The SBCAPCD submitted a plan (maintenance plan) to CARB in November 2001 that demonstrated how the County would maintain the national 1-hour O_3 standard through the year 2015. This 2001 Clean Air Plan was approved by both CARB and the EPA. The 2001 Clean Air Plan also included a schedule to revise the plan in 3 years, as required by the California Clean Air Act, which would show how the County would work toward meeting the state 1-hour O_3 standard.

The 2004 Clean Air Plan was prepared to address the California Clean Air Act mandates under Health and Safety Code sections 40924 and 40925 that require areas update their Clean Air Plans to attain the state 1-hour O_3 standard every 3 years. The 2004 Clean Air Plan was a 3-year update to the 2001 Clean Air Plan. Similarly, the 2007 Clean Air Plan provided a 3-year update to the SBCAPCD's 2004 Clean Air Plan. The 2007 Clean Air Plan was prepared to address both federal and state requirements; specifically, the federal requirements that pertain to maintenance provisions of the federal Clean Air Act, which apply to the County's current designation as an attainment area for the federal 8-hour O_3 standard.

The 2010 Clean Air Plan addressed local plans to attain the California 8-hour O_3 standard. The 2010 Clean Air Plan was a 3-year update required to show how the SBCAPCD planned to meet the state 8-hour O_3 standard. In addition to planning for attainment of the state O_3 standard, the 2010 Clean Air Plan contained two chapters that were provided for informational purposes and were not regulatory in nature: a climate protection chapter, with an inventory of carbon dioxide emissions in the County, and a transportation and land use planning chapter (SBCAPCD and SBCAG 2011).

The 2013 Clean Air Plan implemented "an all feasible measures" strategy to ensure continued progress towards attainment of the state ozone standards and this plan satisfied all state triennial planning requirements. In this Plan, the SBCAPCD proposed to carry forward proposed stationary source control measures from the 2010 Plan that were pending rule adoption except for two which had been reclassified as "further study" measures. However, the primary focus was on marine shipping emissions. Marine shipping ozone precursor emissions have and will continue to account for the largest percentage of the County's inventory, over 50%. While CARB's future on-road vehicle standards for almost zero or zero tailpipe emissions (e.g., Partial Zero Emission Vehicles and Zero Emission Vehicles) will result in substantial emission reductions, without strategies to gain emission reductions from marine shipping, very little additional progress can be made towards attainment of the state 8-hour ozone standard (SBCAPCD and SBCAG 2015).

The 2016 Ozone Plan was adopted by the SBCAPCD Board in October 2016. The 2016 Ozone Plan incorporated and built upon the prior Clean Air Plans and predominantly focused on meeting attainment with the state ozone standards, in addition to achieving the adopted federal ozone standards. The 2016 Ozone Plan focused on reducing ozone precursor emissions through predicting vehicle activity trends and implementation of transportation control measures, which would serve to reduce mobile-source emissions, the primary source of ROC and NO_x emissions in the County. The 2016 Ozone Plan, carried forward proposed stationary source control measures that were identified

in the 2013 Clean Air Plan. The 2016 Ozone plan also moved two stationary source control measures that were previously listed as "further study" measures to proposed control measures. One control measure that was scheduled for adoption in the 2013 Clean Air Plan had been moved to the "further study" list. Finally, the 2016 Ozone Plan continued to pursue programs that will achieve near-term NO_x reductions in the marine shipping sector (SBCAPCD 2016).

The most recent update is the 2019 Ozone Plan, which builds upon the 2016 Ozone Plan. This 2019 Plan addresses the state ozone standards only. This is because the District is designated "attainment" for the federal 8-hour ozone standard of 0.070 ppm, which was promulgated by the U.S. EPA in December 2015. The federal attainment designation for Santa Barbara County was finalized in April 2018. Each plan update includes an evaluation of feasible reduction measures for stationary sources and considers numerous factors such as technology advancements, efficiency measures, cost-effectiveness, and the successful implementation of measures at other California air districts. All of the control measures that were found to be feasible in prior plan updates have been implemented, and any additional measures that could be proposed yield relatively smaller emission reductions with higher associated costs. The 2019 Plan still carries forward the contingency measures and some of the "further study" measures from the 2016 Plan. There is a discussion on how the Assembly Bill 617 Rule Development Schedule interacts with the 2019 Plan (SBCAPCD 2019).

The Santa Barbara County Association of Governments (SBCAG) is responsible for the development and analysis of the 2013 Clean Air Plan's on-road mobile source emission estimates and Transportation Control Measures (TCMs). SBCAG also provides the SBCAPCD with socio-economic projections that form the basis for many of the stationary and area source growth forecasts for the 2016 Ozone Plan. The 2016 Ozone Plan relies on the land use and population projections provided in SBCAG's Regional Growth Forecast. The Regional Growth Forecast is generally consistent with the local plans; therefore, the 2016 Ozone Plan is generally consistent with local general plans.

SBCAPCD Rules and Regulations

As stated above, the SBCAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SCCAB. The following rules and regulations apply to all sources in the jurisdiction of SBCAPCD, and would apply to the proposed project:

- **Rule 302 (Visible Emissions).** Rule 302 prohibits emissions of visible air contaminants from any potential source of air contaminants. The rule prohibits air contaminants, other than water vapor, that are a certain level of darkness or opacity from being discharged for a combined period of more than 3 minutes in any 1 hour.
- **Rule 303 (Nuisance).** This rule could apply to fugitive dust emitted during proposed construction activities or odors during operation. This rule states that a person shall not discharge air contaminants from any source that can cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or that can endanger the comfort, repose, health, or safety, of any such persons or their business or property.
- **Rule 311 (Sulfur Content of Fuels).** The purpose of this rule is to limit the sulfur content in gaseous fuels, diesel and other liquid fuels, and solid fuels for the purpose of both reducing the formation of SO_x and particulates during combustion.
- **Rule 345 (Control of Fugitive Dust from Construction and Demolition Activities).** Rule 345 establishes limits on the generation of visible fugitive dust emissions at demolition and construction sites. The rule includes measures for minimizing fugitive dust from on-site activities and from trucks moving on and off site.

City of Carpinteria

The City has adopted measures within the Open Space, Recreation & Conservation element of its General Plan/Coastal Land Use Plan to protect air quality (City of Carpinteria 2003). The following policies within that element are protective or air quality:

OSC-11a	Carefully review development that will significantly impact air quality.
OSC-11b	Promote the reduction of mobile source emissions related to vehicular traffic (e.g. promote alternative transportation, vanshare, buses).
OSC-11c	Promote use of solar heating and energy efficient building design to reduce stationary source emissions.
OSC-11d	Encourage the improvement of air quality in the Carpinteria Valley by implementing measures in the South Coast Air Quality Attainment Plan. For air quality enhancement, measures will include but not be limited to, measures to reduce dependence on the automobile and encourage the use of alternative modes of transportation such as buses, bicycles and walking.
OSC-11e	Encourage agricultural uses in the Plan Area to use the most energy efficient equipment available and to seek grants available to upgrade existing equipment such as boilers and diesel fueled machinery to equipment that has lower emissions and greater energy efficiency.

The following implementation policies also apply to air quality:

55	Incorporate the relevant policies and strategies from the Santa Barbara County Air Quality Attainment Plan (AQAP).
56	Cooperate in regional air quality plans, programs and enforcement measures.

3.2.3 Thresholds of Significance

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

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.

3.2.3.1 County of Santa Barbara Environmental Thresholds

The County of Santa Barbara Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2020) states that a significant adverse air quality impact may occur when air pollutant emissions associated with a project, individually or cumulatively:

- Interferes with progress toward the attainment of the ozone standard by releasing emissions which equal or exceed the established long-term quantitative thresholds for NO_x and ROC; or
- Equals or exceeds the state or federal ambient air quality standards for any criteria pollutant (as determined by modeling).

The evaluation of whether a project would conflict with or obstruct implementation of the applicable air quality plan is based on the consistency with land use and population forecasts. Consistency with an applicable air quality plan means that a project's direct and indirect emissions are accounted for in the air quality plan's emissions growth assumptions and the project is consistent with the policies developed in the air quality plan (SBCAPCD 2019). The relevant air quality plan to the proposed project is the 2019 Ozone Plan. The 2019 Ozone Plan relies on the land use and population projections provided by the SBCAG and CARB on-road emissions forecast in order to develop vehicle emission forecasts. In addition, the 2019 Ozone Plan utilizes SBCAG's Regional Growth Forecast to project population growth and associated air pollutant emissions within Santa Barbara County. Residential projects that exceed the amount of forecasted growth for the specific jurisdiction or sub-region would be considered inconsistent with the 2019 Ozone Plan.

The County's guidance also indicates that cumulative air quality impacts and consistency with the polices and measures in the Air Quality Supplement of the Comprehensive Plan, other general plans, and the Air Quality Attainment Plan should be determined for all projects (i.e., whether the project exceeds the Air Quality Attainment Plan emission projections or growth assumptions). Pursuant to the County's Threshold Manual, the following issues should also be discussed, but only if they are applicable to the project:

- Emissions which may affect sensitive receptors (e.g. children, elderly, or acutely ill);
- Toxic or hazardous air pollutants in amounts which may increase cancer risk for the affected population; or
- Odor or another air quality nuisance problem impacting a considerable number of people

Chapter 5 of the Santa Barbara County Environmental Thresholds and Guidelines Manual addresses the subject of air quality. The Long-term/Operational Emission Thresholds provide that a proposed project will not have a significant impact on air quality if operation of the project will:

- Emit (from all project sources, mobile and stationary), less than the daily trigger for offsets of any pollutant (Currently 55 pounds per day for NO_x and ROC, and 80 pounds for PM_{10});
- Emit less than 25 pounds per day of NO_x or reactive organic compounds from motor vehicle trips only;
- Not cause or contribute to a violation of California or National Ambient Air Quality Standards (except ozone);
- Not exceed the SBCAPCD's health risk public notification thresholds adopted by the SBCAPCD board; and
- Be consistent with the adopted federal and state Air Quality Plans.

As stated in the SBCAPCD's *Scope and Content of Air Quality Sections in Environmental Documents* (SBCAPCD 2017), no quantitative thresholds have been established for short-term impacts associated with construction

activities. However, the SBCAPCD uses 25 tons per year for ROC or NO_x as a guideline for determining the significance of construction impacts. Additionally, the County's grading ordinance requires standard dust control conditions for all projects involving grading activities. The Long-term/Operational Emission Thresholds listed above have been established to address mobile emissions (i.e., motor vehicle emissions) and stationary source emissions (i.e., station boilers, engines, paints, solvents, and chemical or industrial processing operations that release pollutants) (SBCAPCD 2017).

The County's Threshold Manual states that a project will have a significant air quality impact if it causes, by adding to the existing background CO levels, a CO "hot spot" where the California one-hour standard of 20 parts per million carbon monoxide is exceeded, which typically occurs at severely congested intersections. The County's project screening for CO impacts are the following:

1. If a project contributes less than 800 peak hour trips, then CO modeling is not required.
2. Project contributing more than 800 peak hour trips to an existing congested intersection at level of service (LOS) D or below, or will cause an intersection to reach LOS D or below, may be required to model for CO impacts. However, projects that will incorporate intersection modifications to ease traffic congestion, are not required to perform modeling to determine potential CO impacts.

3.2.4 Impact Analysis

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

SBCAPCD and the Santa Barbara County Association of Governments (SBCAG) are responsible for developing and implementing the Clean Air Plan (SBCAPCD 2019) for attainment and maintenance of the ambient air quality standards in the basin. SBCAPCD further describes consistency with the Clean Air Plan for projects subject to these guidelines, which means that direct and indirect emissions associated with the project are accounted for in the Clean Air Plan's emissions growth assumptions, and the project is consistent with policies adopted in the Clean Air Plan. The 2019 Ozone Plan was adopted by the District Board on December 19, 2019 and is the most recent applicable air quality plan. The 2019 Ozone Plan is the 3 -year update required by the state to show how SBCAPCD plans to meet the state 8-hour O_3 standard (SBCAPCD 2019). However, after the 2019 Ozone Plan was adopted the County was designated as attainment for the state O_3 standards on July 1, 2020.

The 2019 Ozone Plan relies primarily on the land use and population projections provided by SBCAG and CARB on-road emissions forecasts as a basis for vehicle emissions for all County incorporated and unincorporated areas. The project site within the City of Carpinteria has a Carpinteria General Plan/Coastal Land Use Plan land use designation of Visitor-Serving Commercial (2003) and has been zoned for Resort Zone District use. The portion of the project within the County of Santa Barbara is designated as Other Open Land and Recreation and is zoned Transportation Corridor and Recreation (County of Santa Barbara 2021). The proposed trail is an apt use for the City's and County's vision for the properties within each jurisdiction. The proposed project would not conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project.

If a project proposes development that is greater than that anticipated in the local plan and SBCAG's growth projections, the project might be in conflict with the 2019 Ozone Plan and may contribute to a potentially significant cumulative impact on air quality. Based on the nature of the proposed project, implementation of the project would not result in growth-inducing development. As such, the proposed project would not contribute to the projected City of Carpinteria or Santa Barbara County populations as estimated in the Santa Barbara

County Association of Governments 2040 Regional Transportation Plan-Sustainable Communities Strategy Regional Growth Forecast. Accordingly, the project is considered to be consistent with the APCD 2019 Ozone Plan and impacts to air quality would be **less than significant**.

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?

Cumulative air quality impacts are the effect of long-term emissions of the proposed project plus any existing emissions at the same location, as well as the effect of long-term emissions of reasonably foreseeable similar projects, on the projected regional air quality or localized air pollution in the County. As discussed in SBCAPCD's Scope and Content of Air Quality Sections in Environmental Documents (SBCAPCD 2017), the cumulative contribution of project emissions to regional level should be compared with existing programs and plans, including the most recent Clean Air Plan.

Emissions from construction were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (CAPCOA 2017). For the purposes of modeling, it was assumed that construction would commence in March 2022[3] and would be completed by approximately March 2024, which also accommodates periods where work would not occur due to potential weather-related conditions. The equipment mix anticipated for construction activity was based on the City of Carpinteria Parks and Recreation Department input for typical construction practices. The equipment mix is meant to represent a reasonably conservative estimate of construction activity. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for approximately eight hours per day, five days per week (22 days per month). To account for dust control measures in the calculations, it was assumed that the active sites would be watered at least two times daily, resulting in an approximately 55% reduction in dust generation to comply with SBCAPCD Rule 345.The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate):

- Site preparation: 2 months
- Grading: 11 months
- Trail Construction: 5 months
- Bridge Construction: 1 month
- Paving: 2 months
- Architectural Coating: 1 month

The majority of the phases listed above would occur concurrently and would not occur sequentially in isolation. The estimated construction duration was provided by the project applicant. Detailed construction equipment modeling assumptions are provided in Appendix B, Air Quality, Greenhouse Gas, and Energy Calculations.

The construction equipment mix used for estimating the construction emissions of the proposed project is based on information provided by the project applicant and is shown in Table 3.2-4.

[3] The analysis assumes a construction start date of March 2022, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Table 3.2-4. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Site Preparation	8	0	0	Graders	1	8
				Rubber Tired Dozers	1	7
				Tractors/Loaders/ Backhoes	1	8
Grading	8	0	11,764	Crawler Tractors	1	7
				Graders	1	6
				Tractors/Loaders/ Backhoes	1	7
Trail Construction	28	12	0	Crawler Tractors	1	7
				Tractors/Loaders/ Backhoes	1	6
Bridge Construction	28	12	0	Cranes	1	8
				Tractors/Loaders/ Backhoes	1	6
				Welders	3	8
Paving	6	0	0	Crawler Tractors	1	8
				Paving Equipment	1	8
Architectural Coating	6	0	0	Air Compressors	1	6

Note: See Appendix B for details.

For the analysis, it was assumed that heavy construction equipment would be operating five days per week (22 days per month) during proposed project construction. Construction worker and vendor trips were based on CalEEMod default assumptions and rounded up to the nearest whole number to account for whole round trips.

Proposed project construction would include 107,386 cubic yards of cut, a total of 14,860 cubic yards of fill, and the export of a total of 92,526 cubic yards of earth material during the grading phase. It is anticipated that earth movement would be primarily, if not completely, accomplished using off-road equipment (e.g., scrapers and excavators). Off-road travel was assumed to be 1,000 feet per trip for vendor and haul trucks.

A detailed depiction of the construction schedule—including information regarding phases and equipment used during each phase—is included in Appendix B of this Environmental Impact Report. The information contained in Appendix B was used as CalEEMod model inputs.

Construction Emissions

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

quality impacts. Table 3.2-5 presents the estimated annual construction emissions generated during construction of the project. Details of the emission calculations are provided in Appendix B.

Table 3.2-5. Estimated Annual Construction Emissions

Year	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Tons per Year					
2022	0.14	2.50	1.03	0.01	0.24	0.10
2023	0.07	0.85	0.53	0.00	0.17	0.05
Maximum Annual Emissions	**0.14**	**2.50**	**1.03**	**0.01**	**0.24**	**0.10**
SBCAPCD Threshold	*25*	*25*	*25*	*25*	*25*	*25*
Threshold Exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix B.
Notes: ROC = reactive organic compound; CO = carbon monoxide; NO_x = oxides of nitrogen; SO_x = sulfur oxides; PM_{10} = course particulate matter; $PM_{2.5}$ = fine particulate matter

As shown in Table 3.2-5, annual construction emissions would not exceed the SBCAPCD significance thresholds for ROC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ emissions during construction. Therefore, construction of the proposed project would result in a **less than significant** impact.

Operational Emissions

The proposed project would consist of maintenance activities including landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. There would be no energy use (electricity or natural gas) associated with the project. No lighting is incorporated into the project design.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as described in the following text.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings, such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from the application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the surface area for painting equals 2.7 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2017).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days.

Mobile Sources

Following the completion of construction activities, the proposed project would generate criteria pollutant emissions from mobile sources (vehicular traffic) as a result of the periodic maintenance of the proposed project. It was assumed that one maintenance trip would occur per week, for 2 one-way trips. CalEEMod default data, including trip characteristics and emissions factors, were used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles in accordance with the associated use, as modeled within the CalEEMod. Emission factors representing the vehicle mix and emissions for 2024 were used to estimate emissions associated with vehicular sources.

As discussed, pollutant emissions associated with long-term operations were quantified using CalEEMod. Project-generated area and mobile source emissions were estimated based on CalEEMod default user assumptions. Table 3.2-6 presents the daily maximum emissions associated with operation (Year 2024) of the proposed project. Details of the emission calculations are provided in Appendix B.

Table 3.2-6. Estimated Maximum Daily Operational Emissions

Emission Source	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pound per Day					
Area	0.01	0.00	0.00	0.00	0.00	0.00
Vehicular	0.00	0.01	0.03	0.00	0.01	0.00
Combined Total Emissions	**0.01**	**0.01**	**0.03**	**0.00**	**0.01**	**0.00**
Vehicle Source Emissions Threshold	*25*	*25*	—	—	*N/A*	—
Threshold Exceeded?	No	No			N/A	
Area + Vehicle Source Emissions Threshold	*240*	*240*			*80*	
Threshold Exceeded?	No	No			No	

Source: Appendix B.
Notes: ROC = reactive organic compound; CO = carbon monoxide; NO_x = oxides of nitrogen; SO_x = sulfur oxides; PM_{10} = course particulate matter; $PM_{2.5}$ = fine particulate matter

As shown in Table 3.2-6, the combined daily emissions would not exceed the SBCAPCD operational thresholds for ROC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$.

Due to the County's nonattainment status for the PM_{10} standard and its regional nature, if a project's emissions exceed the long-term emission thresholds, then the project's cumulative impacts will be considered significant. For projects that do not have significant PM_{10} emissions or localized pollutant impacts, if emissions have been taken into account in the most recent Clean Air Plan growth projections, regional cumulative impacts may be considered less than significant. When a project's emissions exceed the thresholds and are clearly not accounted for in the most recent Clean Air Plan growth projections, then the project is considered to have significant cumulative impacts that must be mitigated to a less than significant level.

In analyzing cumulative impacts from the proposed project, the assessment must specifically evaluate the project's contribution to the cumulative increase in pollutants for which the County is designated as nonattainment for the NAAQS or CAAQS. The County is currently in attainment of NAAQS and is in attainment for all CAAQS with the exception of the state standards for PM_{10}. Construction and operation of the proposed

project would generate emissions of ROCs and NO_x (O_3 precursors) and PM_{10}; however, the proposed project would not exceed SBCAPCD guidance for annual construction emissions or SBCAPCD thresholds for daily operational emissions. Because implementation of the proposed project would result in less than significant impacts associated with operation of the project, the project's contribution to the County's nonattainment status for the state PM_{10} standard would be less than cumulatively considerable. Because the proposed project would not result in significant PM_{10} emissions, and project-generated emissions have been taken into account in SBCAPCD's 2019 Ozone Plan growth projections, cumulative impacts would be **less than significant**.

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

Carbon Monoxide Hotspots

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-loving vehicles. In accordance with the County Guidelines (as shown in Section 3.2.3.1), a potential hotspot may occur if a project contributes more than 800 peak hour trips to an existing intersection with a Level of Service (LOS) of D or worse (County of Santa Barbara 2020). The peak construction trips would generate up to 61 one-way trips per day (see Appendix B), six of which would be anticipated to occur during the peak hour. During operation, it was assumed that one maintenance vehicle would visit the site per week. With respect to trail users, keep in mind that the trail is intended to promote alternative transportation modes, and to reduce local vehicle trips to the Rincon Preserve and Rincon Beach County Park, by offering a pedestrian and cyclist link between these resources. While some visitors may drive to Rincon Preserve or Rincon Beach County Park specifically to use the new trail segment, such trips are expected to be very limited in comparison to existing visitors to either of these areas. The majority of trail users would be expected to walk from nearby areas or to cycle to and along the trail. Given there are approximately 190 parking spaces at Rincon Beach County Park, and future parking spaces for Rincon Preserve would not be anticipated to exceed 60, parking supply alone would practically limit peak hour trips for Rincon Beach, Rincon Trail, and Rincon Preserve to far below the 800 peak hour trip threshold. Therefore, the County's screening threshold for CO hotspots would not be exceeded during construction or operation. As such, impacts related to CO hotspots from the project would be **less than significant**.

Toxic Air Contaminants

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TAC's resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be diesel particulate matter (DPM), emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs to reduce DPM emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Therefore, for this project, the exposure period to consider would be 24 months, consistent with the duration of construction activity.

Because the project would involve construction activities in several areas across the site, the project would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of the development, which would limit the exposure of any proximate individual sensitive receptor to

TACs. Furthermore, the closest sensitive receptors to the project site are residences of the Rincon Point community. The closest residence to the proposed trail is located approximately 180 feet (55 meters) from the truck haul route at the eastern end of the trail. Therefore, impacts to sensitive receptors would be **less than significant** during construction.

The VOC and NOx emissions, as described previously, would nominally contribute to regional O_3 concentrations and the associated health effects. In addition to O_3, NOx emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 3.2-2, the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected that the proposed project's operational NOx emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO emissions would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter, obstruct the SCCAB from coming into attainment for these pollutants, or contribute to significant health effects associated with the particulates. Therefore, the project would have a **less than significant** impact with respect to criteria air pollutant exposure for sensitive receptors.

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

Although SBCACPD has not adopted quantitative thresholds of significance for odor impacts, SBCAPCD recommends the development of an odor abatement plan for projects that may generate nuisance odors that may affect a substantial number of people.

Construction Odor Impacts

Potential sources that may emit odors during construction activities include diesel equipment and gasoline fumes. Odors from these sources would be localized and generally confined to the project site. The closest residence to the proposed trail is located approximately 180 feet (55 meters) at the eastern end of the trail. Such odors are temporary and generally occur at magnitudes that would not affect a substantial number of people. Furthermore, construction activity would not be centrally located or remain in one location for a substantial amount of time. Therefore, construction of the proposed project would not cause an odor nuisance, and impacts associated with odors during construction would be considered **less than significant**.

Operational Odor Impacts

Certain projects have the potential to cause significant odor impacts because of the nature of their operation and their location. Examples include fast-food restaurants, bakeries, and coffee roasting facilities (SBCAPCD 2017). The proposed project land use is not considered an odor-generating use. Trail maintenance activities involving the occasional use of a light-duty truck would not generate noticeable odor emissions above existing vehicles using Rincon Beach County Park or nearby US Highway 101. Odors associated with equipment and trail equipment and trail maintenance would be temporary and generally confined to the project alignment. Therefore, operation of the proposed project would not cause an odor nuisance, and impacts associated with odors during maintenance activities would be considered **less than significant**.

3.2.5 Mitigation

Impacts would be less than significant prior to mitigation. Therefore, no mitigation is required.

3.2.6 Level of Significance After Mitigation

The project would result in a less than significant impact prior to mitigation.

3.3 Biological Resources

This section describes the existing biological resources conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and proposes mitigation measures to reduce potential impacts to a less than significant level. The following discussion is based on review of existing databases; field surveys performed in 2011, 2018, 2019, and 2020; knowledge of the project vicinity from previous biological surveys, consultations with local expert; and information from the Carpinteria Rincon Trail Proposed Final Mitigated Negative Declaration (MND) (City of Carpinteria 2015) and the Carpinteria Rincon Trail Final Subsequent MND (City of Carpinteria 2019) certified January 6, 2020.

3.3.1 Existing Conditions

The project is located on lands within the jurisdiction of the City and the County of Santa Barbara (County) (Figure 2-1, Project Location). Carpinteria is a quaint seaside town located about 12 miles east of Santa Barbara near the intersection of Highway 150 and U.S. Highway 101, near the Ventura County line. The proposed trail alignment is located largely along an area of coastal bluff known as the Carpinteria Bluffs. As described in the City of Carpinteria General Plan/Local Coastal Land Use Plan & Environmental Impact Report (City of Carpinteria 2003), the Carpinteria Bluffs are among the last remaining coastal open space areas within the County and are a prime example of undisturbed California coastline. The Carpinteria Bluffs provide important public access to the coast for residents and visitors. The Carpinteria Bluffs are partially developed and further development or redevelopment of portions of the Carpinteria Bluffs are anticipated over time making the establishment of policies to protect the environment and character of the place of utmost importance.

The project site crosses several parcels of land owned by public agencies. The trail parking lot location on Carpinteria Avenue is owned by the City of Carpinteria. Heading east, the next portion of the proposed trail route is owned by the State of California as part of the U.S. Highway 101 right-of-way and from there the proposed trail route crosses two parcels of landed owned by Union Pacific Railroad (UPRR) (APN 001-010-032 and APN 001-220-092). The proposed trail route then connects to a parcel of land owned by the County as part of Rincon Beach County Park. A series of terraces interspersed with steep slopes along the proposed alignment route are evidence of extensive past grading for a former railroad bed and road cuts. Further evidence of extensive past grading is evident in the soils within the project site, as the vast majority of the site is composed of xerorthents, cut and fill areas, which are soils that are well drained, and are formed in material with a high content of gravel and cobbles derived from mixed rock sources (USDA 2020a). The remaining portion of the biological survey area contains a mapped section of beaches soils composed of sandy or stony alluvium along the coast, located along the bottom of the hill at the edge of the beach within Rincon Beach County Park (USDA 2020a).

The Union Pacific Railroad (UPRR) right-of-way provides an unvegetated corridor approximately 50 feet wide containing a single track that divides the project alignment near its center. The eastern terminus of the proposed trail alignment is within Rincon Beach County Park parking lot, consisting of both undeveloped terraces as well as a largely developed area where a paved parking lot and landscaping dominate. An existing unsanctioned trail extends between Rincon Beach County Park and the UPRR tracks extending west on the bluffs to the north of the UPRR tracks with spur trails providing beach access. The western portion of the alignment is situated west and south of U.S. Highway 101 and partly includes an unvegetated pull-out at the eastern terminus of Carpinteria Avenue as well as an area of disturbed ground adjacent to the pull-out and undeveloped open space south of U.S. Highway 101.

Despite past disturbances, long stretches of the proposed trail alignment are dominated by native scrub vegetation. In the eastern portion of the proposed trail alignment between the UPRR crossing and Rincon Beach County Park, the native shrub, quailbush (*Atriplex lentiformis*), is the dominant shrub throughout much of the area. Additional native vegetation borders the parking lot in Rincon Beach County Park and occupies portions of the proposed trail alignment. In the western portion of the proposed trail alignment between the eastern terminus of Carpinteria Avenue and the UPRR crossing, California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), and quailbush are the dominant plant species.

The project site region is identified by USGS White Ledge Peak 7.5 quadrangle as well as the four coastally influenced adjacent USGS 7.5-minute quadrangles (Ventura, Matilija, Pitas Point, Carpinteria).

3.3.1.1 Literature Review

Prior to the 2011 field visit conducted by Dudek, the California Natural Diversity Database (CNDDB) was queried for records of special-status plants and wildlife in the vicinity of the site. In addition, Carpinteria local botanist Larry Ballard was consulted for information on rare plants potentially occurring in the project vicinity, including those on the Rare Plants of Santa Barbara County list, issued by the Central Coast Center for Plant Conservation (CCCPC) (Wilken 2007). Additional field surveys were performed in 2018, 2019, and 2020. Prior to 2018, 2019, and 2020 field surveys, the location of documented special-status plant species near the project site and that have potential to occur on site were identified through a query of the CNDDB (CDFW 2018; CDFW 2020a) and the updated Rare Plants of Santa Barbara County (Wilken 2018). In summary the following were reviewed for this project:

- 2008-2009 Second Wet Season 90-Day Vernal Pool Branchiopod Survey Report, King Ventures Rincon Bluffs Carpinteria, California (Sage Institute Inc. 2009)
- Administrative Draft Environmental Impact Report Carpinteria Bluffs, Areas III Development Plan (INTERFACE Planning and Counseling Corporation 1981)
- Carpinteria Bluffs Areas 2 and 3 Biological Resource Analysis & Mapping (Firma 2008)
- Carpinteria Bluffs Biological Resources and Environmentally Sensitive Habitat (Condor Environmental Planning Services 1996)
- CDFW CNDDB (CDFW 2018; CDFW 2020a)
- CNPS Inventory of Rare and Endangered Plants (CNPS 2020)
- Draft Carpinteria Bluffs Area III Project Biological Resources Due Diligence Report (Dudek 2012a)
- Evaluation Report Carpinteria Bluffs Biological Resources and Environmentally Sensitive Habitat Areas (LSA Associates Inc. 1997)
- Initial Biological Assessment: Rincon Trail (VJS Biological Consulting 2008)
- List of potentially occurring listed species generated from a review of the USFWS's IPaC Trust Resources Report list of federal and threatened species (USFWS 2020a)
- Proposed Final Mitigated Negative Declaration Carpinteria Rincon Trail (City of Carpinteria 2015)
- Proposed Final Subsequent Mitigated Negative Declaration. Carpinteria Rincon Trail (City of Carpinteria 2019)
- Rare Plants of Santa Barbara County list (Wilken 2007, 2018)
- USGS National Hydrography Dataset (USGS 2020)
- USFWS Critical Habitat Mapper (USFWS 2020b)

- USFWS National Wetlands Inventory (USFWS 2020c)
- Wetland Delineation of Pool Features at Carpinteria Bluffs Areas III per the California Coastal Act, City of Carpinteria, California (Dudek 2012b)

The biological survey area includes the proposed trail alignment as well as the extent of proposed temporary impacts encompassing vegetated terraces and slopes above and below the proposed trail alignment as well as portions of the developed Rincon Beach County Park (see Figure 3.3-1).

3.3.1.2 Vegetation Communities and Wildlife Habitats

During 2018, Dudek biologists conducted vegetation community mapping within the biological survey area in the field using the List of Vegetation Alliances and Associations (Natural Communities List) (CDFW 2010), which is based on the *Manual of California Vegetation, Second Edition* (MCV2) (Sawyer et al. 2009), as shown in Table 3.3-1. The vegetation communities were updated to align with the California Natural Community List (CNCL) (CDFW 2020b), which incorporated changes based on taxonomic revisions related to dominant plants, reassignment of associations to new or different alliances, and revisions to the rarities rankings of some communities. If vegetation observed did not meet the membership rules of the vegetation communities in these sources, modifications were made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land uses) using Oberbauer et al. (2008). Vegetation community mapping conducted in 2018 was confirmed and/or updated during the 2020 site visit.

The following minimum vegetation mapping units applied during vegetation mapping:

- 0.5–1.0 acre for inaccessible areas of the site due to steep terrain.
- acres for wetland (i.e., hydrophytic) vegetation in traditional wetland environments (i.e., OBL [obligate – plant species almost always in wetlands], FACW [facultative wetland – plant species usually occurring in wetlands but occasionally found in non-wetlands], but not all FAC [facultative – plant species equally likely to occur in wetlands and non-wetlands] species comprising a vegetation alliance will be mapped unless associated with a hydrologic unit – stream, depression, swale, etc.).
- all areas with sensitive vegetation communities were mapped (no minimum mapping unit identified for sensitive vegetation communities)

Table 3.3-1. Survey Dates, Times, Personnel, and Conditions for Biological Surveys

Survey Date	Time	Personnel	Survey Conditions	Survey Type
8/31/2011	0940-1253	Dave Compton	61°F–63°F, 70%–100% cloud cover, 1-8 mph winds	General Biological Survey
5/5/2018	0655-1040	Heather Moine	55°F–68°F, 50%–70% cloud cover, 1-2 mph winds	Special-Status Plant Species Survey
5/15/2018	0630-0755	Heather Moine	51°F–60°F, 0% cloud cover, 1-3 mph winds	Vegetation Mapping
7/21/2018	0700-0900	Heather Moine	63°F–64°F, 100% cloud cover, 1-2 mph winds	Special-Status Plant Species Survey
9/26/2018	1300-1510	Heather Moine	67°F–69°F, 50%–75% cloud cover, 2-3 mph winds	Special-Status Plant Species Survey, Vegetation Mapping
4/8/2019	1505-1825	Heather Moine	80°F–85°F, 10%–80% cloud cover, 2-3 mph winds	Special-Status Plant Species Survey

Table 3.3-1. Survey Dates, Times, Personnel, and Conditions for Biological Surveys

Survey Date	Time	Personnel	Survey Conditions	Survey Type
7/23/2019	1300-1605	Heather Moine	75°F–79°F, 0%–20% cloud cover, 4-5 mph winds	Special-Status Plant Species Survey
12/24/2020	1320-1505	Mackenzie Forgey	69°F–68°F, 90% cloud cover, 2-9 mph winds	General Biological Survey; Tree Assessment

Notes: °F = degrees Fahrenheit; mph = miles per hour.

The CNCL (CDFW 2020b) is a hierarchical classification system which classifies natural vegetation communities based on alliances, which contain associations, the most granular level of classification (CDFW 2020c). The CNCL includes a state rarity rank based on the NatureServe Standard Heritage Methodology (NatureServe 2020). The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). For the purpose of this report the focus is the S rarity rank. The numbers have the following meaning (NatureServe 2020):

1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure

For example, S1 would indicate that a vegetation community is critically imperiled within a particular state or province. A rank of S3 would indicate the vegetation community is vulnerable and at moderate risk within a particular state or province, although it may be more secure elsewhere (NatureServe 2020). The CNCL (CDFW 2020b) includes state-level rarity rankings (i.e., the subnational [S] rank) for vegetation communities. The CNCL is considered the authority for ranking the conservation status of vegetation communities in California. As described by CDFW 2020c, ranking is an ongoing process and some associations are considered sensitive, denoted by a "Y" in the "Sensitive" column of the list, while others lack association-specific global and state ranks. This "Y" in the sensitive column indicates rarity, although that alliance may not be rated S3 or below as well (CDFW 2020c). CDFW expects to provide association level ranks for all S3 or rarer entities in the future, including those associations that are considered sensitive despite lacking an S3 or rarer alliance ranking.

The overall condition and quality of habitat provided by each vegetation community including supporting wildlife species was assessed. Discussions include degrees of disturbance, biological productivity of supporting plant and/or wildlife populations, and the relative viability of the habitat resource are included for each vegetation community and land cover type.

County environmentally sensitive habitat (ESH) and City environmentally sensitive habitat areas (ESHA) were evaluated based on definitions in the County *Coastal Land Use Plan* (CLUP) (County of Santa Barbara 2019) and the *City of Carpinteria General Plan and Local Coastal Plan* (City of Carpinteria 2003). Although most undeveloped areas of the coastal zone, as well as many isolated pockets of open space within urban areas, provide a "habitat" for many species of animals and plants, the intent of the Coastal Act is preservation of significant habitat resources. Coastal Act environmentally sensitive habitat areas are defined as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Coastal Act, Section 30107.5). The

County CLUP (County of Santa Barbara 2019) identifies ESH based on such factors as intrinsic, scientific, and educational value and includes the following biological resource categories:

- Dunes
- Wetlands
- Native Grasslands
- Vernal Pools
- Butterfly Trees
- Marine Mammal Rookeries and Hauling Grounds
- White-tailed Kite Habitat
- Rocky Points and Intertidal Areas
- Subtidal Reefs
- Kelp Beds
- Seabird Nesting and Roosting Areas
- Native Plant Communities – examples: coastal sage scrub, chaparral, coastal bluff, closed cone pine forest, California native oak woodland (also individual oak trees), endangered and rare plant species as designated by CNPS, and other plants of special interest such as endemics
- Streams

The City of Carpinteria General Plan and Local Coastal Plan (City of Carpinteria 2003) ESHA includes a diversity and number of habitats and species not commonly found in urban areas and that warrant unique measures to ensure adequate protection. As such, the Carpinteria Bluffs have specifically been identified as an ESHA. The following list includes ESHA that have been identified as existing in Carpinteria:

- Wetlands
- Butterfly Habitat
- Marine Mammal Rookeries and Hauling Grounds
- Rocky Points and Intertidal Areas
- Subtidal Reef
- Kelp Beds
- Creeks and Riparian Habitat
- Significant Native Plant Communities such as coastal sage scrub, riparian scrub, coastal bluff scrub, and native oak woodlands
- Sensitive, rare, threatened or endangered species habitat

A total of 12 vegetation communities and land cover types were recorded within the biological survey area, including five native scrub communities and seven non-native communities and land cover types (Figure 3.3-1 and Table 3.3-2). All five of the native vegetation communities found are protected under the County CLUP (County of Santa Barbara 2019) and the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), identified as coastal sage scrub, coastal bluff scrub, and/or habitat for sensitive species, and are thus considered County ESH and City ESHA. Two of these five communities, California brittle bush scrub – ashy buckwheat scrub alliance and lemonade berry scrub alliance, are also sensitive by virtue of their state rank. These communities are described in

CNCL and MCV2. Eucalyptus, ice plant mats, and myoporum are non-native and do not have a state rank (state not applicable [SNA]). The other four communities and land cover types are not listed in CNCL or MCV2.

While two individual Monterey cypress (*Hesperocyparis macrocarpa*) trees were identified in separate locations within the project site, one within the temporary impact area along the western portion of the site and the other within the proposed alignment footprint in the eastern portion of the site (Figure 3.3-1), they were not mapped as separate vegetation communities because one tree is not considered a stand or woodland. The first Monterey cypress tree is located near the western terminus of the proposed trail alignment, between the alignment and the pull-out off Carpinteria Avenue, and has a diameter of approximately 10 inches measured 4 feet above the ground. The second Monterey cypress is located within the proposed trail alignment within an unsanctioned trail within Rincon Beach County Park and has a diameter of approximately 12 inches measured 4 feet from the ground. One additional Monterey cypress tree was identified in the northern portion of the project above the railroad right-of-way, which is located along the edge of the temporary impact area adjacent to disturbed habitat and was measured with an approximate 8-inch diameter measured from 4 feet above the ground. Two Monterey cypress trees are located within the developed portion of the Rincon Beach County Park, one of which is a very young sapling with a diameter under an inch and the other is a mature tree with a combined diameter measured 4 feet from the ground of 49 inches due to multiple stems. There are also trees associated with the Rincon Point housing development that abut Rincon Beach County Park and are located south and east of the temporary project impact area and include Monterey cypress trees.

Monterey cypress trees are not naturally occurring within the Carpinteria area and instead are documented as native in populations located in Monterey and Carmel, California (CNPS 2021); therefore, Monterey cypress trees are not considered sensitive vegetation communities or individual trees. However, Monterey cypress trees could be considered County ESH and/or City ESHA if used by sensitive wildlife species as further discussed in Section 3.3.1.4.

Two pine saplings that appeared to be newly planted with mulch placed around the trunks and stakes installed for tree stabilization, are located along the edge of the temporary impact area in the portion of the project above the railroad right-of-way, each under 4 inches diameter measured 4 feet from the ground. One of these newly installed pine saplings is a Norfolk Island pine (*Araucaria heterophylla*), and the other could not be identified to species due to the lack of cones present at the time of the survey but appears to be a native pine tree (*Pinus* sp.).

There are also trees associated with the Rincon Point housing development that abut Rincon Beach County Park and are located south and east of the biological survey area, and include a few non-riparian California sycamore (*Platanus racemosa*) trees and other ornamental tree species located approximately 50-feet from Rincon Creek.

The County CLUP (County of Santa Barbara 2019) does not include mapped ESH within the project site. The City of Carpinteria General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) includes mapped ESHA within the limits of the City north to but not including Carpinteria Avenue.

Table 3.3-2. Summary of Existing Vegetation Communities and Land Cover Types

Habitat Group	General Habitat	Vegetation Community (Alliance, Association)	Alliance-Association (State Sensitive)/County ESH/City ESHA	Acreage
Native Scrub Communities	Coastal Bluff Scrub	California Brittle Bush – Ashy Buckwheat Scrub Alliance, *Encelia california* Association	S3-Yes (Yes)/Yes/Yes	0.96
		Quailbush Scrub Alliance, *Atriplex lentiformis* Association	S4-No (No)/Yes/Yes	6.18
			Coastal Bluff Scrub Subtotal	*7.13*
	Coastal Scrub	California Sagebrush – (Purple Sage) Scrub Alliance, *Artemisia californica* Association	S5-S4 (No)/Yes/Yes	2.08
		Coyote Brush Scrub Alliance, *Baccharis pilularis* Association	S5-No (No)/Yes/Yes	1.18
		Lemonade Berry Scrub Alliance, *Rhus integrifolia* Association	S3-S3 (Yes)/Yes/Yes	0.31
			Coastal Scrub Subtotal	*3.57*
Non-native Communities and Land Cover Types	Non-native Communities	Eucalyptus – Tree of Heaven – Black Locust Groves Alliance, *Eucalyptus (globulus, camaldulensis)* Association	SNA-SNA (No)/No/No	0.21
		Ice Plant Mats Alliance, *Carpobrotus (edulis*) Association	SNA-SNA (No)/No/No	0.14
		Pepper Tree or Myoporum Groves Alliance, *Myoporum laetum/ Arundo donax* Association	SNR-SNA (No)/No/No	0.07
		Parks and Ornamental Plantings	NA (No)/No/No	0.10
		Ruderal	NA (No)/No/No	0.17
	Land Cover Types	Developed	NA (No)/No/No	1.08
		Disturbed Habitat	NA (No)/No/No	1.45
			Non-native Communities and Land Cover Types Subtotal	*3.22*
			Combined Total	***13.92***

Notes:
SNA – state not applicable. State status rank not applicable because the species or ecosystem is not a suitable target for conservation activities (NatureServe 2020).
SNR – state no rank (NatureServe 2020).
NA – not applicable. Not included in California Natural Communities List (CDFW 2020b).

Native Scrub Communities

California Brittle Bush – Ashy Buckwheat Scrub Alliance, *Encelia california* Association (S3-Sensitive [Sensitive], County ESH, City ESHA). This community includes California brittle bush and/or ashy buckwheat (*Eriogonum cinereum*) as the dominant or co-dominant shrub in the canopy. California brittle bush – ashy buckwheat scrub has an intermittent to continuous shrub canopy less than two meters (seven feet) in height with a variable herbaceous ground layer. The California brittle bush – ashy buckwheat scrub alliance occurs on sunny, steep south-facing slopes often rocky or eroded, with soils derived from sandstone, volcanic or shale substrates (Sawyer et al. 2009). Species associated with California brittle bush scrub on site include quailbush *(Atriplex lentiformis)*, California sagebrush, coyote brush, western prickly pear (*Opuntia littoralis*) and black mustard.

California brittle brush scrub occurs in limited patches within the project site, wildlife using this community is partly dictated by adjacent communities, which are generally other scrub communities. Brush rabbits (*Sylvilagus bachmani*) may occur within these areas, and some species of small mammals may occur here as well. The Coast Range western fence lizard (*Sceloporus occidentalis bocourti*) likely occur within this community and within adjacent communities. Songbirds with the potential to nest within this community include the mourning dove (*Zenaida macroura*), bushtit (*Psaltriparus minimus*), northern mockingbird (*Mimus polyglottos*), and song sparrow (*Melospiza melodia*).

California brittle brush scrub has a S3-Sensitive designation thus considered a sensitive vegetation community per CDFW (2020b). California brittle bush scrub is a state sensitive vegetation community, considered coastal bluff scrub per the County CLUP (County of Santa Barbara 2019), and supports sensitive plant species. Additionally, California brittle bush scrub is mapped as ESHA, considered coastal bluff scrub in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and supports sensitive plant species. Therefore, California brittle bush scrub is considered County ESH and City ESHA.

The *Encelia californica* association within the California brittle bush – ashy buckwheat scrub alliance was mapped in the project site. This association occurs in the proposed trail alignment in and near the County's Rincon Beach County Park (see Figure 3.3-1). Approximately 0.96 acres of this community, or 6.9% of the total biological survey area was identified.

Quailbush Scrub Alliance*, Atriplex lentiformis* Association (S4-Not Sensitive [Not Sensitive], County ESH, City ESHA). This vegetation community includes quailbush as a dominant species. Quailbush scrub has an open to intermittent scrub canopy less than five meters (16 feet) in height with a variable herbaceous layer (Sawyer et al. 2009). In the proposed trail alignment, species associated with this community include California brittle bush, lemonade berry and Australian saltbush (*Atriplex semibaccata*).

Quailbush scrub provides shelter for brush rabbits and probably for other medium-sized mammal species such as the raccoon (*Procyon lotor*) and striped skunk (*Mephitis mephitis*). California voles (*Microtus californicus*) may occur in this vegetation community. Common reptile species that occur here include the Coast Range western fence lizard and San Diego gophersnake (*Pituophis catenifer annectens*). Nesting songbirds occurring here include the mourning dove, bushtit, northern mockingbird, and song sparrow. Songbirds that may perch on shrubs within this community include the black phoebe (*Sayornis nigricans*).

Quailbush scrub has a S4-Not Sensitive designation thus is not considered a sensitive vegetation community per CDFW (2020b). Quailbush scrub is considered coastal bluff scrub per the County CLUP (County of Santa Barbara 2019) and mapped as ESHA and considered coastal bluff scrub in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and therefore considered County ESH and City ESHA. Additionally, this vegetation community supports sensitive plant species and has the potential to support the state species of special concern (SSC) California legless lizard and further warrants County ESH and City ESHA designations.

The *Atriplex lentiformis* association within the quailbush scrub alliance was mapped in the project site. It occurs extensively in the proposed trail alignment east of the UPRR and in patches west of the UPRR (see Figure 3.3-1). Approximately 6.18 acres of this community, or 44.3% of the total biological survey area was identified.

California Sagebrush – (Purple Sage) Scrub Alliance*, Artemisia californica* Association (S5-S4 [Not Sensitive], County ESH, City ESHA). This community includes California sagebrush (*Artemisia californica*) and/or purple sage (*Salvia leucophylla*) as the dominant or co-dominant shrub in the canopy. California sagebrush scrub has an

intermittent to continuous shrub canopy less than two meters (seven feet) in height with a variable herbaceous ground layer (Sawyer et al. 2009). Species associated with this community include California brittle bush (*Encelia californica*), coast goldenbush (*Isocoma menziesii*) and coyote brush (*Baccharis pilularis*). Black mustard (*Brassica nigra*) and other non-native species are found in this community on site.

Wildlife occupying California sagebrush scrub includes many species common to other scrub communities within the project site. Brush rabbits seek cover in these areas, and small mammals such as California voles likely occur here. Coast Range western fence lizards and San Diego gophersnakes are reptiles that occur in scrub habitats. Songbirds nesting here include the mourning dove, northern mockingbird, California towhee (*Melozone crissalis*), and song sparrow. White-crowned sparrows (*Zonotrichia leucophrys*) occur here in winter.

California sagebrush scrub has a S5-S4 designation thus is not considered a sensitive vegetation community per CDFW (2020b). California sagebrush scrub is considered coastal sage scrub per the County CLUP (County of Santa Barbara 2019) and mapped as ESHA and considered coastal sage scrub in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and therefore considered County ESH and City ESHA. Additionally, this vegetation community supports sensitive plant species and further warrants County ESH and City ESHA designations.

The *Artemisia californica* association within the California sagebrush – (purple sage) scrub alliance was mapped in the project site. This association occurs in the western portion of the project site, near Carpinteria Avenue and U.S. Highway 101, in a heavily engineered portion of the proposed trail alignment graded during highway construction (see Figure 3.3-1). A smaller patch occurs adjacent to the parking lot for Rincon Beach County Park. Approximately 2.08 acres of this community, or 14.9% of the total biological survey area was identified.

Coyote Brush Scrub Alliance, *Baccharis pilularis* Association (S5-Not Sensitive [Not Sensitive], County ESH, City ESHA). Coyote brush scrub communities include greater than 50% relative cover of coyote brush and coyote brush as the dominant or co-dominant shrub in the canopy. Coyote brush scrub has a variable shrub canopy less than three meters (10 feet) in height with a variable herbaceous ground layer (Sawyer et al. 2009). Species associated with this community in the proposed trail alignment include scattered California sagebrush, California brittle bush, myoporum (*Myoporum laetum*) and black mustard.

Wildlife occurring in coyote brush scrub is very similar to that occurring in quailbush scrub and includes brush rabbits, raccoon, striped skunk, California voles, Coast Range western fence lizard, San Diego gophersnake, mourning dove, bushtit, northern mockingbird, song sparrow and black phoebe.

Coyote brush scrub has a S5-Not Sensitive designation thus is not considered a sensitive vegetation community per CDFW (2020b). Coyote brush scrub is not considered coastal sage scrub or associated with other ESH habitats by definition per the County CLUP (County of Santa Barbara 2019); however, coyote brush scrub does support sensitive plant species and as such is designated County ESH. Additionally, coyote brush scrub is mapped as ESHA in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and also supports sensitive plant species and therefore considered City ESHA.

The *Baccharis pilularis* association within the coyote brush scrub alliance was mapped in the project site. It occurs in the proposed trail alignment mostly near the western terminus, but also in small patches in the vicinity of Rincon Beach County Park. The coyote brush scrub between UPRR and U.S. Highway 101 occurs in old road cuts (see Figure 3.3-1). Approximately 1.18 acres of this community, or 8.5% of the total biological survey area was identified.

Lemonade Berry Scrub Alliance*, Rhus integrifolia* Association (S3-S3 [Sensitive], County Not Sensitive, City Not Sensitive). This vegetation community includes lemonade berry (*Rhus integrifolia*) as either a dominant or co-dominant species. Lemonade berry scrub has a two-tiered, open to continuous shrub canopy less than five meters (16 feet) in height with an open herbaceous ground layer and sparse cover of emergent trees (Sawyer et al. 2009). Species associated with this community on site include coyote brush and myoporum.

Wildlife occurring in lemonade berry scrub is similar to that occurring in Coyote brush scrub and includes brush rabbits, raccoon, striped skunk, California voles, Coast Range western fence lizard, San Diego gophersnake, mourning dove, bushtit, northern mockingbird, song sparrow and black phoebe.

Lemonade berry scrub has a S3-S3 designation thus is considered a sensitive vegetation community per CDFW (2020b). Additionally, lemonade berry scrub is not considered coastal sage scrub or associated with other ESH habitats by definition per the County CLUP (County of Santa Barbara 2019); however, it does support sensitive plant species and is a state sensitive vegetation community thus is considered County ESH. Additionally, lemonade berry scrub is not considered coastal sage scrub or associated with other ESHA habitats by definition per the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003); however, it does support sensitive plant species and is a state sensitive vegetation community and thus is considered City ESHA.

The *Rhus integrifolia* association within the lemonade berry scrub alliance was mapped in the project site. This association occurs in two small patches west of the Rincon Beach County Park (see Figure 3.3-1). Approximately 0.31 acres of this community, or 2.2% of the total biological survey area was identified.

Non-Native Communities

Eucalyptus – Tree of Heaven – Black Locust Groves Semi-Natural Alliance, *Eucalyptus (globulus, camaldulensis)* Provisional Association (SNA-SNA [Not Sensitive], County Not Sensitive, City Not Sensitive). This alliance contains eucalyptus trees (*Eucalyptus* sp.), tree of heaven (*Ailanthus altissima),* or black locust (*Robinia pseudoacacia*) as the dominant species in the tree canopy. These groves have an open to continuous tree canopy less than 60 meters (197 feet) in height. Understory shrubs and herbaceous layers are sparse to intermittent, and the herbaceous layer is sparse to intermittent. Throughout California, this semi-natural groves alliance occurs as planted trees, groves, and windbreaks, naturalized on uplands or bottomlands and adjacent to stream courses, lakes, or levees (Sawyer et al. 2009).

The Eucalyptus – tree of heaven – black locust groves semi-natural alliance and specific *Eucalyptus* (*globulus, camaldulensis*) association is listed in MCV2 (Sawyer et al. 2009) and CNCL (CDFW 2020b), but is ranked SNA-SNA as it is composed of non-native species; it is not considered sensitive. Additionally, per the County CLUP (County of Santa Barbara 2019) eucalyptus trees are considered ESH if they are butterfly trees or provide habitat to sensitive species. Per the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) eucalyptus trees are considered ESHA if they provide habitat for butterfly habitat or sensitive, rare, threatened or endangered species habitat. Included below is a discussion of potential wildlife use of the eucalyptus trees.

Because of shade and possibly the allelopathic (toxic) properties of eucalyptus leaf litter, little other vegetation is present in this community, and relatively little wildlife is found here. But the relatively open ground under the canopy permits medium-sized mammals such as common raccoons and striped skunks to move easily through this community to access adjacent areas. Some bird species are adapted to this community. Yellow-rumped warblers (*Setophaga coronata*) feed on insects attracted to eucalyptus blossoms in the winter. Some birds of prey favor eucalyptus trees for nesting. Red-tailed hawks (*Buteo jamaicensis*), Cooper's hawks (*Accipiter cooperii*), and great horned owls (*Bubo virginianus*) also have the potential to nest in this community.

Monarch butterflies (*Danaus plexippus*) use eucalyptus trees for roosting in the region, but they are not known to use eucalyptus within the project site. The majority of eucalyptus trees within the project site are either singular and isolated, or do not form a large enough grove to provide adequate microclimate conditions and wind protection monarch butterflies require for overwintering sites. Several eucalyptus trees are located within the proposed trail alignment near its western terminus and U.S. Highway 101, and range in diameter from approximately 18 to 28 inches measured 4 feet from the ground. Additionally, a small stand of eucalyptus trees is present at the eastern terminus of the biological survey area, which are rooted next to the Rincon Beach County Park parking lot; however, there is low potential for monarchs to overwinter here as well due to the small relative size of this eucalyptus stand and vulnerability to strong winds and weather. There are also three eucalyptus trees present near the western terminus of the biological survey area, however they each grow individually and do not form a grove capable of supporting overwintering monarchs. There are also trees associated with the Rincon Point housing development that abut Rincon Beach County Park and are located south and east of the eastern portion of the biological survey area and include some eucalyptus trees. Monarch butterflies and monarch butterfly habitat are further discussed in Section 3.3.1.4.

The white-tailed kite is known to occur in the area (City of Carpinteria 2003). The City specifically cites the Carpinteria Bluffs as a location where this species occurs and is protected. However, no white-tailed kites were detected in the biological survey area, and the eucalyptus trees in and around the western portion of biological survey area are relatively small, and located in areas with high levels of human disturbance where kites are unlikely to nest. Marginally suitable woodland nesting habitat is present in the trees adjacent to the project site near Rincon Beach County Park, within the Rincon Point housing development. This species prefers open grassland or marshland habitats which are not present on site, and is found less commonly in agricultural areas or rights-of-way. This species is known to occur along the south coast, however most foraging and nesting activity in the County is restricted to more rural areas and in particular, the Goleta and Santa Maria Valleys (Lehman 2020).

The *Eucalyptus (globulus, camaldulensis)* provisional association within the eucalyptus - tree of heaven - black locust semi-natural alliance was mapped in the project site. Within the biological survey area this community is dominated by eucalyptus trees, which are sparse and do not create a windrow and do not provide habitat for sensitive species; and thus are not included as ESH per County of Santa Barbara (2009) or ESHA per City of Carpinteria (2003). Approximately 0.21 acres of this community, or 1.5% of the biological survey area was identified.

Ice Plant Mats Semi-Natural Alliance, *Carpobrotus (edulis)* Association (SNA-SNA [Not Sensitive], County Not Sensitive, City Not Sensitive). Ice plant mats contains hottentot fig (*Carpobrotus edulis*), sea fig (*Carpobrotus chilensis*), or other ice plant taxa as the dominant or co-dominant species in the herbaceous layer. These species invade coastal bluff scrub, dune mat, dune scrub, and coastal prairies and compete with native plants (Sawyer et al. 2009). Ice plant semi-natural alliance areas have an intermittent to continuous canopy within the herbaceous layer less than 0.5 meters (1.6 feet) in height.

Very few wildlife species occur in ice plant mats. California ground squirrels (*Spermophilus* [*Otospermophilus*] *beecheyi*) often inhabit this community. This community provides poor nesting habitat for birds. Common reptiles such as the western fence lizard likely occur here. This community is not generally valuable to special-status wildlife species.

The ice plant mats semi-natural alliance and specific *Carpobrotus (edulis)* association is listed in MCV2 (Sawyer et al. 2009) and CNCL (CDFW 2020b), but is ranked SNA-SNA as it is composed of non-native species; therefore, it is not considered sensitive. Additionally, ice plant mats vegetation community is not included on the list of ESH per the County CLUP (County of Santa Barbara 2019) or provide habitat for sensitive species. Ice plant mats are not mapped as ESHA, included as other ESHA habitats in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and do not provide habitat for sensitive species, and therefore not considered locally sensitive.

The *Carpobrotus (edulis)* association within the ice plant mats semi-natural alliance was mapped in the project site. Approximately 0.14 acres of this community, or 1.0% of the biological survey area was identified.

Pepper Tree or Myoporum Groves Semi-Natural Alliance*, Myoporum laetum/Arundo donax* Association (SNR-SNA [Not Sensitive], County Not Sensitive, City Not Sensitive). Pepper tree or myoporum groves consist of myoporum or pepper trees (*Schinus* spp.) as the dominant species in the tree canopy. Within the biological survey area, this community is dominated by myoporum. These groves have an open to continuous tree canopy less than 18 meters (59 feet) in height. Understory shrubs are infrequent or common and the herbaceous layer is simple to diverse lacking trees and shrubs. Throughout Central and Southern California, the pepper trees or myoporum groves semi-natural alliance occurs in coastal canyons, washes, slopes, riparian areas, and roadsides (Sawyer et al. 2009).

Several myoporum trees are located within the proposed trail alignment west of Rincon Beach County Park, and are largely multistemmed. Myoporum groves provide shelter for medium-sized mammal species such as the brush rabbit, common raccoon, and striped skunk. California voles may occur in this vegetation community. Common reptile species such as the western fence lizard likely occur. Nesting songbirds occurring here likely include the mourning dove, bushtit, and northern mockingbird. Wintering black phoebes are among birds that likely perch on myoporum. Some birds of prey, such the white-tailed kite and other raptors, may also perch in this community where it is adjacent to foraging habitat.

This semi-natural alliance and specific *Myoporum laetum/Arundo donax* association mapped on site are listed in MCV2 (Sawyer et al. 2009) and CNCL (CDFW 2020b), but is ranked SNA as it is composed of non-native species; thus, it is not considered sensitive. Additionally, myoporum is not included on the list of ESH per the County CLUP (County of Santa Barbara 2019) or provide habitat for sensitive species. Myoporum are not mapped as ESHA, included as other ESHA habitats in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and do not provide habitat for sensitive species, and therefore not considered locally sensitive.

The *Myoporum laetum/Arundo donax* association within the pepper tree or myoporum groves semi-natural alliance was mapped in the project site. Approximately 0.7 acres of this community, or 0.5% of the biological survey area was identified.

Parks and Ornamental Plantings (NA [Not sensitive], County Not Sensitive, City Not Sensitive). This community is not described in CNCL or MCV2 because it is not a naturally occurring community in California; thus, it is not considered sensitive. It includes landscaping plants as dominants. Additionally, parks and ornamental plantings is not included on the list of ESH per the County CLUP (County of Santa Barbara 2019) or provide habitat for sensitive species. Parks and ornamental plantings are not mapped as ESHA, included as other ESHA habitats in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and do not provide habitat for sensitive species, and therefore not considered locally sensitive.

The ornamental vegetation community in the proposed trail alignment is characterized by the dominance of landscaped plant species. Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel are among common mammals found in this community. Western fence lizards are a common reptile found in parks and ornamental plantings. Common nesting birds such as Eurasian collared-dove (*Streptopelia decaocto*), California scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), bushtit, and house finch (*Haemorhous mexicanus*) may be found here.

Parks and ornamental plantings occur within the eastern part of Rincon Beach County Park (see Figure 3.3-1). Approximately 0.10 acres of this community, or 0.7% of the biological survey area was identified.

Ruderal (NA [Not Sensitive], County Not Sensitive, City Not Sensitive). Ruderal is not described in CNCL or MCV2 because it is not a naturally occurring community in California; thus, it is not considered sensitive. Additionally, ruderal habitats are not included on the list of ESH per the County CLUP (County of Santa Barbara 2019) or provide habitat for sensitive species. Ruderal habitats are not mapped as ESHA, included as other ESHA habitats in the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003), and do not provide habitat for sensitive species, and therefore not considered locally sensitive.

Ruderal areas are characterized by limited native vegetation resulting in low function ecological processes. Plants in these areas are dominated by non-native species and there is not a dominant plant species or overall structure to the habitat. Ruderal areas provide little habitat or foraging potential for wildlife, due to the lack of significant cover by vegetation; however, there are often patchy areas of non-native plant species. Mammals may include common species, such as the California ground squirrel, but medium-sized mammals such as raccoons may use ruderal habitats as movement corridors. Among common reptiles that may use these areas is the western fence lizard. Seed-eating birds found here include the California towhee and white-crowned sparrow. Ruderal does not provide habitat for special-status wildlife species.

Mapped ruderal includes roadside areas and areas with disturbed non-native vegetation (see Figure 3.3-1). Approximately 0.17 acres of this community, or 1.3% of the biological survey area was identified.

Land Cover Types

Developed (NA [Not Sensitive], County Not Sensitive, City Not Sensitive). Within the biological survey area, developed areas are unvegetated areas such as pavement and development with impervious materials, it is not described in CNCL or MCV2, and does not provide habitat for sensitive species. Developed areas include the parking lot at Rincon Beach County Park and the wide turnout at the eastern terminus of Carpinteria Avenue (see Figure 3.3-1). Approximately 1.08 acres of developed area, or 7.7% of the biological survey area was identified.

Disturbed Habitat (NA [Not Sensitive], County Not Sensitive, City Not Sensitive). This land cover type, which is not described in CNCL or MCV2, includes invasive non-native and other disturbance-tolerant species as dominants, and does not support sensitive species. Species occurring within this community, including some natives, are those that are tolerant to disturbances such as grading or vegetation clearing. On-site, species appearing in disturbed areas include poison hemlock (*Conium maculatum*), black mustard, Hottentot fig, and horseweed (*Erigeron canadensis*). Approximately 1.45 acres of this land cover type, or 10.45% of the biological survey area was identified.

3.3.1.3 Special-Status Plant Species

During 2018 and 2019 Dudek biologists performed floristic surveys for special-status plant species, as shown in Table 3.3-1. All plant species encountered during the field surveys were identified to subspecies or variety, if possible. Species that could not be identified in the field were brought into the laboratory for further investigation. Scientific and common names for plant species with a California Rare Plant Rank (CRPR) follow the California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2020). For plant species without a California Rare Plant Rank, scientific names follow the Jepson Interchange for California Floristics; Index to California Plant Names (Jepson Flora Project 2020) and common names follow the California Natural Community List (CDFW 2020b) or the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2020b).

For the purpose of CEQA analysis, federal, state, CNPS CRPR 1A, 1B, 2A, and 2B plants, and locally rare plants (Wilken 2018) are considered special-status. CRPR 3 and 4 plants are CNPS designated rare, but not considered special-status as plant species but do add to the vegetation community value designated as County ESH and or City ESHA as CNPS CRPR 3 and 4 species.

In considering rarity beyond federal or state designations, the CNPS Inventory of Rare and Endangered Vascular Plants of California was the primary reference (CNPS 2020). Use of the CNPS inventory is helpful because it clearly defines levels of endangerment and rarity for all of the species addressed. The CNPS inventory divides its subject taxa into four ranks: CRPR 1 (which is further divided into 1A and 1B), CRPR 2 (which is further divided into 2A and 2B), CRPR 3, and CRPR 4. Plants with a CRPR of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years. Plants with a CRPR of 1B are rare throughout their range, with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. Plants with a CRPR of 2A are presumed extirpated because they have not been observed or documented in California for many years. Except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. Plants with a CRPR of 3 have not had sufficient information collected to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. Plants with a CRPR of 3 are plants about which more information is needed and 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly. CRPR 3 plants lack necessary information to assign them to one of the other ranks or to reject them. Should the degree of endangerment or rarity of a CRPR 4 plant change, it would be transferred to a more appropriate rank.

CRPR plants are further defined as follows:

- .1 = seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- .2 = moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
- .3 = not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

A total of 133 plant species were observed and identified during surveys. Of these, 57 (43%) are considered native and 76 (57%) are considered non-native to California, included as Appendix C1, Plant and Wildlife Species Compendium. The CNDDB (CDFW 2018; CDFW 2020a) and CNPS (CNPS 2020) queries returned 34 special-status plant species that have been documented within the USGS White Ledge Peak 7.5 quadrangle as well as the four coastally influenced adjacent USGS 7.5 minute quadrangles (Ventura, Matilija, Pitas Point, Carpinteria), hereafter referred to as the region. Only the four coastally influenced adjacent USGS 7.5-minute quadrangles were queried for sensitive biological resources instead of all adjacent quadrangle maps, since the habitats north of the foothills vary greatly from the project site and would not be representative of what species are likely to occur in coastal habitats. Dudek analyzed the resulting special-status plant species potential to occur based on known elevation or geographic range, suitable habitat, or the species has been extirpated from the region. Appendix C2, Plant and Wildlife Species Not Expected to Occur within the Biological Survey Area provides a list of the 20 special-status plant species that are not expected to occur based on site surveys, lack of suitable habitat, and the site being out of the species range. The special-status plant species in Appendix C2 are not analyzed in this report as no direct, indirect, or cumulative impacts are expected.

Based on Dudek's habitat suitability analysis including elevation and habitats, 11 of the special-status plant species had the potential to occur within the project site, and 3 special-status plant species were observed during 2018

and 2019 rare plant surveys. These 14 special-status plant species include aphanisma (*Aphanisma blitoides*), Miles' milk-vetch (*Astragalus didymocarpus* var. *milesianus*), Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), Coulter's saltbush (*Atriplex coulteri*), South Coast saltscale (*Atriplex pacifica*), southern tarplant (*Centromadia parryi* ssp. *australis*), Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*), mesa horkelia (*Horkelia cuneata* var. *puberula*), California satintail (*Imperata brevifolia*), Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*), cliff malacothrix (*Malacothrix saxatilis* var. *saxatilis*), aparejo grass (*Muhlenbergia utilis*), south coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*), Nuttall's scrub oak (*Quercus dumosa*), salt spring checkerbloom (*Sidalcea neomexicana*), and woolly seablite (*Suaeda taxifolia*) (Table 3.3-3).

Table 3.3-3. Special-Status Plant Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[a]	Habitat Requirements	Potential to Occur within the BSA
Aphanisma blitoides	aphanisma	None/None/ 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub; sandy or gravelly/annual herb/Feb–June/3–1,000 feet amsl	Low potential to occur. Suitable coastal scrub and coastal bluff scrub habitat is present, however the only CNDDB occurrence in the region was last confirmed in 1963 and located 1.5 miles west of the Ventura River (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Astragalus didymocarpus var. *milesianus*	Miles' milk-vetch	None/None/ 1B.2	Coastal scrub (clay)/annual herb/Mar–June/66–295 feet amsl	Low potential to occur. Suitable coastal scrub habitat is present, although clay soils are absent (USDA 2020a). There are only two CNDDB occurrences in the region the most recent of which was recorded in the 1970s in the Ojai area (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Atriplex coulteri	Coulter's saltbush	None/None/ 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/10–1,505 feet amsl	Low potential to occur. Suitable coastal bluff scrub and coastal scrub habitat is present, and the large quantities of quailbush on site indicate that suitable alkaline soils may be present. This species is known to occur along Carpinteria coastal bluffs, however this is from an occurrence last confirmed in 1927 (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.

Table 3.3-3. Special-Status Plant Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[a]	Habitat Requirements	Potential to Occur within the BSA
Atriplex pacifica	South Coast saltscale	None/None/ 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0–460 feet amsl	Low potential to occur. Suitable coastal bluff scrub and coastal scrub habitat is present and the large quantities of quailbush on site indicate that suitable alkaline soils may be present. However, there is only one occurrence in the region which was last confirmed in 1972 about 1.5 miles west of the Ventura River (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/ 1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1,570 feet amsl	Low potential to occur. Suitable habitat is present in the disturbed habitat and ruderal areas on site, as this species can occur in disturbed sites (CDFW 2020a). However, the only occurrence in the region was last confirmed in 1997 and is considered possibly extirpated (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/ 1B.1	Coastal bluff scrub (sandy), Coastal dunes/annual herb/Jan–Aug/0–330 feet amsl	Low potential to occur. Suitable coastal bluff scrub habitat is present. However, the only occurrence in the region was last confirmed in 1961 and is considered possibly extirpated (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/ 1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/230–2,655 feet amsl	Low potential to occur. Suitable coastal scrub habitat is present, although the most recently confirmed occurrence in the region is from 1935 (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.

Table 3.3-3. Special-Status Plant Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[a]	Habitat Requirements	Potential to Occur within the BSA
Imperata brevifolia	California satintail	None/None/ 2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3,985 feet amsl	Low potential to occur. Suitable coastal scrub habitat is present, and the large quantities of quailbush on site indicate that suitable alkaline soils may be present. However, there are only two occurrences in the region, both of which are located behind the transverse ranges north the site, approximal 11 miles northeast of the project site (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Lonicera subspicata var. *subspicata*	Santa Barbara honeysuckle	None/None/ 1B.2	Chaparral, Cismontane woodland, Coastal scrub/perennial evergreen shrub/May–Aug(Dec–Feb)/33–3,280 feet amsl	Low potential to occur. Suitable coastal scrub habitat is present. However, all the occurrences in the region are located within the foothills and not directly along the coast (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Malacothrix saxatilis var. *saxatilis*	cliff malacothrix	None/None/ 4.2[b]	Coastal bluff scrub, Coastal scrub/perennial rhizomatous herb/Mar–Sep/10–655 feet amsl	Present. Detected during 2018 or 2019 special-status plant species surveys.
Muhlenbergia utilis	aparejo grass	None/None/ 2B.2	Meadows and seeps, marshes and swamps, chaparral, coastal scrub, cismontane woodland; sometimes alkaline, sometimes serpentinite/perennial rhizomatous herb/Mar–Oct/82–7,625 feet amsl	Low potential to occur. Suitable coastal scrub habitat is present, and the large quantities of quailbush on site indicate that suitable alkaline soils may be present. However, the only occurrence in the region was last confirmed in 1964 and was located west of Matilija Lake (CDFW 2020a).

Table 3.3-3. Special-Status Plant Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[a]	Habitat Requirements	Potential to Occur within the BSA
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/ 3.2[b]	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/16–985 feet amsl	Present. Detected during 2018 or 2019 special-status plant species surveys.
Quercus dumosa	Nuttall's scrub oak	None/None/ 1B.1	Closed-cone coniferous forest, Chaparral, Coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr(May–Aug)/49–1,310 feet amsl	Low potential to occur. Suitable coastal scrub habitat is present, although clay soils are absent (USDA 2020a). The closest occurrence in the region was last confirmed in 1929 and was described as occurring in Carpinteria, and the remaining occurrences in the region[2] are located within the foothills and not directly along the coast (CDFW 2020a). This species was not detected during 2018 or 2019 special-status plant species surveys.
Suaeda taxifolia	woolly seablite	None/None/ 4.2[b]	Coastal bluff scrub, Coastal dunes, Marshes and swamps (margins of coastal salt)/perennial evergreen shrub/Jan–Dec/0–165 feet amsl	Present. Detected during 2018 or 2019 special-status plant species surveys.

Notes: amsl = above mean sea level.

[a] **Status Legend:**
FE: Federally listed as endangered
SE: State listed as endangered
CRPR 1A: Plants presumed extinct in California
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants rare, threatened, or endangered in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Plants about which more information is needed – a review list
CRPR 4: Plants of limited distribution – a watch list
.1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 Fairly endangered in California (20% to 80% of occurrences threatened)
.3 Not very endangered in California (less than 20% of occurrences threatened or no current threats known).

[b] For the purpose of CEQA analysis, federal, state, and CNPS CRPR 1A, 1B, 2A, and 2B plants are considered special-status. CRPR 3 and 4 plants are not considered special-status as plant species but do add to the vegetation community value designated as County environmentally sensitive habitat and or City environmentally sensitive habitat areas as CNPS CRPR 3 and 4 species.

No federal, state, or CNPS CRPR 1 or 2 plant species were observed. Two CNPS CRPR 4.2 plant species, cliff malacothrix (*Malacothrix saxatilis* var. *saxatilis*) and woolly seablite (*Suaeda taxifolia*), and one CNPS CRPR 3.2 plant species, south coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*) were detected within the biological survey area (see Figure 3.3-1). Cliff malacothrix, south coast branching phacelia, and woolly seablite are not included on the Rare Plants of Santa Barbara County list (Wilken 2018); therefore, these are not considered special-status plant species.

Cliff malacothrix (*Malacothrix saxatilis* var. *saxatilis*). This CNPS CRPR 4.2 species is a perennial herb that occurs in coastal bluff scrub and coastal scrub at 10 to 220 feet in elevation. It occurs along the coast from Orange County north to Santa Barbara County, and inland in Kern and San Bernardino Counties and blooms March through September. A total of 68,385 square feet and 834 individuals were documented (Figure 3.3-1) in the biological survey area.

South coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*). This species is a perennial herb that is native to California and included as CNPS CRPR 3.2. It occurs in chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt) in sandy sometimes rocky soils and blooms March through August. A total of 14 square feet and 2 individuals were documented (Figure 3.3-1) in the biological survey area.

Woolly seablite (*Suaeda taxifolia*). This CNPS CRPR 4.2 species is found in coastal bluff scrub, coastal dunes, and marshes and swamps at 0 to 165 feet elevation. It occurs along the coast from Orange County north to San Luis Obispo County, as well as on the Channel Islands and blooms January through December, year-round. In the project vicinity, this species is distributed in monotypic patches along the bluffs just west of Rincon Beach County Park, adjacent to the trail alignment (Figure 3.3-1). A total of 75,161 square feet and 617 individuals were documented in the biological survey area.

3.3.1.4 Special-Status Wildlife Species

Wildlife species were documented during the 2011 general biological survey and subsequent vegetation mapping, and special-status plant species surveys during 2018 and 2019. Additionally, a Dudek biologist documented wildlife observed during the general biological survey conducted in December 2020.

A total of 32 special-status wildlife species (25 birds, two invertebrates, three mammals, and two reptiles) were either directly observed or detected based on vocal cues or observation of sign, included as Appendix C1. The CNDDB (CDFW 2018, 2020a) and USFWS (USFWS 2020a) queries returned 41 special-status wildlife species that have been documented within the USGS White Ledge Peak 7.5 quadrangle as well as the four coastally influenced adjacent USGS 7.5 minute quadrangles (Ventura, Matilija, Pitas Point, Carpinteria), herein after referred to as the region. Only the four coastally influenced adjacent USGS 7.5-minute quadrangles were queried for sensitive biological resources instead all adjacent quadrangle maps, since the habitats north of the foothills vary greatly from the project site and would not be representative of what species are likely to occur in coastal habitats.

A variety of special-status wildlife have recorded occurrences in the region (i.e., the five 7.5-minute quadrangles queried) and were evaluated for their potential to occur on the project site, including but not limited to the Monarch butterfly (*Danaus plexippus*; Special Animal), tidewater goby (*Eucyclogobius newberryi*; federally endangered [FE]), southern steelhead (*Oncorhynchus mykiss irideus*; FE), California red-legged frog (*Rana draytonii*); federally threatened [FT]), California legless lizard (*Anniella sp.*; California Species of Special Concern [SSC]), two-striped garter snake (*Thamnophis hammondii*; SSC), white-tailed kite (*Elanus leucurus*; state fully protected [FP]); light-footed clapper rail (*Rallus longirostris levipes*; FE, state endangered [SE], FP), snowy plover (*Charadrius nivosus*;

FT) and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*; SE). Appendix C2 provides a list of the 31 special-status wildlife species that are not expected to occur based on site surveys, lack of suitable habitat, and the site being out of the species range. The special-status wildlife species in Appendix C2 are not analyzed in this report as no direct, indirect, or cumulative impacts are expected.

Based on Dudek's knowledge of regional biological resources, distribution of local species, and species-specific habitat preferences, 8 of the special-status wildlife species queried had the potential to occur within the project site. These 8 special-status wildlife species include California legless lizard, Blainville's horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), white-tailed kite, western mastiff bat (*Eumops perotis californicus*), Townsend's big-eared bat (*Corynorhinus townsendii*), San Diego desert woodrat (*Neotoma lepida intermedia*), and the monarch butterfly and their overwintering population (Table 3.3-4).

Table 3.3-4. Special-Status Wildlife Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1] Fed/State/ County/City	Habitat Requirements	Potential to Occur within the BSA
Reptiles				
Anniella sp.	California legless lizard	None/SSC/None/None	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	Moderate potential to occur. Note that the species of legless lizard occurring in the region is not known (Papenfuss and Parham 2013). Suitable scrub habitat is present, although loose, loamy soils are less abundant within the site due to extensive past grading to form the slopes adjacent to U.S. Highway 101. A 1952 CNDDB occurrence was within the western portion of the project site (CDFW 2020a). The next closest occurrence is located approximately 2 miles northwest of the site at Carpinteria State Beach (CDFW 2020a).
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC/None/None	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Low potential to occur. Suitable coastal scrub habitat is present, although there is only one CNDDB occurrence in the region, located approximately 10.5 miles northeast of the site near the Los Robles Diversion Canal (CDFW 2020a).

Table 3.3-4. Special-Status Wildlife Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1] Fed/State/ County/City	Habitat Requirements	Potential to Occur within the BSA
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC/None/None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Low potential to occur. Suitable coastal scrub shrubby habitat is present, although all three CNDDB occurrences in the region are located in the montane areas behind the site and not in coastal areas, the closest of which is located approximately 10.5. miles north of the site along E Camino Cielo (CDFW 2020a).
Birds				
Elanus leucurus (nesting)	white-tailed kite	None/FP/ESH/ESHA	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to nest. Marginally suitable woodland nesting habitat is present in the trees adjacent to the project site near Rincon Beach County Park, within the Rincon Point housing development. This species prefers open grassland or marshland habitats which are not present on site, and is found less commonly in agricultural areas or rights-of-way. This species is known to occur along the south coast, however most foraging and nesting activity in the County is restricted to more rural areas and in particular, the Goleta and Santa Maria Valleys (Lehman 2020).
Mammals				
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC/None/None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, human-made structures, and tunnels	Low potential to occur, not expected to roost. Marginally suitable coastal scrub foraging habitat is present, while suitable roosting habitat is absent on site. There is only one CNDDB occurrence in the region, last confirmed in 1941 at the Carpinteria Salt Marsh (CDFW 2020a).

Table 3.3-4. Special-Status Wildlife Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1] Fed/State/ County/City	Habitat Requirements	Potential to Occur within the BSA
Eumops perotis californicus	western mastiff bat	None/SSC/None/None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Low potential to occur, not expected to roost. Suitable coastal scrub foraging habitat is present, while the slopes present on site are not large and far enough away from human disturbance to be suitable roosting habitat. There is only one CNDDB occurrence in the region, which is located approximately 10 miles east of the site near Weldon (CDFW 2020a).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC/None/None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Moderate potential to occur. Suitable coastal scrub habitat is present, and this species is known to occur along the coast in the region, the closet occurrence of which was last confirmed in 1992 located approximately 2.75 miles southeast of the site just east of Punta Gorda (CDFW 2020a). Additionally, woodrat middens have been observed within the project site during various surveys.
Puma concolor (southern and central coast California evolutionary significant units)	mountain lion	None/SC/None/None	Dense undergrowth and cover in deserts, humid coast forests, arid hillsides, and scrub and oak woodlands.	Low potential to occur. Suitable habitat north and east of the project site across U.S. Highway 101 in the vicinity of State Route 150. This species is known to occur in more rural areas and may access areas east of the project site via Rincon Creek; however, project site access is constricted by U.S. Highway 101 and adjacent chain link fencing along the southbound lanes of the highway, the narrow and frequently used State Route 150, and the beach.

Table 3.3-4. Special-Status Wildlife Species Observed or with Potential to Occur within the Biological Survey Area

Scientific Name	Common Name	Regulatory Status[1] Fed/State/ County/City	Habitat Requirements	Potential to Occur within the BSA
Invertebrates				
Danaus plexippus	monarch	FC/None/ESH[2]/ESHA[2]	Follows a pattern of seasonal migration and the Rocky Mountain population migrates southwest to wintering grounds along the California coast from Mendocino to the Mexico border extending into Baja, California, Mexico. Overwintering populations utilize wind-protected tree groves (typically eucalyptus [*Eucalyptus* sp.], Monterey cypress [*Hesperocyparis macrocarpa*], sycamore [*Platanus racemosa*], and coast live oak [*Quercus agrifolia*]) with nectar sources and nearby water sources.	Low potential to roost. While there are a few trees located on the project site including Monterey cypress and eucalyptus trees, most are isolated individuals, and none assemble into a woodland large enough to provide protection and other elements required by overwintering monarch butterflies. There is low potential for monarch butterflies to overwinter adjacent to the project site, including the stand of eucalyptus and trees associated with residential development at Rincon Point near Rincon Creek; however, monarch individuals were not observed during surveys and winter roost sites have not been documented in these areas (Xerces Society 2020). There are numerous occurrences in the region, including a stand of eucalyptus trees north of the project site along Rincon Creek and Bates Road north of Highway 101, last confirmed in 2002 (CDFW 2020a).

[1] **Federal Designations:**

FC	Candidate for federal listing as threatened or endangered
(FD)	Federally delisted; monitored for five years
FE	Federally listed Endangered
FT	Federally listed as Threatened
FDL	Federally delisted
BCC	Bird of Conservation Concern

State Designations:

SC	Candidate for state listing as endangered
SSC	Species of Special Concern
FP	California Department of Fish and Game Protected and Fully Protected Species
SE	State listed as Endangered
ST	State listed as Threatened
SDL	State delisted
WL	Watch List

[2] Monarch overwintering sites are protected under County CLUP (County of Santa Barbara 2019) and the City General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) as County environmentally sensitive habitat and City environmentally sensitive habitat areas.

Two special-status wildlife species were determined to have a moderate potential to occur within the project site, including Northern California legless lizard (SSC) and San Diego desert woodrat (SSC).

California legless lizard. The California legless lizard is a state SSC and is a fossorial lizard that occupies suitable habitats such as coastal dune, valley and foothill grassland, chaparral, and coastal scrub from Contra Costa County south to the Mexico border. This species requires loose, friable soils for burrowing, and often requires moist substrates and environments (CDFW 2020a). This species has been recorded within the project site from a 1952 occurrence along the coastal bluffs near Rincon Road and Rincon Beach County Park (CDFW 2020a). Suitable habitat for this species occurs on site in the coastal scrub and coastal bluff scrub vegetation communities mapped over a large portion of the site

San Diego desert woodrat. The San Diego desert woodrat is a state SSC known to inhabit scrub habitats, such as coastal sage scrub. Its distribution tends to be on the west side of Coast Ranges from San Diego County north to at least San Luis Obispo County. The San Diego desert woodrat prefers moderate to dense canopies, and are particularly abundant in rock outcrops, rocky cliffs, and slopes (CDFW 2020a). Unlike dusky-footed woodrats, San Diego desert woodrats do not construct large stick nests. This species normally occupies openings in rocks, vegetation (such as openings among patches of cactus), and even debris, and sometimes small stick nests are built within an opening or crevice. Suitable habitat for this species occurs on site in the coastal scrub and coastal bluff scrub vegetation communities mapped over a large portion of the site. Woodrat middens have been observed during surveys on site.

White-tailed kite. The white-tailed kite, a state fully protected species, is known to occur in the area (City of Carpinteria 2003), and in addition to protections by the state, the white-tailed kite receives protection under the Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019) and the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003). The City specifically cites the Carpinteria Bluffs as a location where this species occurs and is protected. However, no white-tailed kites were detected in the biological survey area, and the scrub vegetation that predominates there is unsuitable for foraging by this species, which hunts in habitats dominated by grasses and forbs. Trees in and around the site are relatively small, and located in areas with high levels of human disturbance where kites are unlikely to nest. Marginally suitable woodland nesting habitat is present in the trees adjacent to the project site near Rincon Beach County Park, within the Rincon Point housing development. This species prefers open grassland or marshland habitats which are not present on site, and is found less commonly in agricultural areas or rights-of-way. This species is known to occur along the south coast, however most foraging and nesting activity in the County is restricted to more rural areas and in particular, the Goleta and Santa Maria Valleys (Lehman 2020).

Monarch butterflies and overwintering sites. Monarch butterflies are currently a federal candidate species, while their overwintering sites are also protected under Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019) and the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) policies. The monarch butterfly follows a pattern of seasonal migration. The summer grounds of the species are found in New England, the Great Lakes region, the northern Rocky Mountains, and some portions of the Arid West (Pelton et al. 2016). The New England and Great Lakes populations generally migrate southwest to wintering grounds in the Sierra Madre mountain range of Mexico, while the Rocky Mountains population generally migrates southwest to wintering grounds along the California coast.

Monarchs require specific conditions for suitable wintering sites, and wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, dappled sunlight, high humidity, and an absence of freezing temperatures or high wind, generally near the coast

(Pelton et al. 2016). The majority of trees within the biological survey area are either singular and isolated, or do not form a large enough grove to provide adequate microclimate conditions and wind protection monarch butterflies require for overwintering sites. There is a small portion of eucalyptus trees within the eastern portion of the biological survey area, however there is low potential for monarchs for overwinter here as well due to the small relative size of this eucalyptus stand and vulnerability to strong winds and weather. There are also three eucalyptus trees present at near the western terminus of the biological survey area, however they each grow individually and do not form a grove capable of supporting overwintering monarchs. Additionally, the eucalyptus trees present along the hills behind the biological survey on private property, specifically the eucalyptus trees around the residential development off Bates Ranch Road as well as the eucalyptus trees that extend beyond the terminus of Camino Carreta, appear to be planted windrows and do not form large protected groves that have the microclimate characteristics monarchs require for overwintering.

Monarch butterflies are known to occur near the biological survey area along Bates Road just north of U.S. Highway 101 in a eucalyptus stand associated with Rincon Creek (CNDDB Occurrence No. 268; Xerces Site No. 2803) (CDFW 2020a). Additionally, this site was known to have been surveyed for overwintering monarch populations in 2017 during the Xerces Society New Year's Count, of which none were detected (Xerces Society 2020).

3.3.1.5 Critical Habitat

There is no USFWS designated critical habitat for any plant species or wildlife species within or adjacent to the project site (USFWS 2020b).

3.3.1.6 Wildlife Movement Corridors

The project site is located adjacent to the Pacific Ocean and does not connect important habitat areas used by large or small wildlife species. In addition, U.S. Highway 101 and adjacent chain link fencing along the southbound lanes of the highway provide impediments to wildlife movement between the bluffs and more inland areas. Additionally, development and restricted access from more open space areas to the north impede wildlife movement in accessing the project site. Large-sized mammal species such as mountain lion and California black bears (*Ursus americanus californiensis*) may utilize areas to the east of the biological survey area including Rincon Creek and the channelized portion under U.S. Highway 101 to access beach areas; however, the surrounding areas where Rincon Creek daylights is developed with residential homes and parking lot improvements, resulting in a high urban wildlife interface. Medium-sized mammal species such as the striped skunk (*Mephitis mephitis*) or northern raccoon (*Procyon lotor*) may move locally along the coast. The UPRR and associated right-of-way provides an unvegetated corridor approximately 50 feet wide containing a single track that divides the project alignment near its center. The UPRR tracks are at a much lower elevation than the adjacent bluffs creating an anthropogenic valley and break in continuous topography along the bluffs. The project includes a span bridge which connects the two bluffs and ultimately will not change the overall topography for wildlife to approach or cross the tracks. Additionally, minor changes to wind and weather patterns in a very local setting are not an impediment to birds moving long distance, particularly since the overall height of the slope should remain at the same elevation.

To evaluate the change in wind uplift patterns above the bluff face from the proposed regrading for the project, Dudek commissioned an Airflow Analysis for the Proposed Regrading of the Rincon Bluffs study (Airflow Study) by an expert in fluid dynamics; the Airflow Study is included as Appendix I of this Environmental Impact Report. Several different approaches were used, based upon published literature including wind tunnel experiments and direct field measurements of the amplification effects of a slope or vertical face on horizontal wind vectors perpendicular to

the slope face. In the published literature reviewed for this Airflow Study, certain investigators compared the average slope angle of the entire slope or bluff face to determine the wind amplification effect, while others compared the angle of just the upper portion of the slope. The analysis of the effects of the proposed regrading of the bluff face for the project concluded that the proposed regrading could reduce the vertical airflow velocity by 10% to 30% relative to current conditions; for altitudes relevant to paragliding and soaring activities, the reduction is expected to be closer to 30% (Appendix I). Based on available experimental results, the introduction of an upper bench above the trail is expected to provide a small increase in turbulence (of the order of 5%) at an altitude of 30 feet above the front of the bluffs, becoming negligible by an altitude of approximately 75 feet (Appendix I). Migratory avian species travel hundreds to thousands of miles at various elevations during which they can be exposed to a variety of weather systems within days or weeks of each other and have behavioral plasticity in response to microscale through mesoscale conditions including extremely adverse weather (Sahmoun-Baranes 2017). The anticipated changes in velocity and turbulence would occur within a short linear distance relative to the distance traveled for a migrating avian species, and avian species regularly adjust to changing weather conditions. Additionally, the velocity and turbulence changes would be focused at altitudes near the bluff top and would not extend the whole altitude range for migrating birds.

3.3.1.7 Aquatic Resources

While a delineation of jurisdictional aquatic resources was not performed; no evidence of aquatic features was observed within the biological survey area during field surveys. Additionally, there are no USGS National Hydrography Dataset (USGS 2020) or USFWS National Wetlands Inventory (USFWS 2020b) mapped aquatic resources within the project site. On the adjacent Carpinteria Bluffs III site, to the south and west of the western most portion of the project site, multiple seasonal pools and ephemeral pools have been documented (Sage Institute Inc. 2009; Dudek 2012a, 2012b). As part of the Wetland Determination of Pool Features at Carpinteria Bluffs Area II per the California Coastal Act (Dudek 2012b), jurisdictional determinations for coastal wetlands were made for documented seasonal pools and ephemeral features. No documented coastal wetlands occur within the project site; however, coastal wetlands (Dudek 2012b) are approximately 123 feet from project temporary impacts and 125 feet from project permanent impacts. The closest mapped riverine or stream/river feature is associated with the Rincon Creek outlet located approximately 50 feet from the eastern portion of the biological survey area.

3.3.2 Relevant Plans, Policies, and Ordinances

3.3.2.1 Federal

Clean Water Act, Section 404

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into waters of the United States, and regulating quality standards for surface waters. Under the CWA, the U.S. Environmental Protection Agency (USEPA) has implemented pollution control programs such as setting wastewater standards for industry and developing national water quality criteria recommendations for pollutants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. USEPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or human-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an

NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material into wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters (typically a navigable water). USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill of wetlands that are hydrologically connected to jurisdictional waters would require a permit from USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through avoidance and minimization to the extent practicable, followed by compensatory mitigation involving creation or enhancement of similar habitats.

Federal Endangered Species Act

Under the federal Endangered Species Act of 1973 (ESA), the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533[c]). Pursuant to the requirements of the ESA, an agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the planning area, and determine whether the project would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3][4]). The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service are responsible for implementation of the ESA.

USFWS also publishes a list of candidate species. Species on this list receive special attention from federal agencies during environmental review, although they are not protected otherwise under the ESA. The candidate species are those for which USFWS has sufficient biological information to support a proposal to list them as endangered or threatened.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the Migratory Bird Treaty Act, "take" is defined as "pursue, hunt, shoot, wound, kill trap, capture, or collect, or any attempt to carry out these activities" (16 USC 703 et seq.). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). Executive Order 13186 requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species. Currently, birds are considered to be nesting under the Migratory Bird Treaty Act only when there are eggs or chicks that are dependent on the nest.

3.3.2.2 State

California Endangered Species Act

The California ESA establishes state policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. Under the California ESA, CDFW is responsible for maintaining a list of threatened species and endangered species (California Fish and Game Code, Section 2070). CDFW also maintains a list of candidate species, which are species that CDFW has formally noticed as under review for addition to the threatened or endangered species list. CDFW also maintains lists of California species of special concern, which serve as watch lists. Pursuant to the requirements of the California ESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the area, and determine whether the proposed project would have a potentially significant impact on such species. CDFW encourages informal consultation on any proposed project that may impact a candidate species.

California Fish and Game Code

Under the California Fish and Game Code, CDFW provides protection from take for a variety of species, including fully protected species. "Fully protected" is a legal protective designation administered by CDFW and intended to conserve wildlife species that risk extinction within California. Lists have been created for birds, mammals, fish, amphibians, and reptiles.

Birds of prey are protected in California under California Fish and Game Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFW. Section 3511 prohibits take or possession of a fully protected species. In addition, Section 3513 states "It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory [Bird] Treaty Act." Any loss of fertile eggs or nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact. Non-raptor native birds receive similar protection under California Fish and Game Code Section 3503. Project impacts to these species would not be considered significant unless the species are known to, or have a high potential to, nest in the area or rely on it for primary foraging.

The Native Plant Protection Act of 1977 (California Fish and Game Code, Section 1900 et seq.) gives CDFW authority to designate state endangered, threatened, and rare plants, and provides specific protection measures for identified populations.

CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Sections 1601–1606 of the California Fish and Game Code. The California Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. Through policy, CDFW asserts jurisdiction to the top of banks of all streams, including intermittent and ephemeral streams, extending laterally to the upland edge of adjacent riparian vegetation. CDFW uses the Cowardin system for wetland identification and classification, which typically results in a larger jurisdictional area than federal jurisdiction under the Clean Water Act. Under this system, wetlands must

have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

3.3.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City's General Plan/Local Coastal Land Use Plan includes the following objectives and policies relevant to the proposed project and biological resources:

- OSC-1 Protect, Preserve and Enhance Local Natural Resources and Habitats
  - Policy OSC-1a. Protect ESHAs from development and maintain them as natural open space or passive recreational areas.
  - Policy OSC-1b. Prohibit activities, including development, that could damage or destroy ESHA.
  - Policy OSC-1c. Establish and support preservation and restoration programs for ESHA, including but not limited to Carpinteria Creek, Carpinteria Bluffs, Carpinteria Salt Marsh, seal rookery, Carpinteria reef, Pismo clam beds and the intertidal zones along the shoreline.
  - Policy OSC-1d. Property including ESHA should be designated with a zoning category that allows for the protection of, and access to, the resource area, such as Open Space/Recreation or Public Facility zoning. Any development on property including ESHA should be designed and conducted to protect the resources. Within environmentally sensitive habitat only uses dependent upon those resources shall be allowed and the resources shall be protected against any disruption.
  - Policy OSC-1f. Protect and restore degraded wetlands, butterfly habitat, native plant communities, and sensitive, rare, threatened or endangered species habitat on City-owned land to the maximum extent feasible.
- OSC-3 Preserve and Restore Wetlands Such as the Carpinteria Salt Marsh
  - Policy OSC-3a. Wetland delineations shall be based on the definitions contained in Section 13577 (b) of Title 14 of the California Code of Regulations
  - Policy OSC-3b. The upland limit of a wetland is defined as
    - the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover;
    - the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric;
    - in the case of wetlands without vegetation or soils, the boundary between land that is flooded or saturated at some time during years of normal precipitation, and land that is not.
    - If questions exist, the limit shall be determined by a habitat survey made by a qualified biologist in consultation with the California Department of Fish and Game.
  - Policy OSC-3c. Development adjacent to the required buffer around wetlands should not result in adverse impacts including but not limited to sediment runoff, chemical and fertilizer contamination, noise, light pollution and other disturbances.
- OSC-7 Conserve Native Plant Communities.
  - Policy OSC-7b. When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. Structures shall be sited and designed to minimize the impact of grading, paving

construction of roads, runoff and erosion on native vegetation. Sensitive resources that exhibit any level of disturbance shall be maintained, and if feasible, restored. New development shall include measures to restore any disturbed or degraded habitat on the project site. Cut and fill slopes and all areas disturbed by construction activities shall be landscaped or revegetated at the completion of grading. Plantings shall be of native, drought-tolerant plant species consistent with the existing native vegetation on the site. Invasive plant species that tend to supplant native species shall be prohibited.

Santa Barbara County Article II Coastal Zoning Ordinance

Pursuant to PRC Section 30500 of the California Coastal Act of 1976, Santa Barbara County was required to prepare an LCP for portions of the unincorporated areas of Santa Barbara County within the coastal zone. Sections of the Santa Barbara County Article II Zoning Ordinance that may be relevant to the proposed project include Section 35-140, Tree Removal. Section 35-140 regulates the removal of qualifying trees within the coastal zone, and requires Coastal Development Permit (CDP) approval prior to removal of any qualifying tree. A qualifying tree is defined as a tree which is six inches or more in diameter measured four feet above the ground and six feet or more in height and which is 1) located in a County street right-of-way; or 2) located within 50 feet of any major or minor stream except when such trees are removed for agricultural purposes; or 3) oak trees; or 4) used as a habitat by the monarch butterflies. However, a CDP to remove trees in the coastal zone shall only be issued for reasons such as: the trees are dead; the trees prevent the construction of a project for which a CDP has been issued and project redesign is not feasible; the trees are diseased and pose a danger to healthy trees in the immediate vicinity; or the trees are so weakened by age, disease, storm, fire, excavation, removal of adjacent trees, or any injury so as to cause imminent danger to persons or property.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan was partially certified by the Coastal Commission on March 17, 1981, adopted in 1982, and republished June 2019, as the Local Coastal Program for unincorporated Santa Barbara County. It details the rules and regulations of land use within Santa Barbara County's coastal areas. The following policies would apply to the proposed project. Policy 9-37 consists of the same guidelines discussed above in the Santa Barbara County Article II Zoning Ordinance Section 35-97.19, Development Standards for Stream Habitats. Policy 9-38 consists of the same guidelines discussed above in the Santa Barbara County Article II Zoning Ordinance Section 35-97.19.

- Policy 9-36: When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. All development shall be sited, designed, and constructed to minimize impacts of grading, paving, construction of roads or structures, runoff, and erosion on native vegetation. In particular, grading and paving shall not adversely affect root zone aeration and stability of native trees.
- Policy 9-37: The minimum buffer strip for major streams in rural areas, as defined by the land use plan, shall be presumptively 100 feet, and for streams in urban areas, 50 feet. These minimum buffers may be adjusted upward or downward on a case-by-case basis. The buffer shall be established based on an investigation of the following factors and after consultation with the Department of Fish and Game and Regional Water Quality Control Board in order to protect the biological productivity and water quality of streams:
  1) Soil type and stability of stream corridors;
  2) How surface water filters into the ground;
  3) Slope of the land on either side of the stream; and
  4) Location of the 100-year flood plain boundary.

Riparian vegetation shall be protected and shall be included in the buffer. Where riparian vegetation has previously been removed, except for channelization, the buffer shall allow for the reestablishment of riparian vegetation to its prior extent to the greatest degree possible. Riparian vegetation shall be protected and shall be included in the buffer. Where riparian vegetation has previously been removed, except for channelization, the buffer shall allow for the reestablishment of riparian vegetation to its prior extent to the greatest degree possible.

- Policy 9-38: No structures shall be located within the stream corridor except: public trails, dams for necessary water supply projects, flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development; and other development where the primary function is for the improvement of fish and wildlife habitat. Culverts, fences, pipelines, and bridges (when support structures are located outside the critical habitat) may be permitted when no alternative route/location is feasible. All development shall incorporate the best mitigation measures feasible.

3.3.3 Thresholds of Significance

The County provides types of impacts to biological resources that may be considered significant if the project substantially alters biological resources in the following ways (County of Santa Barbara 2008):

1. Substantially reduce or eliminate species diversity or abundance
2. Substantially reduce or eliminate quantity or quality of nesting areas
3. Substantially limit reproductive capacity through losses of individuals or habitat
4. Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources
5. Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes)
6. Substantially interfere with natural processes, such as fire or flooding, upon which the habitat depends.

Furthermore, the size, type, and timing of impacts should be considered in assessing the significance of project impacts on biological resources (County of Santa Barbara 2008).

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

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

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

g) Result in cumulatively considerable impacts to biological resources.

3.3.4 Impact Analysis

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

For the purpose of CEQA analysis, federal, state, CNPS CRPR 1A, 1B, 2A, and 2B plants, and locally rare plants (Wilken 2018) are considered special-status plant species. CRPR 3 and 4 plants, which are CNPS "rare", but not considered special-status yet these plant species do add to the vegetation community value designated as County ESH and or City ESHA as CNPS CRPR 3 and 4 species. No federal, state, or CNPS CRPR 1 or 2 species, or locally rare (Wilken 2018) species were observed. Two CNPS CRPR 4.2 plant species, cliff malacothrix and woolly seablite, and one CNPS CRPR 3.2 plant species, south coast branching phacelia, were detected within the biological survey area. Cliff malacothrix, south coast branching phacelia, and woolly seablite are not included on the Rare Plants of Santa Barbara County list (Wilken 2018) and therefore, are not considered special-status plant species. No special-status plant species were observed; thus, impacts to special-status plant species would be less than significant.

Habitat was documented for two special-status wildlife species, either within or adjacent to the trail alignment: California legless lizard and San Diego desert woodrat. Habitat for the California legless lizard was found in the proposed trail alignment immediately south of the UPRR crossing. California legless lizard individuals could suffer injury or mortality because of grading and other construction activities associated with the project. Therefore, impacts to California legless lizard would be potentially significant absent mitigation. Habitat for the woodrat is located throughout the scrub dominated portions of the site. Woodrat individuals could suffer injury or mortality because of grading and other construction activities. Therefore, impacts to woodrat would be potentially significant absent mitigation. Impacts to these species' habitats would be reduced to **less than significant with implementation of Mitigation Measure (MM) BIO-1 through MM-BIO-4**.

White-tailed kite is known to occur along the south coast, however most foraging and nesting activity in the County is restricted to more rural areas and in particular, the Goleta and Santa Maria Valleys (Lehman 2020). The City specifically cites the Carpinteria Bluffs as a location where white-tailed kites occur and their habitat is protected. However, no white-tailed kites were detected in the biological survey area, and the scrub vegetation that predominates there is unsuitable for foraging by this species, which hunts in habitats dominated by grasses and forbs. This species prefers open grassland or marshland habitats which are not present on site, and is found less commonly in agricultural areas or rights-of-way. Trees in and around the project site are relatively small, and located in areas with high levels of human disturbance where white-tailed kites are unlikely to nest. Marginally suitable woodland nesting habitat is present in the trees adjacent to the project site near Rincon Beach County Park and within the Rincon Point housing development; however, proposed project impacts are greater than 500 feet from these habitats. The trees within the vicinity of Rincon Beach County Park are not planned to be directly impacted. Therefore, impacts to white-tailed kites would be **less than significant.**

Monarchs require specific conditions for suitable wintering sites, and wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, dappled sunlight, high humidity, and an absence of freezing temperatures or high wind, generally near the coast (Pelton et al. 2016). The majority of trees within the project site are either singular and isolated, or do not form a large enough grove to provide adequate microclimate conditions and wind protection monarch butterflies require for overwintering sites. There are three eucalyptus trees present near the western terminus of the project site, however they each grow individually and do not form a grove capable of supporting overwintering monarchs. There is a small portion of eucalyptus trees within the eastern portion of the biological survey area, however there is low potential for monarchs for overwinter here as well due to the small relative size of this eucalyptus stand and vulnerability to strong winds and weather. The easternmost proposed project impacts are over 1,000 feet from these eucalyptus trees. Additionally, the eucalyptus trees present along the hills behind the project site on private property, specifically the eucalyptus trees around the residential development off Bates Ranch Road as well as the eucalyptus trees that extend beyond the terminus of Camino Carreta, appear to be planted windrows and do not form large protected groves that have the microclimate characteristics monarchs require for overwintering.

Monarch butterflies are known to occur near the project site along Bates Road just north of U.S. Highway 101 in a eucalyptus stand associated with Rincon Creek (CNDDB Occurrence No. 268; Xerces Site No. 2803) (CDFW 2020a). Additionally, this site was known to have been surveyed for overwintering monarch populations in 2017 during the Xerces Society New Year's Count, of which none were detected (Xerces Society 2020). While this population is not within 100 feet of the project site, it could be affected by project implementation due to changed weather patterns. However, no impacts to this monarch overwintering site is anticipated since the overall height of the slope within Rincon Beach County Park south of Highway 101 will not be reduced, as work includes proposed terraces to stabilize the hill but will not decrease its overall height, and therefore no changes to the wind conditions at the overwintering site are expected. Additionally, this overwintering site is largely protected by the hill below the single residential development at 637 Bates Road, and any possible changes to weather and wind patterns due to project implementation would not affect the protective contour this hill independently provides. Therefore, monarch butterflies are not anticipated to be affected since there is low potential for the project site to support overwintering populations, and because known overwintering populations in the vicinity would not be adversely affected due to project implementation. Therefore, impacts to monarch butterfly individuals and monarch butterfly overwintering sites would be **less than significant.**

Several trees, including eucalyptus, Monterey cypress, pine, are located within the proposed trail alignment near its western terminus and U.S. Highway 101. These trees are relatively small and located in areas with high levels of human disturbance including U.S. Highway 101 vehicular traffic and pedestrian use of Carpinteria Avenue and adjacent areas. These isolated and singular trees lack dense foliage and are located in areas vulnerable to strong winds and weather. Several myoporum trees are located within the proposed trail alignment and are largely multistemmed. The myoporum located directly adjacent to the unsanctioned trail experiences high levels of human disturbance. Due to the locations of these trees in areas with high levels of human disturbance, relatively small size of these trees, isolated nature of the trees, and vulnerability to strong winds and weather, raptors are unlikely to nest in these trees. Therefore, removal of these trees would not substantially reduce or eliminate quantity or quality of raptor nesting areas and impacts would be **less than significant.**

Additionally, a stand of trees is present at the eastern terminus of the biological survey area, which are rooted next to the Rincon Beach County Park parking lot. The eastern most proposed project impacts are over 1,000 feet from this stand of trees. The trees within the vicinity of Rincon Beach County Park are not planned to be directly impacted. Therefore, project impacts to raptor nesting trees would not substantially reduce or eliminate quantity or quality of nesting areas and impacts to nesting trees would be **less than significant.**

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, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

As discussed in Section 3.1.1.2, five native scrub communities ([California brittle bush – ashy buckwheat scrub alliance, *Encelia californica* association], [quailbush scrub alliance, *Atriplex lentiformis* association], [coastal sage scrub: California sagebrush – (purple sage) scrub alliance, *Artemisia californica* association], [coyote brush scrub alliance, *Baccharis pilularis* association], and [lemonade berry scrub alliance, *Rhus integrifolia* association]) are found in the proposed trail alignment and adjacent areas. These five native scrub communities are designated sensitive by CDFW, County ESH by definition (coastal bluff scrub or coastal sage scrub habitat) or supporting sensitive species, and/or City ESHA by definition (coastal bluff scrub or coastal sage scrub habitat), mapped as ESHA by the City, or supporting sensitive species, as described in Table 3.3-5.

Communities impacted by the proposed project are shown in Table 3.3-5, below, and include California brittle bush – ashy buckwheat scrub alliance, *Encelia californica* association (0.38 acres temporary impacts, 0.04 acres permanent impacts) and quailbush scrub alliance, *Atriplex lentiformis* association (1.31 acres temporary impacts, 0.41 acres permanent impacts) as well as coastal sage scrub: California sagebrush – (purple sage) scrub alliance, *Artemisia californica* association (1.15 acres temporary impacts, 0.14 acres permanent impacts), coyote brush scrub alliance, *Baccharis pilularis* association (0.57 acres temporary impacts, 0.14 acres permanent impacts), and lemonade berry scrub alliance, *Rhus integrifolia* association (0.14 acres temporary impacts, 0.03 acres permanent impacts).

Table 3.3-5. Temporary and Permanent Impacts to Sensitive Native Vegetation Communities

Vegetation Community Alliance, Association	Alliance-Association (State Sensitive)/ County ESH/ City ESHA	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impacts (acres)
Coastal Bluff Scrub				
California Brittle Bush – Ashy Buckwheat Scrub Alliance, *Encelia californica* Association	S3-Yes (Yes)/Yes/Yes	0.38	0.04	0.42
Quailbush Scrub Alliance, *Atriplex lentiformis* Association	S4-No (No)/Yes/Yes	1.31	0.41	1.73
Coastal Bluff Scrub Subtotal		*1.69*	*0.46*	*2.15*
Coastal Scrub				
California Sagebrush – (Purple Sage) Scrub Alliance, *Artemisia californica* Association	S5-S4 (No)/Yes/Yes	1.15	0.14	1.29
Coyote Brush Scrub Alliance, *Baccharis pilularis* Association	S5-No (No)/Yes/Yes	0.57	0.14	0.71
Lemonade Berry Scrub Alliance, *Rhus integrifolia* Association	S3-S3 (Yes)/Yes/Yes	0.14	0.03	0.17
Coastal Scrub Subtotal		*1.86*	*0.30*	*2.17*
Combined Total		**3.55**	**0.76**	**4.32**

As shown in Table 3.3-5, approximately 3.55 acres of CDFW sensitive, County ESH, and/or City ESHA habitats would be temporarily impacted due to construction. An additional 0.76 acres of CDFW sensitive, County ESH, and/or City ESHA habitats would be permanently impacted due to construction. These native plant communities are considered CDFW sensitive, County ESH, and/or City ESHA and protected under County CLUP (County of Santa Barbara 2019) and the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) policies. Therefore, the proposed project would result in a substantial adverse effect on a sensitive natural community, and impacts would be potentially significant.

County CLUP (County of Santa Barbara 2019) and the City of Carpinteria General Plan and Local Coastal Plan (City of Carpinteria 2003) policies require County ESH and City ESHA avoidance. With implementation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-5**, impacts would be reduced to **less than significant with mitigation.**

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

As discussed in Section 3.1.1.8, above, no jurisdictional aquatic resources were detected at the biological survey area during the field survey. Therefore, no direct impacts to jurisdictional aquatic resources would occur. On the adjacent Carpinteria Bluffs III site, to the south and west of the western most portion of the project site, multiple seasonal pools and ephemeral pools have been documented (Sage Institute Inc. 2009; Dudek 2012a, 2012b). As part of the Wetland Determination of Pool Features at Carpinteria Bluffs Area II per the California Coastal Act (Dudek 2012b), jurisdictional determinations for coastal wetlands were made for documented seasonal pools and ephemeral features. These coastal wetlands (Dudek 2012b) are approximately 123 feet from project temporary impacts and 125 feet from project permanent impacts. The closest mapped riverine or stream/river feature is associated with the Rincon Creek outlet located approximately 50 feet from the eastern portion of the biological survey area and over 1,000 feet from the eastern terminus of proposed impacts. The existing developed areas near this portion of Rincon Creek included the Rincon Beach County Park asphalt parking lot and associated developments of a standard curb, vegetation, paved Rincon Point Lane, and additional vegetation.

The City of Carpinteria General Plan and Local Coastal Plan (City of Carpinteria 2003) includes implementation policies associated with wetlands which state, "*Maintain a minimum 100-foot setback/buffer strip in a natural condition along the upland limits of all wetlands. No structures other than those required to support light recreational, scientific and educational uses shall be permitted within the setback, where such structures are consistent with all other wetland development policies and where all feasible measures have been taken to prevent adverse impacts. The minimum setback may be adjusted upward to account for site-specific conditions affecting avoidance of adverse impacts.*"

Project impacts, both temporary and permanent, are greater than 100 feet from known coastal wetlands near the western terminus of the project and greater than 1,000 feet from Rincon Creek near the eastern terminus of the project. Therefore, the project would not have a substantial adverse effect on coastal wetlands including creeks and **no impact** would occur.

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?

As discussed in Section 3.1.1.7, the proposed trail alignment is located adjacent to the Pacific Ocean and does not connect important habitat areas used by large or small terrestrial wildlife species. In addition, U.S. Highway 101 and the chain link fence adjacent to the southbound lanes of the highway provide impediments to movement of larger and medium-sized wildlife. Additionally, development and restricted access from more open space areas to the north impede wildlife movement in accessing the project site. Large-sized mammal species such as mountain lion and California black bears (*Ursus americanus californiensis*) may utilize areas to the east of the biological survey area including Rincon Creek and the channelized portion under U.S. Highway 101 to access beach areas; however, the surrounding areas where Rincon Creek daylights is developed with residential homes and parking lot improvements, resulting in a high urban wildlife interface. Medium-sized mammal species such as the striped skunk (*Mephitis mephitis*) or northern raccoon *(Procyon lotor)* may occasionally use the opening provided by the trail to move locally along the coast. The trail may provide some hazard to common, smaller terrestrial species such as the western fence lizard *(Sceloporus occidentalis)*, common side-blotched lizard *(Uta stansburiana)* and California pocket mouse *(Chaetodipus californicus),* but the trail and associated fencing will not present a physical barrier to their movement.

Concerning avian species, minor changes to wind and weather patterns in a very local setting are not an impediment to birds moving long distance, particularly since the overall height of the slope should remain at the same elevation. As identified in the Airflow Study (Appendix I), the analysis of the effects of the proposed regrading of the bluff face for the project concluded that the proposed regrading could reduce the vertical airflow velocity by 10% to 30% relative to current conditions; for altitudes relevant to paragliding and soaring activities, the reduction is expected to be closer to 30%. Based on available experimental results, the introduction of an upper bench above the trail is expected to provide a small increase in turbulence (of the order of 5%) at an altitude of 30 feet above the front of the bluffs, becoming negligible by an altitude of approximately 75 feet. Migrating avian species may experience reduced airflow velocity by approximately 30% and an increase in turbulence (of the order of 5%) at an altitude of 30 feet above the front of the bluffs. Migratory avian species travel hundreds to thousands of miles at various elevations during which they can be exposed to a variety of weather systems within days or weeks of each other and have behavioral plasticity in response to microscale through mesoscale conditions including extremely adverse weather (Sahmoun-Baranes 2017). The anticipated changes in velocity and turbulence would occur within a short linear distance relative to the distance traveled for a migrating avian species, and avian species regularly adjust to changing weather conditions. Additionally, the velocity and turbulence changes would be focused at altitudes near the bluff top and would not extend the whole altitude range for migrating birds. Therefore, changes in topography associated with regrading would not substantially impact migratory avian species and impacts would be **less than significant.**

In addition, as discussed under Threshold a, above, 22 species of native birds were detected on site, including several with the potential to nest there. Nests, eggs and nestlings of all native bird species are protected by the Migratory Bird Treaty Act and the California Fish and Game Code. Vegetation clearing and grading, if occurring during the nesting season (typically mid-February to August), have the potential to destroy nests, eggs and nestlings, which could violate these regulations. Therefore, the project impacts to nesting birds from project disturbances would be potentially significant. With implementation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-6**, project impacts would be reduced to **less than significant with mitigation**.

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

As discussed in Section 3.1.1.4, three Monterey cypress trees (*Hesperocyparis macrocarpa*), a species native to California but not to the project region, exist on or near the proposed alignment, or within the temporary impact area. This includes a single tree near the western terminus of the project site near the pull-out off Carpinteria Ave., a single tree at the edge of the temporary disturbance area near disturbed habitat in the western half of the project, and a single tree adjacent to the myoporum grove along an unsanctioned trail within Rincon Beach County Park. Additionally, two newly planted pine saplings (*Pinus* sp.) exist near the edge of the temporary disturbance area in the western portion of the project, both of which were under 3 inches diameter measured 4 feet from the ground and were installed with supportive stakes and mulch. Several eucalyptus (*Eucalyptus* sp.) are adjacent to the western portions of the proposed trail, located within the City, as well as exist near the eastern terminus of the biological survey area overhanging the Rincon Beach County Park parking lot. All of the trees described above are not native or naturally occurring in the region, therefore they should not be considered native trees under Policy 9.36 of the Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019).

Furthermore, the only trees on site that meet the definition for qualifying trees under the Santa Barbara County Article II Coastal Zoning Ordinance, are the few eucalyptus trees located at the eastern terminus of the biological survey area, the canopies of which spread across the Rincon Beach County Park parking lot. These few trees are large enough and are located within 50 feet of Rincon Creek satisfying the definition for a qualifying tree. Note that Rincon Creek is outside the biological survey area and greater than 1,000 feet from proposed project impacts. The trees associated with Rincon Creek and trees south of the Rincon Beach County Park parking lot are not proposed to be impacted or altered in any way, and thus the project would not conflict with the Coastal Zoning Ordinance. None of the other trees on site meet the definition of a qualifying trees under the Santa Barbara County Article II Coastal Zoning Ordinance as they are not located in a County street right-of-way, located within 50 feet of any major or minor stream, oak trees or used as a habitat by the monarch butterflies. In addition, none of the trees identified on site are not a part of any windbreak on the Carpinteria Bluffs, which are protected under the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003). Therefore, the project does not conflict with any local tree preservation policy and impacts to trees would be **less than significant.**

White-tailed kite is known to occur along the south coast, however, most foraging and nesting activity in the County is restricted to more rural areas and in particular, the Goleta and Santa Maria Valleys (Lehman 2020). The City specifically cites the Carpinteria Bluffs as a location where white-tailed kites occur and their habitat is protected. However, no white-tailed kites were detected in the biological survey area, and the scrub vegetation that predominates there is unsuitable for foraging by this species, which hunts in habitats dominated by grasses and forbs. This species prefers open grassland or marshland habitats which are not present on site, and is found less commonly in agricultural areas or rights-of-way. Trees in and around the project site are relatively small, and located in areas with high levels of human disturbance where white-tailed kites are unlikely to nest. Marginally suitable woodland nesting habitat is present in the trees adjacent to the project site near Rincon Beach County Park and within the Rincon Point housing development; however, proposed project impacts are greater than 500 feet from these habitats. The trees within the vicinity of Rincon Beach County Park are not planned to be directly impacted. Therefore, impacts to white-tailed kites would be **less than significant.**

Monarchs require specific conditions for suitable wintering sites, and wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, dappled sunlight, high humidity, and an absence of freezing temperatures or high wind, generally near the coast (Pelton et al. 2016). The majority of trees within the project site are either singular and isolated, or do not form a

large enough grove to provide adequate microclimate conditions and wind protection monarch butterflies require for overwintering sites. There are three eucalyptus trees present near the western terminus of the project site, however they each grow individually and do not form a grove capable of supporting overwintering monarchs. There is a small portion of eucalyptus trees within the eastern portion of the biological survey area, however, there is low potential for monarchs to overwinter here as well due to the small relative size of this eucalyptus stand and vulnerability to strong winds and weather. The easternmost proposed project impacts are over 1,000 feet from these eucalyptus trees. Additionally, the eucalyptus trees present along the hills behind the project sit on private property, specifically the eucalyptus trees around the residential development off Bates Ranch Road as well as the eucalyptus trees that extend beyond the terminus of Camino Carreta, appear to be planted windrows and do not form large protected groves that have the microclimate characteristics monarchs require for overwintering.

Monarch butterflies are known to occur near the project site along Bates Road just north of U.S. Highway 101 in a eucalyptus stand associated with Rincon Creek (CNDDB Occurrence No. 268; Xerces Site No. 2803) (CDFW 2020a). Additionally, this site was known to have been surveyed for overwintering monarch populations in 2017 during the Xerces Society New Year's Count, of which none were detected (Xerces Society 2020). While this population is not within 100 feet of the project site, it could be affected by project implementation due to changed weather patterns. However, no impacts to this monarch overwintering site is anticipated since the overall height of the slope within Rincon Beach County Park south of U.S. Highway 101 will not be reduced, as work includes proposed terraces to stabilize the hill but will not decrease its overall height, and therefore no changes to the wind conditions at the overwintering site are expected. Additionally, this overwintering site is largely protected by the hill below the single residential development at 637 Bates Road, and any possible changes to weather and wind patterns due to project implementation would not affect the protective contour this hill independently provides. Therefore, monarch butterflies are not anticipated to be affected since there is low potential for the project site to support overwintering populations, and because known overwintering populations in the vicinity would not be adversely affected due to project implementation. Therefore, impacts to monarch butterfly individuals and monarch butterfly overwintering sites would be **less than significant.**

Several trees, including eucalyptus, Monterey cypress, and pine, are located within the proposed trail alignment near its western terminus and U.S. Highway 101. These trees are relatively small and located in areas with high levels of human disturbance including U.S. Highway 101 vehicular traffic and pedestrian use of Carpinteria Avenue and adjacent areas. These isolated and singular trees lack dense foliage and are located in areas vulnerable to strong winds and weather. Several myoporum trees are located within the proposed trail alignment and are largely multistemmed. The myoporum located directly adjacent to the unsanctioned trail experiences high levels of human disturbance. Due to the locations of these trees in areas with high levels of human disturbance, relatively small size of these trees, isolated nature of the trees, and vulnerability to strong winds and weather, raptors are unlikely to nest in these trees. Therefore, removal of these trees would not substantially reduce or eliminate quantity or quality of raptor nesting areas and impacts would be **less than significant.**

Additionally, a stand of trees is present at the eastern terminus of the biological survey area, which are rooted next to the Rincon Beach County Park parking lot. The easternmost proposed project impacts are over 1,000 feet from this stand of trees. The trees within the vicinity of Rincon Beach County Park are not planned to be directly impacted. Therefore, project impacts to raptor nesting trees would not substantially reduce or eliminate quantity or quality of nesting areas and impacts to nesting trees would be **less than significant.**

County environmentally sensitive habitat (ESH) and City environmentally sensitive habitat areas (ESHA) were evaluated based on definitions in the County *Coastal Land Use Plan* (CLUP) (County of Santa Barbara 2019) and the *City of Carpinteria General Plan and Local Coastal Plan* (City of Carpinteria 2003). As shown in Table 3.3-5,

approximately 3.55 acres of CDFW sensitive, County ESH, and/or City ESHA habitats would be temporarily impacted due to construction. An additional 0.76 acres of CDFW sensitive, County ESH, and/or City ESHA habitats would be permanently impacted due to construction. These native plant communities are considered CDFW sensitive, County ESH, and/or City ESHA and protected under County CLUP (County of Santa Barbara 2019) and the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) policies. Therefore, the proposed project would result in a substantial adverse effect on a sensitive natural community, and impacts would be potentially significant. County CLUP (County of Santa Barbara 2019) and the City of Carpinteria General Plan and Local Coastal Plan (City of Carpinteria 2003) policies require County ESH and City ESHA avoidance. With implementation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-5**, impacts would be reduced to **less than significant with mitigation.**

As discussed in Section 3.1.1.8, above, no jurisdictional aquatic resources were detected in the biological survey area during the field survey. Therefore, no direct impacts to jurisdictional aquatic resources would occur. On the adjacent Carpinteria Bluffs III site, to the south and west of the western most portion of the project site, multiple seasonal pools and ephemeral pools have been documented (Sage Institute Inc. 2009; Dudek 2012a, 2012b). As part of the Wetland Determination of Pool Features at Carpinteria Bluffs Area II per the California Coastal Act (Dudek 2012b), jurisdictional determinations for coastal wetlands were made for documented seasonal pools and ephemeral features. These coastal wetlands (Dudek 2012b) are approximately 123 feet from project temporary impacts and 125 feet from project permanent impacts. The closest mapped riverine or stream/river feature is associated with the Rincon Creek outlet located approximately 50 feet from the eastern portion of the biological survey area and over 1,000 feet from the eastern terminus of proposed impacts. The existing developed areas near this portion of Rincon Creek included the Rincon Beach County Park asphalt parking lot and associated developments of a standard curb, vegetation, paved Rincon Point Lane, and additional vegetation.

The City of Carpinteria General Plan and Local Coastal Plan (City of Carpinteria 2003) includes implementation policies associated with wetlands which state, *Maintain a minimum 100-foot setback/buffer strip in a natural condition along the upland limits of all wetlands. No structures other than those required to support light recreational, scientific and educational uses shall be permitted within the setback, where such structures are consistent with all other wetland development policies and where all feasible measures have been taken to prevent adverse impacts. The minimum setback may be adjusted upward to account for site-specific conditions affecting avoidance of adverse impacts.*

Project impacts, both temporary and permanent, are greater than 100 feet from known coastal wetlands near the western terminus of the project and greater than 1,000 feet from Rincon Creek near the eastern terminus of the project. Therefore, the project would not have a substantial adverse effect on coastal wetlands including creeks and **no impact** would occur.

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?

No habitat conservation plans apply to the project area (CDFW 2019). **No impact** would occur.

g) Would the project result in cumulatively considerable impacts to biological resources?

The surrounding land uses of the project site include transportation, open space, residential development, and recreational facilities. While the project site is primarily composed of undeveloped lands, they have been previously subject to extensive grading to form the terraces and slopes that abut U.S. Highway 101 to the north

and UPRR which bisects the site. The coastal bluffs west of the project site are moderately trafficked areas used for recreation, walking, and biking. In 2017, The Land Trust for Santa Barbara County partnered with the Citizens for the Carpinteria Bluffs, the City of Carpinteria, the County of Santa Barbara, and over a thousand community members to purchase, initiate restoration, and ensure long-term maintenance of the Carpinteria Bluffs III property (also referred to as Rincon Bluffs Preserve), the 21-acre property directly to the west of the project site. A conservation easement of the Carpinteria Bluffs III property/Rincon Bluffs Preserve has been recorded which provides permanent preservation and provides long-term conservation of the open space, scenery, habitat for native plants and animals, and coastal access and recreational opportunities. And within the eastern portion of the project site, the currently developed Rincon Beach County Park provides infrastructure for recreation and is highly utilized. Areas to the south are associated with undeveloped beach areas and the Pacific Ocean. As discussed in Section 3.1.1.7, the proposed trail alignment is located adjacent to the Pacific Ocean and does not connect important habitat areas used by large or small terrestrial wildlife species, and minor changes to wind and weather patterns in a very local setting are not an impediment to birds moving long distance, particularly since the overall height of the slope would remain at the same elevation. Mitigation measures have been identified to reduce potential impacts to special-status wildlife species and sensitive vegetation communities to less-than-significant levels. Therefore, cumulative impacts resulting from the proposed project, in combination with the reasonably foreseeable future projects in the area, would be less-than-significant.

3.3.5 Mitigation

MM-BIO-1 **Workers Environmental Awareness Program (WEAP).** The City shall fund an approved biologist to prepare and implement a worker education and awareness program (WEAP) specific to the project. The program shall be presented to all individuals involved in the construction of the project. The program shall include information focused on sensitive vegetation communities, sensitive wildlife and plant species, and common wildlife species and their habitats and shall include, but not be limited to, the following:

- Description of sensitive vegetation communities.
- Workers shall be provided with photographs of sensitive biological resources including sensitive wildlife and plant species.
- Workers shall be informed verbally and in writing of the various project tasks that require biological surveys and monitoring for resource protection.
- Workers shall be provided with a photograph or description of the markers for active bird nests, trees, or other mitigation areas, so that they shall know these are not to be disturbed without a biological monitor present.
- Workers shall be informed not to litter. All trash and litter shall be picked up and removed from the construction sites at the end of each day.
- Workers shall be informed to obey a speed limit of 15 miles per hour while traveling on the project site to avoid collisions with wildlife.
- Workers shall avoid driving over or otherwise disturbing areas outside the designated construction areas.

Plan Requirements and Timing: The applicant shall submit the WEAP to the City of Carpinteria (City) and County of Santa Barbara (County) for review and approval prior to implementation. All workers, contractors, and visitors shall attend the WEAP prior to entering the project site and performing any

work. The applicant shall provide copies of the training attendance sheets to City of Carpinteria and County staff as a record of compliance with this measure on a monthly basis. The WEAP shall be reviewed and approved by the City of Carpinteria and County prior to Zoning Clearance approval. Implementation of the WEAP training shall occur prior to the start of construction and as new crew members are added to the project.

Monitoring: The City of Carpinteria and County permit compliance staff will ensure compliance with the WEAP throughout construction by review of attendance sheets and hardhats, inspection of the site, and interviewing workers, as appropriate.

MM-BIO-2 **Fencing.** To prevent inadvertent impacts on adjacent sensitive vegetation communities including County ESH and City ESHA, native vegetation, special-status species, and common wildlife species and their habitats, construction limits will be fenced with highly visible fencing and staked. Wildlife-safe highly visible construction fencing shall be installed to identify the limits of grading/disturbance, which would reduce potential human trampling outside of the construction limits and minimize the potential spread of non-native weeds or invasive plant species. Wildlife-safe construction fencing and flagging shall remain in place during construction and replaced as needed.

Plan Requirements and Timing: The detailed fencing plan, showing the location of required fencing shall be reviewed and approved by City of Carpinteria and County staff prior to Zoning Clearance approval. This condition shall be printed on all project plans. The detailed fencing plan, showing the location of fencing shall be submitted to City of Carpinteria and County staff for review and approval prior to Zoning Clearance approval. The fence shall be installed prior to the start of ground disturbing activities.

Monitoring: The City of Carpinteria and County staff will inspect the project plans and site, to ensure compliance with this measure as appropriate.

MM-BIO-3 **Pre-construction California Legless Lizard Survey and Relocation**. Prior to initiation of construction, capture and relocation efforts for California legless lizards shall be conducted. Trapping shall be conducted by a qualified biologist and shall include the following steps:

1. Prior to initiation of capture and relocation, a suitable receptor site shall be located. This site shall include areas with loose, moist soils occurring in scrub habitat with high coverage of deerweed (*Lotus scoparius*) or California goldenbush, in arroyo willow (*Salix lasiolepis*) thickets or in other suitable scrub or woodland habitat.
2. Capture and relocation shall take place no more than five days prior to the initiation of construction.
3. These surveys shall be performed by lightly raking loose soil, sand and leaf litter with a wooden rake for a sufficient period to determine that no legless lizards are present, or all legless lizards have been captured.
4. Any lizards found shall be placed in a receptacle with sand and a wet towel and relocated to the previously designated receptor site.

Plan Requirements and Timing: Prior to initiation of construction, capture and relocation efforts for California legless lizards shall be conducted where appropriate. Trapping shall be conducted by a qualified biologist.

Monitoring: The City of Carpinteria and County staff shall ensure the pre-construction survey and relocation efforts, if required, are completed prior to commencement of any earth-moving activities.

MM-BIO-4 Pre-construction Woodrat Survey and Relocation. Prior to initiation of construction, capture and relocation efforts for woodrat shall be conducted. Trapping shall be conducted by a qualified biologist and shall include the following steps:

1. Prior to initiation of capture and relocation, a suitable receptor site shall be located. This site shall be within similar habitat and an adequate distance away from any locations that might be subject to increased human disturbance, such as adjacent to a walking path.
2. These pre-construction surveys shall be performed searching all coastal sage scrub or coastal bluff scrub within the disturbance area for middens or other sign of the species.
3. Any middens and woodrats found shall be live-trapped and relocated to the pre-determined receptor site. The midden shall be dismantled and the materials placed at the relocation site.

Plan Requirements and Timing: Prior to initiation of construction, capture and relocation efforts for woodrat shall be conducted where appropriate. Trapping shall be conducted by a qualified biologist.

Monitoring: The City of Carpinteria and County staff shall ensure the pre-construction survey and relocation efforts, if required, are completed prior to commencement of any earth-moving activities.

MM-BIO-5 Habitat Mitigation and Monitoring Plan. Prior to approval of a coastal development permit, the City shall contract with a qualified biologist to develop a Habitat Mitigation and Monitoring Reporting Plan (Plan) to mitigate for impacts to County ESH/City ESHA vegetation communities. The Plan shall outline efforts to restore or enhance coastal sage scrub and coastal bluff scrub communities, and, therefore, preserve or provide wildlife habitat, in areas temporarily impacted by construction of the trail and within similar habitats adjacent to the impacted biological resources. The Plan may focus on the following:

- In-kind, on-site restoration of areas where coastal sage scrub or coastal bluff scrub has been removed;
- Enhancement of temporarily impacted areas on site currently occupied by ornamental, disturbed or developed areas;
- Restoration of areas occupied by non-native habitats or native habitats with large components of non-native vegetation, within similar habitats adjacent to the impacted biological resources.

Under the Plan, a total of 3.55 acres of County ESH/City ESHA native vegetation communities temporarily impacted by vegetation clearance shall be restored on site in kind at 1:1. A total of 0.76 acres of County ESH/City ESHA native vegetation communities permanently impacted shall be mitigated on site in kind at 3:1. As mitigation potential within the project area may be insufficient for mitigating 0.76 acres permanent impacts to County ESH/City ESHA native vegetation communities at 3:1, any additional mitigation required shall be carried out on areas within adjacent

land controlled by the County or City, such as the Rincon Bluffs Preserve . Off-site mitigation for permanent impacts shall be implemented in-kind at 3:1.

A qualified biologist/botanist shall develop the Plan, which shall provide specific measures to restore or enhance habitat to replace the loss of coastal sage scrub and coastal bluff scrub communities. This Plan shall be focused on adaptive management principles, and shall identify detailed enhancement areas and strategies based on the parameters outlined below, with long-term timing and monitoring requirements. The Plan shall:

1. Provide an up-to-date inventory of on-site native vegetation resources.
2. Define attainable and measurable goals and objectives to achieve through implementation of the Plan. Goals and objections shall focus on replacement of coastal sage scrub, coastal bluff scrub and rare plants removed during construction.
3. Provide site selection and justification.
4. Detail a restoration work plan including methodologies, restoration schedule, plant materials (seed and container plant) sourcing – locally genetic stock, and implementation strategies.
5. Provide a detailed maintenance plan to include removal of invasive non-native species.
6. Define performance standards.
7. Provide a monitoring plan to include methods and analysis of results. Also, include goal success or failure criteria, and an adaptive management plan and suggestions for failed restoration efforts.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria shall contract with a qualified biologist to develop a Plan. The Plan shall outline efforts to restore or enhance coastal sage scrub and coastal bluff scrub communities in areas temporarily and permanently impacted by construction of the project.

***Monitoring*:** The City of Carpinteria and County staff shall ensure development of the Plan and adherence to Plan measures are completed prior to commencement of any earth-moving activities. City and County staff shall periodically conduct site inspections to ensure compliance on site. Restored areas shall be monitored for five years following planting. Annual reports and the final report shall be submitted to the City and County.

MM-BIO-6 **Pre-construction Nesting Bird Surveys**. Within 30 days prior to any vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically mid-February through August in the project region, or as determined by a qualified biologist), the City shall have weekly surveys conducted by a qualified biologist to determine if active nests of special-status bird species, or of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code, are present in the disturbance zone or within 300 feet (500 feet for raptors) of the area to be disturbed. The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance is delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. The City or contractor shall provide the biologist with plans detailing the extent of proposed ground disturbance prior to the survey effort.

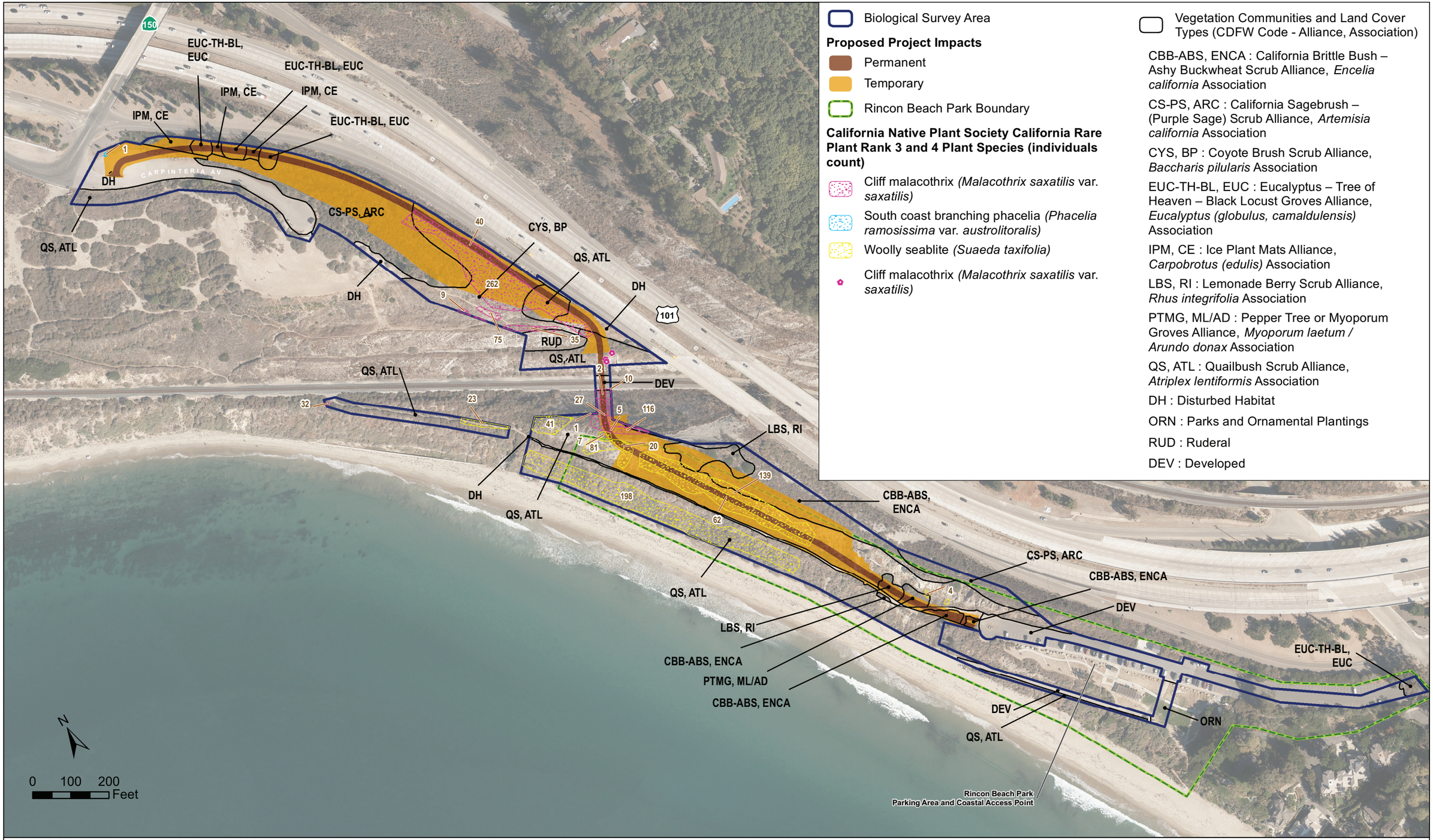
If active nests are found, including any nests for Cooper's hawk, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with highly visible construction fencing, and construction personnel shall be instructed on the sensitivity of nest areas. The results of the surveys, including graphics showing the locations of any nests detected, and any avoidance measures recommended, shall be submitted to the City and County within 14 days of completion of the pre-construction surveys to document compliance with applicable state and federal laws pertaining to the protection of native birds.

Plan Requirements and Timing: Pre-construction nesting bird surveys shall be completed within 30 days prior to any vegetation clearing or ground disturbance associated with construction or grading during the bird nesting season (typically mid-February to August). The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of disturbance work.

Monitoring: The City of Carpinteria and County staff shall ensure the pre-construction nesting bird surveys and any avoidance requirements are completed prior to commencement of any earth-moving activities.

3.3.6 Level of Significance After Mitigation

Implementation of **MM-BIO-1, MM-BIO-2,** and **MM-BIO-3** would reduce impacts to California legless lizard to less than significant. Implementation of **MM-BIO-1, MM-BIO-2,** and **MM-BIO-4** would reduce impacts to San Diego desert woodrat to less than significant. After implementation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-5**, impacts to sensitive vegetation communities, including County ESH and City ESHA, would be less than significant**.** After implementation of **MM-BIO-1, MM-BIO-2,** and **MM-BIO-6**, impacts to nesting birds during the bird nesting season would be less than significant.



Biological Survey Area

Proposed Project Impacts

Permanent

Temporary

Rincon Beach Park Boundary

California Native Plant Society California Rare Plant Rank 3 and 4 Plant Species (individuals count)

Cliff malacothrix *(Malacothrix saxatilis* var. *saxatilis)*

South coast branching phacelia *(Phacelia ramosissima* var. *austrolitoralis)*

Woolly seablite *(Suaeda taxifolia)*

Cliff malacothrix *(Malacothrix saxatilis* var. *saxatilis)*

Vegetation Communities and Land Cover Types (CDFW Code - Alliance, Association)

CBB-ABS, ENCA : California Brittle Bush – Ashy Buckwheat Scrub Alliance, *Encelia california* Association

CS-PS, ARC : California Sagebrush – (Purple Sage) Scrub Alliance, *Artemisia california* Association

CYS, BP : Coyote Brush Scrub Alliance, *Baccharis pilularis* Association

EUC-TH-BL, EUC : Eucalyptus – Tree of Heaven – Black Locust Groves Alliance, *Eucalyptus (globulus, camaldulensis)* Association

IPM, CE : Ice Plant Mats Alliance, *Carpobrotus (edulis)* Association

LBS, RI : Lemonade Berry Scrub Alliance, *Rhus integrifolia* Association

PTMG, ML/AD : Pepper Tree or Myoporum Groves Alliance, *Myoporum laetum / Arundo donax* Association

QS, ATL : Quailbush Scrub Alliance, *Atriplex lentiformis* Association

DH : Disturbed Habitat

ORN : Parks and Ornamental Plantings

RUD : Ruderal

DEV : Developed

AERIAL SOURCE: CIRGIS 2017
ENGINEERING SOURCE: Bengal 2019

FIGURE 3.3-1

Biological Resources

Carpinteria Rincon Trail EIR

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3.4 Cultural Resources

This section describes the existing cultural resources conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.4.1 Existing Conditions

A Phase 1 cultural resources investigation for the originally proposed Carpinteria Rincon Trail was prepared by Dudek in March 2008. The cultural resources investigation included an archaeological site records and literature search at the Central Coast Information Center (CCIC), University of Santa Barbara, California and an intensive surface survey covering the entire project area. For the current revised trail design, Dudek performed a new Phase 1 Cultural Resources Survey in 2018 of the entire alignment to document existing conditions and in order to assess impacts of the updated trail alignment on cultural resources. The updated Phase 1 cultural resources investigation included an archaeological site records and literature search at the Central Coast Information Center (CCIC), University of Santa Barbara, California and an intensive surface survey of the revised trail alignment and area within earthwork limits and temporary impact areas delineated for the transportation and storage of construction equipment. As is customary for Phase 1 cultural resource surveys, the document is not circulated with the associated CEQA document. The updated Dudek Phase 1 survey is on-file with the City of Carpinteria, Community Development Department and with the County of Santa Barbara Planning & Development Department.

Although limited weathered shell was observed in disturbed contexts, no cultural resources were observed in situ, or within intact soils, during the intensive field survey under generally good to excellent ground surface visibility. However, the project site is not only located partially within an archaeological site (CA-SBA-1168), it is also surrounded, in every direction, by archaeological sites with the closest loci of CA-SBA-1/CA-VEN-62 located immediately adjacent to the southeastern extent of the proposed project site. Based on the presence of a portion of the proposed project site overlapping a small portion of the archaeological site CA-SBA-1168, the close proximity of multiple archaeological sites to the proposed project site, as well as the general archaeological sensitivity of the area surrounding the proposed project site, there is substantial evidence for potential unknown significant prehistoric and historic archaeological resources to exist within the project site. Technical Reports and supporting documentation are available in Confidential Appendix D. These confidential appendices are archived at the City and are only accessible to eligible individuals as defined under applicable regulations governing cultural resources confidentiality.

3.4.1.1 Prehistoric Setting

California has one of the best studied archaeological records in the world, and the Santa Barbara Channel is among the most studied regions of California. The basic regional culture historical patterns (i.e., what life was like at different points in time) have been articulated for many decades, and in spite of the ever increasing intensity of archaeological work in the region, our understanding (or at least our definition) of these general patterns has changed only slightly in part because our understanding of how to distinguish them has been compromised by conflicting data and interpretations; notable exceptions include our understanding of the earliest inhabitants, which keeps getting earlier and better defined (Erlandson et al. 2011; Erlandson, Rick, et al. 2007), and our perspectives on the late prehistoric evolution of socio-political complexity, which have matured and expanded rapidly since the late 1980s (e.g., Erlandson and Jones 2002; Arnold 2001, 2004).

The cultural history of the Santa Barbara Channel has seen many iterations, and much of our understanding of change through time is based on foundational research by Rogers (1929) and Warren (1968), both of whom conducted substantial primary research on the mainland coast. Higher resolution periodization was later established by King (1990) who used a combination of stylistic change in shell beads and absolute ages from radiocarbon dates. This bead-based chronology dovetails well with a more recent chronology based on lower-resolution changes in human behavior and material culture (Arnold 1992), and this has been further refined with a larger set of absolute age estimates pegged to a background of regional environmental change matched with more accurate radiocarbon calibration (Kennett 2005).[1] Note that the temporal span of each period in the sequence is approximate, and naming conventions for them vary across different authors; the cultural patterns (e.g., subsistence and settlement) and temporal markers (shell bead styles, for example) used to define them, also vary across temporal boundaries by region.

Paleoindian/Paleocoastal Period (The Earliest Inhabitants): 13,000 – 11,000 BP

Though the earliest appearance of people in the New World is a contentious issue with new data generating new ideas every few years about who they were and how they got here, the evidence from the California Bight is relatively straightforward: cultural deposits and human remains from a series of sites on Santa Rosa and San Miguel islands date from 13,000-11,500 years ago and suggest that people at the time were well-adapted to life on the sea but also had connections to people who lived much further east, deep in the American continent (Erlandson et al. 2011). While this isn't the earliest evidence of human activity in the New World (which, at most is somewhere between 16,000 and 15,000 years old), this early evidence from the West Coast gives credit to the idea that (at least some of) its earliest inhabitants were a marine-adapted people able to move skillfully and quickly between islands and near-shore environments across the southern landmass of the (now submerged) continent of Beringia, down the entire Pacific Coast of North America, and eventually to the southern tip of South America in only a few thousand years (Erlandson, Graham, et al. 2007; Fladmark 1979; Dixon 2001). Though these "Paleocoastal" sites from the islands are the earliest we know of, we may never find evidence for the earliest coastal inhabitants as the shorelines they lived on are now submerged under more than 50 m of water (Masters and Aiello 2007). Indeed, sites of this antiquity are unknown on the mainland, though the occasional isolated – and undated – fluted projectile point (for example from Gaviota State Park CA-SBA-1951) may be suggestive (Erlandson, Cooley, and Carrico 1987).

Early Holocene/Milling Stone Horizon: 11,000 – 5500 BP

Many scholars of North American archaeology separate the Paleoindian/Paleocoastal period from the succeeding Archaic period on the rough (and now debatable) observation that the earlier people were more focused on large game while the later people exploited a broader range of resources and required a different set of tools to do so. On a continent-wide scale, the Archaic therefore sits in the middle of a trajectory of increasing technological and social intensity, somewhere between big-game hunting and full-fledged farming; in California, this crude trajectory has little value as farming was never part of the pre-Columbian picture, yet use of the term "Archaic" persists (cf. Meighan 1959). Colloquially, it applies to everything from the Early Holocene to the end of the Middle-Late Period transition (ca. 11,000 – 1000 years ago), distinguished only by the late prehistoric intensification of economy, technology, population, and political complexity (though see Glassow 1992 for a slightly different interpretation).

[1] Note that all dates provided herein are rounded and drawn from the literature. We attempt to maintain consistency by using calendar, calibrated, years before present (cal BP) which are essentially the same as saying "years ago." However, most authors prior to the mid-1990s (e.g., Glassow 1996) typically report in uncalibrated radiocarbon years before present, uncorrected for marine reservoir offsets, therefore their cultural chronologies can differ from current age estimates for the same site (or cultural period) by 200 – 1500 years, depending on the age and material dated. This is a general problem for the interpretation of California culture history as even current authors use a mixture of differently reported dates. We've tried to account for this, as much as possible, herein, but it further suggests the need to maintain a large, fully vetted, and corrected radiocarbon database, preferably shared across multiple research teams and authors.

Here, the division between Paleoindian and Early Archaic is somewhat arbitrary, but follows current convention; likewise, we combine the earliest known settlements on the mainland coast in this period with those of the more well-documented Milling Stone Horizon because they exist in many of the same places, show evidence for the intensive use of shellfish, use many of the same tools (albeit in different proportions), and overlap in time.

One of the reasons these sites are so visible, stratified, and well-preserved is they contain the remains of shellfish, leading many to suggest that this early Holocene occupation of the region was heavily oriented towards the intensive and persistent exploitation of marine resources. The material remains (and perhaps adaptations) of these earliest Holocene[2] inhabitants of the mainland occasionally differ however, from their predecessors on the islands, but also from their successors on the mainland. However, some of these early sites also differ from the later coastal (and Coast Range interior) occupants as they do not contain millingstones, which become increasingly common after about 8500 years ago. However, it is important not to overstate the differences, as there are clearly sites dating to the early Holocene where groundstone dominates the formal lithic assemblage, both on the coast (Fitzgerald 2000) and deep into the interior (McGuire 1993). Contemporaneous variability in site types and artifact assemblages may point to variability in mobile foraging strategies, or reveal that very different groups exploited an otherwise sparsely inhabited coastal region at slightly different times. These alternatives demand interrogation, as do the relationships between the evidence for human activity on the coast and that of the California interior and the more distant Desert West (Koerper, Langenwalter, and Schroth 1991).

While the emergence of an adaptation tuned to marine resources seems beyond question (particularly if the first people to come to coastal California brought this ability with them from somewhere else), the emergence of a processing technology centered on the use of groundstone slabs and handstones (i.e., the hallmarks of the Milling Stone Horizon) has been the focus of investigation for decades (see Warren 1968; Basgall and True 1985). Like shell middens, grinding tools, especially in high frequencies, are highly visible in the archaeological record and at face value can bias (indeed have biased) interpretation of their relative economic importance (see Nelson and Lippmeier 1993). Recent efforts to understand the highly visible "Milling Stone" sites focus on patterns of groundstone manufacture and use. Following Basgall and True (1985), Hale (2001) analyzed groundstone (millingstones and handstones) and battered stone (scraper planes, cobble tools, etc.) tools from well-known Milling Stone sites across Southern California, including CA-SBA-142 (Glen Annie Canyon) on the Santa Barbara mainland, and found that Milling Stone sites were places that people visited repeatedly, over hundreds to thousands of years to conduct similar economic activities, perhaps for only short periods of time. The large numbers of reused or expedient groundstone tools at these sites speak to food processing. Indeed, regular use of milling tools for processing seeds and other plant foods, such as roots and tubers, does not preclude using them to process rodents, reptiles, and other animals (which might be more easily cooked or dried with less costly tools). Costs associated with acquiring and transporting raw materials suitable for milling, and investments in shaping them to accomplish specific tasks may be modest (depending on local geology), but significant enough to suggest they were essential for survival; investing in them would make them available for use in less essential tasks, like pulverizing non-essential foods or pigments, that might otherwise be processed in other ways. Therefore, while millingstones may have been used for many things, their prominence indexes their importance to a specific adaptive strategy, and archaeological research should be geared towards understanding that relationship.

Hale (2001) interprets Milling Stone sites as places of seasonal occupation for intensive processing, but not as sedentary villages as Wallace (1955) and others envision. Large, well-used assemblages in single locations (as is typical of the classic Milling Stone identity) result from recurrent seasonal visits to specific locations for food processing over multiple years. The milling equipment in these kinds of sites are typically made from locally abundant stone (encountered either in its raw form or as previously discarded tools). Therefore, analysis of tool shaping and maintenance as well as use-wear reveal much about the nature and intensity of occupation and activity.

[2] Note that the Holocene is set at the end of the Younger Dryas, ca. 11,500 years ago (+/-).

Hale (2001) also laments the rarity of other kinds of sites linked both temporally and socioeconomically to those of the Milling Stone period, as they would help to illustrate the full picture of the Archaic in California, and help us to move beyond simple definitions of it as a period marked by economic drudgery imposed by marginalizing climatic regimes (e.g., the Altithermal - see Antevs 1948). Herein lies an important research avenue: assembling well-dated archaeological site data across broad regions to better understand socioeconomic nuance during the Archaic and abandon the site-specific interpretation of the Milling Stone period that is itself an artifact of early archaeological research.

Generally speaking, adaptations attributed to the Archaic (including the Milling Stone phenomenon) involved small groups of people who moved regularly throughout the year to exploit a broad range of resources using a very flexible tool kit that could be made relatively easily or expediently and applied to a wide range of scenarios (Hale 2001; Fitzgerald and Jones 1999; Lantis 1938; Basgall and True 1985). Here, and elsewhere throughout the California Bight and central coast, the full suite of material attributes aligned with the classic Milling Stone horizon is found in a relatively small number of archaeological sites; together with evidence for somewhat different activities at other kinds of sites, presumably within the spatial catchment of annual, or even generational human activity, the Milling Stone pattern reveals a "highly successful strategy of mobility, flexibility, and emphasis on low-risk, moderate-return resources, such as small game, shellfish, and certain plants… (that) seems downright practical" for the environmental and cultural context of the age (Stevens 2013: 54).

The Early Period: 5500 – 2500 BP

The identity of the California "Early Period" in Santa Barbara (in both definition and timing) differs from that of other parts of California. The problem is really about the naming conventions assigned to trends (i.e., the "Periods") in the production and use of shell beads which vary around the state (Bennyhoff and Hughes 1987; Groza 2002; Groza et al. 2011) rather than local conditions or broader patterns of behavior.[3] Instead, here it helps to imagine the shift in quasi-adaptive terms, initially characterized by both Rogers (1929) and Greenwood (1972) as a "Hunting" people or period, marked quite notably by an increase in the abundance of projectile points and a decline in the relative abundance of millingstones. On the central coast, Jones and colleagues (Jones 1992; Jones and Codding 2019; Jones et al. 2007) put the division somewhere between 5500 and 5100 BP, though others (Glassow et al. 2007; Lebow and Moratto 2005) see this transition happening around the Northern California Bight at 7500-7000 BP; yet the use of millingstones continues here, and elsewhere in California, into the late Holocene (Erlandson 1997a, 1997b; Sutton, Schneider, and Yohe II 1993).

Beyond the bead-based periodization, temporal distinctions are hazy, as identification of the Early Period as a clear-cut behavioral or cultural shift at a specific point in time is less obvious. In the literature from the mainland of the California Bight, some authors identify change in patterns of settlement, specifically a shift away from a practice of relocating the entire residential settlement multiple times throughout the year (i.e., a "residentially mobile" pattern), to a pattern the entails moving the residential base only a few times a year (i.e., a "logistically mobile" pattern). For example, Glassow (1990, 1996) saw this shift happening at approximately 8500 years ago for the broader region (prior to the dates he uses for the end of the Milling Stone Horizon) while research from the far northern end of the California Bight puts this shift much later, at approximately 3000 years ago (Lebow et al. 2006). Unfortunately, the differences in interpretation make it difficult to identify or define temporal periods for the region on the basis of cultural behavior alone.

Use of milling equipment persists through this period, though the form and variety of the manos and metates change (Gamble and King 1997), while mortars and pestles were "added to the milling repertoire" around 6000 years ago (Glassow et al. 2007:197). At CA-SBA-53 on the Goleta Slough, millingstones and mortars in roughly the

[3] By contrast, archaeologists in other parts of the state have abandoned this confusion in favor of chronologies based on a broader range of material culture anchored to absolute dates (Rosenthal 2011; Rosenthal et al. 2007) Either way, these names and boundaries are all somewhat arbitrary, imprecise, and/or artificial.

same proportions (and in greater numbers than in most any other excavated sites in the region) come from deposits dating to 5650-5050 BP (Harrison and Harrison 1966; Rick and Glassow 1999). Whether any of these things point to a change in diet is still an open question. Importantly, mortars are costly to make and signal an investment in processing technology much greater than the use of millingstones (Hale 2001, 2010). Such an investment was likely made to increase processing efficiency of pulpy nut meat such as acorns (Hale 2009). Glassow (1997) suggests that they could have been used to process bulrush and other estuarine resources, though millingstones would have offered similar efficiency in processing such things. It is certain, however, that the addition of mortars marks a socioeconomic shift that placed emphasis on intensive resource extraction and/or processing beyond that which could be accomplished using a basined millingstone. Perhaps this is the economic shift that identifies the onset of the Early Period. The extent to which this change in economy reflects change in the density and distribution of subsistence resources as a function of regional environmental change at the end of the Mid-Holocene warm period, or "Altithermal" (Glassow 1997; Rick and Glassow 1999; Glassow, Wilcoxon, and Erlandson 1988), along with a decline in marine productivity associated with warming sea-surface temperatures (Kennett et al. 2007) is an important but unresolved issue.

A broad range of evidence regarding subsistence diversification, increasing sedentism, status differentiation, ritual activity, rock art, and population growth have all been marshalled to suggest that the second half of this interval (after 4000 years ago, or what Lebow and Moratto call the "Late Early Period") contains some of the earliest evidence for the evolution of cultural complexity in the region (Glassow et al. 2007; Erlandson and Rick 2002), though dramatic, fundamental change did not happen until the end of the Middle Period and into the Late Period.

The Middle Period: 2500 – 800 BP

Glassow (1996: 22) suggests that the defining feature of this period is the elevated importance of fish and marine mammals in the subsistence budget. Appearance of the single-piece shell fishhook around 2900 BP, along with increasing importance of notched stone sinkers corroborates this and may have been essential to the intensification of the marine-based economy on the mainland as well as on the islands (Rick et al. 2002; Erlandson 1997b). Indeed, intertidal resources (namely shellfish) remained important to everyone living within walking distance of the coast. And though it seems clear that people in some places acquired more of their protein from large terrestrial and marine mammals during the Middle Period than did people in earlier periods (Lebow et al. 2007) shellfish was still the dominant source of protein throughout the region (Glassow 1992).

During this time, the old groundstone food processing slabs of the early and middle Holocene are mostly absent throughout the region, while mortars become more common, and with increasing effort invested in their production (Glassow 1996; Hale 2009). Whether or not this shift from millingstones to mortars points to the rising importance of the acorn to the subsistence economy, as it is thought to do elsewhere in California (Hale 2010; Basgall 1987), is a question that demands further attention. Answering it depends, in part, on establishing a solid understanding of the distribution of different kinds of oak trees in different parts of the region. For example, oak trees are rare, or entirely absent from the landscape within about 10 km of the coastline throughout the northern end of the California Bight (see Glassow 1996: 6). Where oak trees were scarce, mortars were either used for processing other things, or acorns were transported from considerable distance – a pattern well documented from other parts of California (Morgan 2007).

Land use patterns observed to the west, in the Vandenberg region (Lebow et al. 2006), suggest that these changes in resource use were accompanied by a shift in settlement patterns: though the shift to a logistical pattern of residence began around 3000 years ago, it was fully in place throughout the Middle Period. If the patterns observed from the compilation of radiocarbon dates, both from Vandenberg (Lebow et al. 2010; Lebow et al. 2011) and the

surrounding region (Glassow 1996) can be used to evaluate change in human population, then the Middle Period is the first episode of measurable and sustained demographic increase in the history of the region, increasing noticeably approximately 2800-1800 years ago, and then dramatically after that. Thereafter, life across the Channel on the Islands starts to change markedly: the number of settlements starts to increase and people start to live in those settlements for longer periods of time while commanding more rigid territories and controlling the natural resources within them; at the same time, the incidence of inter-personal violence increases while human health and stature start to decline (Kennett 2005; Lambert and Walker 1991; Lambert 1997, 2002; Walker 1989). Together, these things mark the beginning of a trend that continues into the Late Period where it intensifies dramatically. The extent to which these patterns obtained on the mainland and the adjacent interior, or how people in any given area were affected by the dramatic change on the Islands, are open questions.

The Late Period: 800 B.P. – European colonization (ca. A.D. 1780)

For most of this periodization, the exact starting and ending dates are mostly inconsequential, but the Late Period is different, in part because the bead-based chronology is more precise, the archaeological record is better preserved, change in that record is more pronounced, and because change in the cultural record seems to match dramatic change in well-dated, high-resolution paleo-environmental archives from the Santa Barbara Basin that are also reflected in written records from other parts of the world (Kennett and Kennett 2000; Kennett 2005; Raab and Larson 1997; Jones and Kennett 1999; Arnold, Colten, and Pletka 1997). Setting it at 800 B.P. follows King's (1990) bead-based chronology, and includes the period of dramatic environmental change (ca. 800-650 BP) along with its purported role in rapid Late Period cultural change. However, one could easily define this cultural period by everything that happens after that environmental change, as Arnold (1992) does, or alternatively by putting it at 1300 BP – the beginning of Lebow and Moratto's (2005) Late Middle Period – by which time many of the material hallmarks of Late Period cultural complexity (the sewn-plank canoe, the bow and arrow, exotic raw materials, intensive fishing, standardized *Olivella* shell beads, status differentiation, skeletal evidence for interpersonal violence, stable primary villages) were all in place, and the pace of cultural change began to increase (Kennett 2005).

Hale (2010) argues that the rate-limiting factors on cultural evolution are socioeconomic, rather than techno-environmental. Therefore, the archaeological signatures of culture change (namely, the types and uses of artifacts, including food remains) that appear to be more rapid during the Late Period are more important when viewed in the light of major socioeconomic shifts, rather than seeing them simply as a rapid accumulation of variability. More to the point, a time-limited strategy would actively resist change while an energy-limited strategy would actively pursue it, and would accumulate material representation in the archaeological record accordingly simply through technological improvements to make tools more efficient or specialized, and in specialized subsistence (Bettinger 1999). The causal relationship between the archaeologically visible increase in material diversity over shorter periods of time, and socioeconomic strategy (i.e., time- or energy-limited) on the one hand, or demographic increase on the other (see below), merits further investigation throughout the region (particularly at sites with rich artifact assemblages).

Since the mid-1980s an enormous body of literature has accumulated on the origins of cultural, social, and political complexity in the Santa Barbara Channel. Much of this has been dedicated to the Late Period and most of that has been done on the Islands. The archaeology of this is spectacular, and dovetails dramatically with the written accounts of European explorers, Mission colonists, and 20th century ethnographers. In addition to basic archaeological reconnaissance, there has been focused attention on understanding subsistence (e.g., Bernard 2004; Martin and Popper 2001), the context of shell bead money production (Arnold and Munns 1994), the production of tools (i.e., microlithic drills) used to manufacture that money (Arnold 1987, 2001), the differential access to exotic goods (Arnold and Graesch 2001), the presence of trade centers (Arnold 2001; Gamble 2008), the production and control of sea-worthy watercraft (Gamble 2002; Arnold 1995), and established patterns of exchange (Arnold 1995; Fauvelle 2011).

By 650 BP the full suite of attributes that early European chroniclers noticed of the Chumash were in place on the Islands: sedentary villages of permanent semi-subterranean architecture, high dietary diversity that also included prestige items like pelagic fish, a monetized market economy, specialized craft production, inter-village and island-mainland exchange networks, political control of natural resources, numerous forms of personal adornment, and an unequal distribution of wealth. Presumably, these things also index the social order documented of the Chumash, including elite offices, formal religious systems, hereditary power and prestige (i.e., the "Dynasty of Nobility"), a ranked social order, institutional inequality, and chiefly control (e.g., Blackburn 1976; Gamble 2008; Harrington 1942; Hollimon 2004; Johnson 1988).

3.4.1.2 Historic Context

The earliest European exploration of California was by sea approximately one generation following the Spanish conquest of the indigenous groups in what is now Mexico. In 1542, ships under the command of former conquistador Juan Rodríguez Cabrillo explored the coast perhaps as far north as Mendocino. The expedition spent time ashore on the mainland and islands of the Santa Barbara Channel, long enough to record various attributes of Chumash social and political life, and noted that the region along the mainland coast from approximately Point Mugu to Point Conception was heavily populated. That said, the Cabrillo expedition only report going ashore here to visit settlements at *Pueblo de las Canoas* (interpreted variously as either Ventura, Mugu, or Malibu Lagoon), *Pueblo de las Sardinas* (perhaps at Mission Creek near downtown Santa Barbara), and *Xexo* (likely Cojo Anchorage at Point Concepcion). Inhabitants from these settlements, as well as those at Dos Pueblos, Goleta Lagoon, and perhaps Carpinteria likely paddled out to encounter, and board, the European sailing vessels (Gamble 2008; McDaniel McDevitt 2013; Johnson 1982; Rindge 1985; Heizer 1972; Wagner 1928). The Cabrillo expedition also anchored and landed at various points on the islands, including on their return trip south, where Juan Rodríguez Cabrillo died under conflicting accounts, perhaps on San Miguel Island (Heizer 1972).

Spanish ships engaged in the Manila Galleon trade regularly sailed south along the California coast beginning in 1565. This resulted in a least two known instances of contact with indigenous groups in California. One instance occurred when Pedro de Unamuno entered Morro Bay in 1587 and traveled inland perhaps as far as what is now the city of San Luis Obispo and made claim to the land in the name of the King of Spain. Later, Sebastian Cermeño visited San Luis Obispo Bay in 1595 in a small boat following the loss of his ship further north at Point Reyes (Greenwood 1978). These voyages did little to strengthen the Spanish presence in the remote province of Alta California. In 1602, Sebastián Vizcaíno sailed north through the Santa Barbara channel long enough to grant one of the islands (and therefore the region) the name "Santa Barbara." While in the region the expedition encountered several Chumash who had come out by canoe to greet and inspect them (Wagner 1929). Vizcaíno's cosmographer, Jerónimo Martín Palacios, may have paid a return visit to the mainland long enough to comment on the size of the settlements and the quality of its natural resources, though this remains uncertain (Brown 1967).

Spanish Mission Period (1786–1834)

Following the earliest boat-based exploratory visits to the Santa Barbara Channel, and the subsequent, irregular, and largely undocumented contacts through the Manila Galleon trade, the Spanish Period in the California Bight began with the 1769 overland expedition led by Captain Gaspar de Portolá in an effort to establish a system of missions and fortifications in Alta California. The goal of the Portolá expedition was to establish a mission in Monterey, the second mission in Alta California following the mission in San Diego, and to reconnoiter the region for colonization.

Diaries from the Portolá expedition provide the most detailed accounts of the mainland around Santa Barbara, where they made elaborate descriptions of Chumash generosity, ceremony, performance, cuisine, village size, population, and even politics (Bolton 1967; Priestley 1937; D.E. Smith and Teggart 1909; Teggart 1909). Notably, the village names recorded by the Portolá expedition did not match those recorded by Cabrillo 227 years earlier, perhaps revealing something about the long term stability and tenure of village locations in the area, possibly associated (at least during the protohistoric era) with shifting socioeconomic interests and political allegiances (C.D. King 1978; Johnson 1982).

When the Portolá expedition traveled overland, heading north from Ventura in 1769, they were famously taken by what they witnessed in the vicinity of modern day Carpinteria: a large, prosperous bluff-top village next to a freshwater outlet (Carpinteria Creek) oriented substantially towards the sea. To the Spanish, the presence of several *tomol* sewn-plank canoes in various states of manufacture or repair seemed like a shipyard, and they dubbed the location *La Carpinteria* (Brown 2001). This was the village of *Mishopshno*, and over the years the Spanish estimated between 500 and 97 inhabitants, notably declining from A.D.1770 to 1796 (Gamble 2008; Brown 1967, 2001). An important feature of this location, as noted by Friar Crespí of the Portolá expedition, were the natural "springs" of asphaltum, which provided essential raw materials for (among other things) the waterproofing of ocean-going canoes (Brown 2001). As the expedition moved north from here, they would have had to circumvent a large lagoon or estuary occupying an area much larger than that represented by the Carpinteria Salt Marsh today. Beyond that, near the mouth of Toro Canyon they encountered the village of *Q'oloq'* (*Coloc*), which was considerably smaller than *Mishopshno*, before continuing up the coast. This area was later visited by Felipe de Goycoechea in 1796 while conducting a formal census of the California coast.

With the establishment of Mission San Luis Obispo (1772), Mission San Buenaventura (1782), the Presidio of Santa Barbara (1782), and later Mission Santa Barbara (1786), Mission La Purísima (1787), and Mission Santa Ynez (1804), life changed profoundly for the indigenous inhabitants of the region. The root cause of change was Spanish religious and political hegemony brought by the Franciscan missionaries and enforcement of their assumed authority by the Spanish military. Religious conversion, adoption of farming and ranching practices, forced labor, capital and corporal punishment, virulent exotic disease, and intermarriage with other groups also contributed to the rapid dissipation or modification of many aspects of traditional tribal culture. The effect of the early Spanish Period on the Native population was dramatic. By 1805, the vast majority of pre-existing Chumash villages had been abandoned as their inhabitants either relocated to the Mission districts to assimilate with communities there, or moved further inland to the periphery of traditional Chumash territory and beyond (McLendon and Johnson 1999; Byrd and DeArmond 2018; Byrd, DeArmond, and Engbring 2018).

The extent to which the armed Chumash resistance of 1824, and the subsequent response by both Spanish and Chumash (Sandos 1985) affected the lifeways, residences, and genealogical histories of people originally tied to the villages of *Mishopshno* and *Q'oloq'* – both of which are recorded in the baptismal records of Mission Santa Barbara (Johnson 1988) – is an ongoing and important avenue of research, perhaps answerable only through a combination of documentary records, oral history, and thoughtful, ongoing consultation and collaboration (Ranch 2012).

3.4.2 Relevant Plans, Policies, and Ordinances

3.4.2.1 Federal

Although there is no federal nexus for this project, the trail proposal was evaluated in consideration of National Register of Historic Places (NRHP) designation criteria and integrity requirements.

National Register of Historic Places

The National Register of Historic Places (NRHP) is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks and historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide federal agencies, state and local governments, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
> B. That are associated with the lives of persons significant in our past; or
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, How to Apply the National Register Criteria for Evaluation, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). In assessing historic integrity, the NRHP recognizes seven aspects or qualities that, in various combinations, define integrity. In order to retain historic integrity "a property will always possess several, and usually most, of the aspects" (NPS 1990). The seven aspects of integrity are: location, design, setting, workmanship, materials, feeling, and association. NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

3.4.2.2 State

California Register of Historical Resources

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources on the CRHR, enumerated as follows, were developed to

be in accordance with previously established criteria developed for listing in the NRHP, previously enumerated above. According to Public Resources Code (PRC), Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity" and (ii) meets at least one of the following criteria:

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

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

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

California Environmental Quality Act

The following California Environmental Quality Act (CEQA) statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

> PRC Section 21083.2(g) defines "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21083.2(g)):
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.

- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5(b)). If a site is listed or eligible for listing in the CRHR, included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(c)), it is an "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; 14 CCR 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of an historical resource is materially impaired when a project does any of the following (14 CCR 15064.5(b)(2)):

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any historical resources, then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)). Impacts on non-unique archaeological resources are generally not considered significant environmental impacts (PRC Section 21083.2(a); 14 CCR 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as a tribal cultural resource (PRC Sections 21074(c) and 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Health and Safety Code Section 7050.5(b)). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5(c)). The NAHC will notify the "most likely descendant" (MLD). With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

3.4.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City's General Plan/Local Coastal Land Use Plan includes the following objectives and policies relevant to the proposed project and cultural resources:

- OSC-16 Preserve Carpinteria's Cultural Resources

  Implementation Policies

  74. Explore all available measures, including purchase, tax relief, purchase of development rights, etc. to avoid development on important archaeological sites. Where these measures are not feasible and development will adversely affect identified archaeological or paleontological resources, require adequate mitigation.

  75. Prohibit activities, other than development, which could damage or destroy archaeological sites, including off-road vehicle use and unauthorized collecting of artifacts.

  76. Review all proposals for development in or adjacent to cultural resource areas for their potential to impact the resource. Give special consideration to development of facilities that enhance the cooperation, enjoyment or maintenance of these areas.

  77. Prior to the city granting a development permit, all archaeological sites (or areas near known archeological sites that have been determined though Phase 1 investigation to potentially include cultural or paleontological resources) must undergo a subsurface test to determine the integrity and significance of the site. Through the project environmental review process, the disposition and/or preservation of any archaeological sites deemed to have significance as a result of the subsurface testing shall be determined. Preservation of cultural/paleontological resource sites through avoidance shall be preferred, however, other methods of disposition may be approved through the environmental review process as identified in the city's Guidelines for the Implementation of CEQA.

  78. A qualified archaeologist and Native American observer (acceptable to the city) shall be retained to monitor grading activities on identified archeological sites and in the vicinity of identified archaeological

resources. If cultural artifacts or similar material of potential cultural or paleontological importance, are uncovered during grading or other excavation the following shall occur:

a. The monitor or archaeologist shall halt the grading or excavation and notify the City.
b. A qualified archaeologist shall prepare a report assessing the significance of the find and recommending any actions to be taken by the applicant(s) prior to the city granting permission for grading to resume.
c. The removal of cultural artifacts or other materials shall only occur after preparation of the report and in conformance with the recommendations of the report as approved by the City.

Santa Barbara County Article II Coastal Zoning Ordinance

Pursuant to PRC Section 30500 of the California Coastal Act of 1976, Santa Barbara County was required to prepare a Local Coastal Program (LCP) for portions of the unincorporated areas of Santa Barbara County within the coastal zone. Sections of the Santa Barbara County Article II Zoning Ordinance that may be relevant to the proposed project include standards for archaeological resources (Section 35-65).

Section 35-65. Archaeology

1. When developments are proposed for lots where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.
2. When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.
3. Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan was partially certified by the Coastal Commission on March 17, 1981 and is the Local Coastal Program for unincorporated Santa Barbara County. It details the rules and regulations of land use within Santa Barbara County's coastal areas. The following policies would apply to the proposed project.

- Policy 10-1: All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.
- Policy 10-2: When developments are proposed for parcels where archaeological or other cultural sites are located, Project design shall be required which avoids impacts to such cultural sites if possible.
- Policy 10-3: When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

3.4.3 Thresholds of Significance

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

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 pursuant to §15064.5.
c) Disturb any human remains, including those interred outside of dedicated cemeteries.
d) Result in a cumulatively considerable impact to cultural resources.

3.4.4 Impact Analysis

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

One previously recorded cultural resource site partially intersects the proposed project area (CA-SBA-1168); CA-SBA-1168 is a prehistoric archaeological site and therefore, no historical built environment resources exist within or near the proposed project site. CA-SBA-1168 has not been evaluated for NRHP or CRHR eligibility; however, based on the site record description, it likely meets the criteria for eligibility on either or both the CRHR and NRHP.

Extensive topographic modification of the existing terrain in the proposed project area overlapping CA-SBA-1168 occurred with construction of U.S. Highway 101 in the late 1960s, after the earliest archeological investigations in this area were completed. Information to conclusively define the boundary of CA-SBA-1168 compared to limits of earthwork completed for the U.S. Highway 101 construction does not evidently exist (the boundary description in the original archaeological investigation was poorly described, and was not verified with perimeter excavations at many points). It is therefore possible that some portion of CA-SBA-1168 exists at depth beneath fill materials used to construct some of the slope faces along the south side of U.S. Highway 101. Deep excavations for the Rincon Trail UPRR bridge foundation on both the northern and southern sides of the UPRR alignment could potentially encounter intact deposits associated with CA-SBA-1168. Additionally, based on information gathered during AB-52 consultation, the fill materials placed on portions of CA-SBA-1168 originated from the immediate area and could retain displaced cultural material from CA-SBA-1168 and other surrounding sites. Therefore, the proposed project could have potentially significant impacts to archaeological resources. Mitigation measures CR-1 through CR-4 are required in order to address this impact. Implementation of **Mitigation Measure (MM) CR-1** through **MM-CR-4** would reduce impacts to historical resources to **less than significant with mitigation.**

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

The current updated Phase 1 Cultural Resources Survey identified several pieces of weathered shellfish within the proposed project area, in disturbed contexts near the metal gate at the western end of Rincon Beach County Park and along the northern edge of the Rincon Beach County Park parking lot. Particularly since the shellfish pieces were identified on the ground surface in areas that have been impacted by previous grading and documented placement of fill soils, their location is considered to be the result of modern activities and soil movement (i.e., grading associated with construction of U.S. Highway 101, the UPRR alignment, an asphalt path and the Rincon Beach County Park parking lot) and not an intact or disturbed cultural deposit. The recovered

shellfish, mainly unidentifiable Veneridae (Venus clams), lacked the density and diversity documented at CA-SBA-1. No other cultural material associated with prehistoric occupation including stone tools, animal bone, or groundstone implements were identified. Even if the shellfish were in situ (i.e., in its original depositional location) and associated with prehistoric activity, the shell is not of sufficient density or diversity to provide important information to explain and understand the prehistoric occupation of coastal areas of Santa Barbara County, particularly when compared to the substantial CA-SBA-1 deposits. Additionally, it is important to understand that CA-SBA-1168 is documented as existing under 10-15 feet of imported fill and is only exposed along the south cut of Highway 101. Therefore, the pieces of shellfish observed in disturbed contexts within the proposed project area are not considered a potentially significant archaeological resource under CEQA Guidelines Section 15064.5.a.3, City of Carpinteria Environmental Review Guidelines and Santa Barbara County Cultural Resources Guidelines.

Extensive topographic modification of the existing terrain in the project area occurred with construction of U.S. Highway 101 in the late 1960's, after the earliest archeological investigations in this area were completed. Information to conclusively define the boundary of CA-SBA-1168 compared to limits of earthwork completed for the U.S. Highway 101 construction does not evidently exist (the boundary description in the original archaeological investigation was poorly described, and was not verified with perimeter excavations at many points). It is therefore possible that some portion of CA-SBA-1168 exists at depth beneath fill materials used to construct some of the slope faces along the south side of U.S. Highway 101. Deep excavations for the Rincon Trail UPRR bridge foundation on the both the northern and southern sides of the UPRR alignment could potentially encounter intact deposits associated with CA-SBA-1168. Additionally, based on information gathered during AB-52 consultation, the fill materials placed on portions of CA-SBA-1168 originated from the immediate area and could retain displaced cultural material from CA-SBA-1168 and other surrounding sites. Therefore, the proposed project could have potentially significant impacts to archaeological resources. Mitigation measures CR-1 through CR-4 are required in order to address this impact. Implementation of **MM-CR-1** through **MM-CR-4** would reduce impacts to historical resources to **less than significant with mitigation.**

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

No burial areas have been previously identified or were observed during the pedestrian survey within the proposed project area. The Phase 1 Survey included a search of the Native American Heritage Commission's (NAHC) Sacred Land Files. The search results were negative but did include a strong suggestion from the (NAHC) that specific Native American individuals be contacted to see if they might have any additional information regarding the cultural or archaeological significance of the proposed project site. Tribal consultation was conducted in support of the project and is documented in detail in Section 3.13, Tribal Cultural Resources. No human burials were documented as a result of tribal consultation. No human remains have been identified within the proposed project or within the associated archaeological site CA-SBA-1168 as a result of previous or current archaeological investigations. **No impacts** relating to disturbance of human remains is expected to occur as a result of this project.

d) Would the project result in a cumulatively considerable impact to cultural resources?

Potentially significant project-specific impacts to cultural resources would be reduced to less than significant with implementation of **MM-CR-1, MM-CR-2**, **MM-CR-3**, and **MM-CR-4**, avoiding the potential for the proposed project to contribute to significant cumulative impacts to cultural resources. The project would, therefore, result in a less than cumulatively considerable impact to cultural resources.

3.4.5 Mitigation

The potential exists for significant cultural resources impacts. The project would require the implementation of **MM-CUL-1** through **MM-CUL-4** to reduce such impacts to less than significant levels.

MM-CR-1 Cultural Resource Treatment and Inadvertent Discovery Plan.

Potential impacts to cultural resources shall be minimized through development of protocols for practical adherence of mitigation measures CR-2 and CR-3 prior to and after ground disturbing construction activities associated with the proposed project. These protocols shall be outlined in a Cultural Resource Treatment Plan (CRTP). The CRTP shall be developed by a City-qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, prior to the implementation of ground disturbing activities and include wording of each mitigation measure CR-2-4, specific and detailed explanation for implementation of each mitigation measure and contact protocol. The CRTP shall be provided to all agency personnel, consulting tribes, contractors and archaeological personnel. The existence and necessity for adherence to the CRTP shall be noted on plans, handbooks, or the like associated with tasks that may incur ground disturbance either intentionally or inadvertently.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to develop the required CRTP in accordance with the above criteria. **Monitoring:** City of Carpinteria/County of Santa Barbara staff shall review and authorize the CRTP prior to the commencement of ground disturbance activities to ensure that the CRTP adheres to the criteria established in CR-1.

MM-CR-2 Workers Environmental Awareness Program (WEAP) Training.

All personnel participating in tasks that may incur ground disturbance either intentionally or inadvertently shall be briefed regarding unanticipated discoveries prior to the start of said activities. A basic presentation shall be prepared by a City-qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards to inform all personnel working on the project about the archaeological sensitivity of proposed project areas. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during project activities and explain the importance of and legal basis for the protection of cultural resources. Each personnel shall also be instructed in the proper procedures to follow in the event that cultural resources or human remains are encountered. These procedures include work curtailment or redirection, and the immediate contact of the site supervisor, qualified archaeologist and if human remains are encountered, the County coroner.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to develop and conduct the required WEAP Training in accordance with the above criteria. **Monitoring:** City of Carpinteria/County of Santa Barbara staff shall ensure the required WEAP training has been conducted by attending the WEAP Training and documenting attendance of required personnel by means of a sign in sheet completed by all attendees of the WEAP Training.

MM-CR-3 **Initial ground disturbing activities shall be monitored by a County-qualified/City-approved archaeologist in accordance with the following specifications:**

Temporary Impact Areas (equipment staging and materials storage outside trail alignment) - a County-qualified/City-approved archaeologist shall monitor transport and placement activities until such time that it is reasonable to ascertain that no additional prehistoric archaeological/cultural resources are located within areas of temporary disturbance of the proposed project site.

Permanent Impact Areas not including bridge piling installation (all areas of the trail alignment excepting the bridge approaches area on both sides of the UPRR alignment) – a County-qualified/ City-approved archaeologist shall monitor project implementation during the initial grading and excavation activities until such time as sufficient subsurface soil has been uncovered/excavated to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area.

Bridge piling installation – a County-qualified/City-approved archaeologist shall monitor the installation of bridge pilings within intact soils and/or any soils deeper than 10 feet below current ground surface to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area.

The monitor shall immediately inform equipment operators in the event archaeological resources are encountered, and shall be empowered to immediately halt construction activity in the area of the discovery until assessment can be completed, and materials recovered as appropriate (refer to CR-2 for additional detail). Monitoring reports shall be provided to the City of Carpinteria/County of Santa Barbara on a monthly basis during construction, with a final monitoring report produced at the conclusion of construction activities and provided to both the City and County.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to monitor initial ground disturbance activities in accordance with the above criteria. ***Monitoring***: City of Carpinteria/County of Santa Barbara staff shall ensure the contracted archaeologist provide monitoring of initial ground disturbance activities in accordance with the above criteria through receipt of field documentation describing each day of monitoring, construction activity occurring during the monitoring, and observed soil profile conditions related to the potential for presence of archaeological resources.

MM-CR-4 **In the event cultural resources are encountered, construction shall be redirected to another area of the project while data/resource assessment and recovery is accomplished.**

Grading/construction shall be immediately suspended in the immediate area (no less than 50 feet from the area of the discovery) where cultural resources are encountered and temporarily redirected to another portion of the project area to allow the archaeologist to assess the nature, extent and significance of any discoveries and develop appropriate management recommendations for archaeological resource treatment consistent with Santa Barbara County Guidelines for the Implementation of California Environmental Quality Act of 1970 (as amended May 25, 2010). It is anticipated that recovery of artifacts would occur where project elements (such as pilings) would conflict with in situ artifact locations, and such artifacts would be properly archived

in accordance with the project CEQA, City of Carpinteria and Santa Barbara County guidelines and the CRTP protocol.

Identified remedial action for the discovery shall be completed prior to allowing construction to re-commence in the area, no less than 50 feet from the area of the discovery. The project sponsors shall be responsible for funding the assessment of archaeological resources encountered during construction, and for the proper archiving or preservation of such resources. A Phase 3 Archaeological Resources Assessment and Data Recovery Report shall be prepared to document any archaeological resources encountered during construction.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall contract with a County-qualified/City-approved archaeologist to provide archaeological assessment and recovery of any archaeological resources encountered during project construction, in accordance with the above criteria. ***Monitoring***: City of Carpinteria/County of Santa Barbara staff shall ensure the contracted archaeologist assess the nature, extent and significance of any archaeological discoveries occurring during project construction and develop appropriate management recommendations for archaeological resource treatment in accordance with the project CEQA, City of Carpinteria and Santa Barbara County guidelines and the CRTP protocol..

The contracted archaeologist shall assess the nature, extent and significance of any archaeological discoveries occurring during project construction and develop appropriate management recommendations for archaeological resource treatment.

3.4.6 Level of Significance After Mitigation

After implementation of **MM-CR-1** through **MM-CR-4**, impacts would be reduced to less than significant.

3.5 Geology and Soils

This section describes the existing geologic and soils conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project. The following analysis is based in part upon the following document:

- Geotechnical Report for the Proposed Rincon Beach Multi-Use Trail, prepared by Bengal Engineering in January 2019, the body of which is included as Appendix E of this Environmental Impact Report (EIR). The complete Geotechnical Report (including all plates and attachments) is on file with the City of Carpinteria.

Other sources consulted are listed in Section 3.5.7, References.

3.5.1 Existing Conditions

The proposed trail alignment lies generally within an elevated marine terrace, which has been subject to extensive grading associated with current and former transportation facilities. Exhibit 3.5-1 is an oblique aerial illustrating the topographic conditions along the northern/western portion of the trail alignment, starting at the existing eastern terminus of Carpinteria Avenue.

Exhibit 3.5-1 Topography of the Northern Trail Portion

US Highway 101 was constructed via massive excavation of earth material, which is immediately evident in the two planar slopes off-set by a bench along the left-hand side of the freeway, The angle of the slope and a mid-elevation bench were created during the cuts for the freeway, to stabilize these manufactured slopes. On the opposite side of the freeway, similar cut slopes were also created, but the cut slopes have become less evident with the growth of vegetative cover. The flat, roughly triangular area at the Carpinteria Avenue terminus was leveled through the local placement of some of the excavated freeway earth materials. With reference to the trail alignment in Exhibit 3.5-1 (the red line), the trail would be located entirely on artificial landforms on the north side of the Union Pacific Railroad (UPRR) alignment. For reference, the ground surface at the "Wave Overhead" (the highway bridge which provides the grade separation between mainline US Highway 101 and the Union Pacific Railroad) was originally approximately 100-feet higher in elevation than today (Bengal 2020), The cut slope along the south of US Highway 101 (right side of US Highway 101 in the aerial) would be re-graded again to form a mid-elevation bench to carry the trail.

Exhibit 3.5-2 shows the topography in the area of the proposed UPRR crossing bridge, which is entirely the result of grading to depress the UPRR tracks below the elevation of the new US Highway 101.

Exhibit 3.5-2 Topography at the Proposed UPRR Bridge Crossing

The planar cut slopes separated by a bench are evident again along the left-side of the railroad tracks, a single less steep cut slope exists along the right-hand side of the tracks. At the location of the Wave Overhead, the railroad line was excavated about 140-feet below the natural grade (Bengal 2020). The red rectangle is the approximate location of the proposed bridge, which would have foundations within the slopes previously created via the rail line excavation. This portion of the trail, the bridge segment, would therefore also only involve artificial landforms, not natural slopes.

Exhibit 3.5-3 illustrates the topography within the portion of the trail along the southern side of the UPRR alignment. The railroad tracks at the bottom left-hand corner lead toward the Wave Overhead, but they originally followed the bench visible along the right side of the ridge. The slope above the bench was cut for the railroad, and along the top of the slope the coastal highway was previously located. Remnants of retaining walls constructed to protect the old highway alignment can be seen sliding from the top of the cut slope manufactured for the former railway bench. Thus, again, this segment of the trail would entirely traverse artificial landforms (i.e., cut slope and bench), here originally created via the UPRR construction. These artificial slope faces would be regraded to a more geotechnically stable configuration (i.e., less steep in profile) and a new bench created upon which to set the trail. In summary,

the entire length of the proposed trail alignment would be located on landforms resulting from former grading for construction of US Highway 101 and current or former UPRR alignments.

Exhibit 3.5-3 Topography of the Southern Trail Portion

Regional Geology

The City of Carpinteria is located in the Transverse Ranges geomorphic province of Southern California. According to the California Geological Survey (CGS), the Transverse Ranges geomorphic province is composed of a series of steep east-west trending mountain ranges, which is in contrast to the northwest trend of coastal California and surrounding mountain ranges (CGS 2002). Geologic deposits within the City and adjacent unincorporated County lands are generally represented by alluvium. The mountains and foothills north of the project site are characterized by alluvium, quaternary nonmarine terrace deposits, Pleistocene nonmarine, Pleistocene volcanic, and Eocene marine deposits (Dibblee and Ehrenspeck 1986; USGS 2009).

Faults and Seismicity

Faults in the Carpinteria area include the Carpinteria Fault, the Rincon Creek Fault, the Arroyo Parida Fault and the Shepard Mesa Fault. According to the State of California Conservation Department, California Geologic Survey (CGS), none of these faults are considered "active" (CGS 1996). The CGS has calculated the probabilities for earthquakes throughout the state of California; the research indicates a 10% probability within the next 50 years for an earthquake between magnitudes 6.5 and 7.0 to occur along a fault within five miles of the Carpinteria Planning Area. The geotechnical report for Rincon Trail (Bengal Engineers 2019) identifies a potential peak ground acceleration of 0.8 g for the project site (“g” represents acceleration rate of gravity). There are no Alquist-Priolo Special Studies Zones for the Carpinteria Planning Area (CGS 2018b). No recent movement (within the last 11,000 years) or recent fault rupture has been identified along the known faults in the Carpinteria Planning Area.

Geologic Formations

The trail alignment north of the UPRR corridor is underlain by Miocene age and older surficial sediments (Qoa or alluvium), bedrock of the Santa Barbara Formation (Qsb) consisting of silty sand and sand-like material, and bedrock of the Monterey Formation (Tm) consisting mainly of sandy silt and siltstone/shale (Dibblee and Ehrenspeck 1986; Bengal Engineers 2019). The trail alignment within and south of the UPRR corridor is underlain directly by bedrock of the Monterey Formation (Tm) siltstone/shale and Sisquoc Formation (Tsq) siltstone/mudstone both consisting mainly of sandy silt/silt-like materials (Dibblee and Ehrenspeck 1986; Bengal Engineers 2019). The Monterey Formation has been identified in some locations to contain an abundance of fossil specimens including birds, fish, sea lions, sea cows, porpoises, whales, and sharks (Dibblee and Ehrenspeck 1986).

Liquefaction

Liquefaction is a phenomenon that occurs when loosely consolidated soils lose their load bearing capabilities during ground shaking and flow in a fluid-like manner. The specific soil condition conducive to liquefaction is loose sands and silty sands below the water table and typically within the top 50 feet of the ground surface. The Bengal geotechnical investigation did not identify the presence of soil horizons that would have the potential for liquefaction (Bengal Engineers 2019). Consequently, soils with liquefaction potential are not anticipated to occur within the trail alignment.

Landslide/Rockfall

Landslides generally occur on steep slopes that have been undercut by erosion or on slopes where the bedding planes of the bedrock are inclined down the slope. The updated project alignment avoids slopes with identified historic landslide activity. However, the Bengal geotechnical investigation found that due to the relatively low shear strength of the Monterey and Sisquoc Formations (Tm and Tsq) and the slope face orientation, the existing ocean-facing slope south of the proposed trail bridge is considered to be susceptible to surficial/local instability under static conditions. These steep slopes in the southern trail alignment are the result of former landform modification carried out for the railroad alignment and former state highway, and do not represent natural conditions resulting from natural weathering of the involved earth materials and geologic formations.

Soil Settlement/Consolidation

Settlement is the downward movement of soil or of structures it supports, resulting from a reduction in the voids in the underlying strata. The Bengal geotechnical investigation did not identify the presence of soil horizons that would have the potential for settlement or consolidation (Bengal Engineers 2019). Consequently, soils with settlement potential are not anticipated to occur within the trail alignment.

Expansive Soils

Expansive soils are those characterized as having a high shrink-swell potential, associated with a high percentage of clay content. The Bengal geotechnical investigation did not identify the presence of soil horizons that would have the potential for expansiveness (Bengal Engineers 2019). Consequently, soils with expansion potential are not anticipated to occur within the trail alignment.

3.5.2 Relevant Plans, Policies, and Ordinances

3.5.2.1 Federal

U.S. Geological Survey Landslide Hazard Program

In fulfillment of the requirements of Public Law 106-113, the USGS created the Landslide Hazard Program in the mid-1970s. According to USGS, the primary objective of the National Landslide Hazards Program is to reduce long-term losses from landslide hazards by improving our understanding of the causes of ground failure and suggesting mitigation strategies (USGS 2018). The federal government takes the lead role in funding and conducting this research, whereas the reduction of losses due to geologic hazards is primarily a state and local responsibility.

3.5.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act (1972)

The Alquist-Priolo Act was passed in 1972 to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep (CGS 2018a). In accordance with this act, the State Geologist established regulatory zones, called "earthquake fault zones," around surface traces of active faults and has published maps showing these zones. Construction within these zones cannot be permitted until a geologic investigation has been conducted to prove that a building planned for human occupancy would not be constructed across an active fault. The project is not located on a site designated to be an active earthquake fault zone (CGS 2018c).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Chapter 7.8, Section 2690 et seq.) directs the CGS to protect the public from earthquake-induced liquefaction and landslide hazards (note that these hazards are distinct from fault surface rupture hazard regulated by the Alquist-Priolo Act). This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones (i.e., zones of required investigation). Before a development permit may be granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Evaluation and mitigation of potential risks from seismic hazards within zones of required investigation must be conducted in accordance with CGS Special Publication 117A, adopted March 13, 1997, by the State Mining and Geology Board, as updated in 2008.

California Building Code (CBC) (2019)

The CBC has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or those standards are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability, by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2019 edition of the CBC is based on the 2018 International Building Code published by the International Code Conference.

Chapters 16 and 16A of the 2019 CBC include structural design requirements governing seismically resistant construction, including (but not limited to) factors and coefficients used to establish seismic site class and seismic occupancy category for the soil/rock at the building location and the proposed building design. Chapters 18 and 18A include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A). Chapter 33 of the 2019 CBC includes (but is not limited to) requirements for safeguards at work sites to ensure stable excavations and cut or fill slopes (Section 3304).

Construction activities are subject to occupational safety standards for excavation and trenching, as specified in the California Safety and Health Administration regulations (Title 8 of the California Code of Regulations) and in Chapter 33 of the CBC. These regulations specify the measures to be used for excavation and trench work where workers could be exposed to unstable soil conditions. The proposed project would be required to employ these safety measures during excavation and trenching.

Occupational Safety and Health Administration Regulations

In California, the California Occupational Safety and Health Administration (Cal/OSHA) has responsibility for implementing state standards that have been determined to be "as effective as" federal rules relevant to worker safety, including slope protection during construction excavations.

3.5.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan – Safety Element

The City of Carpinteria General Plan/Local Coastal Land Use Plan outlines goals, policies, and programs designed to protect the community from geologic and seismic hazards. The General Plan/Local Coastal Land Use Plan Safety Element includes the following objectives and policies applicable to the project:

Objective S-1 Minimize the potential risks and reduce the loss of life, property and the economic and social dislocations resulting from fault surface rupture in the planning area, from ground shaking due to an earthquake along a fault in the planning area or in the region, from seismically -induced liquefaction in the planning area, and from seismically-induced tsunamis.

Policy S-1c Development in areas identified as having high seismically-induced liquefaction potential shall follow structural engineering foundation design parameters outlined in the Uniform Building Code or obtained through an independent structural engineering study.

Objective S-2: Minimize the potential risks and reduce the loss of life, property and economic and social dislocations resulting from seismically-induced and naturally-occurring landslides, from mud and debris flows, from rock falls, and from seacliff retreat.

Policy S-2a. Areas identified on Figure S-2 as High Landslide Potential shall either be designated in an open space zoning category or the potential for landslide will be mitigated through avoiding disturbance of the slope area of the site subject to landslide potential.

Policy S-2b. Building improvements and other development including any irrigated landscape areas shall be setback sufficiently to protect the development and all associated improvements from bluff failure and bluff retreat over a 100-year term.

Objective S-3 Minimize the potential risks and reduce the loss of property and the economic and social dislocations resulting from expansive soils, soil settlement, subsidence, and hydrocompaction.

Policy S-3b All new development will comply with the Uniform Building Code, local City building ordinances, and geotechnical recommendations related to construction in areas identified as having a high potential for expansive soils or soil settlement.

Santa Barbara County Comprehensive Plan Seismic Safety and Safety Element

Geologic, soil, and seismic factors affect the suitability of land for various uses and, hence, should be considered, along with other factors, in land use planning to eliminate or minimize their adverse effects. Geologic and Seismic Goal 1 applies to the proposed project (County of Santa Barbara 2011):

- Protect the community to the extent feasible from risks associated with the effects of seismically induced incidents by requiring:
  - Protection Policy 1: The County minimizes the potential effects of geologic, soil, and seismic hazards through the development review process.
  - Protection Policy 2: The County shall refer to the CBC, the Land Use Development Code (LUDC), County Ordinances, the Coastal Land Use Plan (CLUP), and the Comprehensive Plan when considering the siting and construction of structures in seismically hazardous areas.
  - Protection Policy 3: The County shall ensure compliance with state seismic and building standards in the evaluation, design, and siting of critical facilities.
  - Protection Policy 4: The Office of Emergency Services (OES) shall continue coordinating emergency planning for the Santa Barbara Operational Area pursuant to the California Emergency Services Act of 1970.
  - Protection Policy 5: The County shall require a preliminary soil report prepared by a qualified civil engineer be submitted at the time a tentative map is submitted.

Santa Barbara County Comprehensive Plan Environmental Resources Management Element

This element states that urbanization should be prohibited on slopes 30% and greater and should be prohibited, except in a relatively few special instances on slopes between 20% and 30% (County of Santa Barbara 2009).

Santa Barbara County Comprehensive Plan Coastal Land Use Plan

The purpose of the Coastal Land Use Plan (CLUP) is to protect coastal resources while accommodating land use development within the coastal zone. Policies outlined in the CLUP that are applicable to the project are listed below (County of Santa Barbara 2019):

Policy 3-8 Applications for grading and building permits, and applications for subdivision shall be reviewed for adjacency to, threats from, and impacts on geologic hazards arising from seismic events, tsunami runup, landslides, beach erosion, or other geologic hazards such as expansive soils and subsidence

areas. In areas of known geologic hazards, a geologic report shall be required. Mitigation measures shall be required where necessary.

Policy 3-13 Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.

Policy 3-14 All developments shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.

Policy 3-15 For necessary grading operations on hillsides, the smallest practical area of land shall be exposed at any one time during development, and the length of exposure shall be kept to the shortest practicable amount of time. The clearing of land should be avoided during the winter rainy season and all measures for removing sediments and stabilizing slopes should be in place before the beginning of the rainy season.

Policy 3-16 Sediment basins (including debris basins, desilting basins, or silt traps) shall be installed on the project site in conjunction with the initial grading operations and maintained throughout the development process to remove sediment from runoff waters. All sediment shall be retained on site unless removed to an appropriate dumping location.

Policy 3-17 Temporary vegetation, seeding, mulching, or other suitable stabilization method shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized as rapidly as possible with planting of native grasses and shrubs, appropriate non-native plants, or with accepted landscaping practices.

Santa Barbara County Grading Code

Ordinance No. 4766, 11-9-2010 of County Code of Ordinances (SBCCO) addresses compliance with the National Pollutant Discharge Elimination System (NPDES) Phase II stormwater regulations and sets forth local stormwater requirements for the disturbance of less than 1 acre, to avoid pollution of water courses and drainage ways with sediments or other pollutants generated on or caused by surface runoff on or across a construction site.

Santa Barbara County Building Code

SBCCO Ord. No. 4822, 1-17-2012 addresses geological, topographical, and climatic conditions in the County including extreme weather conditions, firefighting resources, flammable vegetation, High Hazard Areas, extreme wind conditions, and seismic shaking and the minimum standards to safeguard and protect life, buildings, and structures within the County.

3.5.3 Thresholds of Significance

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

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking.
   iii. Seismic-related ground failure, including liquefaction.
   iv. Landslides.
b) Result in substantial soil erosion or the loss of topsoil.
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
g) Result in considerable cumulative impacts to geology and soils.

3.5.3.1 Local Significance Thresholds

City of Carpinteria

The City of Carpinteria's Guidelines for the Implementation of the California Environmental Quality Act of 1970, as Amended (1997), states the following conditions or impacts shall be considered significant:

- The graded or cleared portion of the site includes more than 10,000 square feet of area having a slope greater than 15 percent.
- There is a significant risk that more than 2,500 square feet will be unprotected or inadequately protected from erosion during any portion of the rainy season.
- Grading or clearing will occur within 50 feet of any watercourse or 100-year floodplain.
- Grading will involve cut and fill volumes of 3,000 cubic yards or more, or cut or fill heights of 15 feet or greater.
- The project will significantly increase water runoff, velocities, peak discharges, or water surface elevations on or off-site. Coordinate with the Department of Public Works for clarification.
- The project will produce erosion impacts which constitute a structural hazard or significant visual impact, or will result in sediment or excessive drainage flows which cannot be contained or controlled on-site.
- The project will result in impacts which violate or are in conflict with any of the Federal, State, or local policies, ordinances or regulations listed above.

- Any cut or fill slope over 15 feet in height is potentially significant for grading, visual, erosion, siltation and community character impacts.
- Any grading which includes the addition, removal or moving of earth is potentially significant.
- Any grading proposed within environmentally sensitive areas is potentially significant.

County of Santa Barbara

The County thresholds are similar and include the following criteria:

- The project site or any part of the project is located on land having substantial geologic constraints, as determined by P&D or PWD. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. "Special Problems" areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards and other physical limitations to development.
- The project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to 1 vertical.
- The project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade.
- The project is located on slopes exceeding 20% grade.

3.5.4 Impact Analysis

The following analysis is based upon the CEQA Appendix G checklist, as described above.

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

ii. Strong seismic ground shaking?

iii. Seismic-related ground failure, including liquefaction?

iv. Landslides?

The California Department of Conservation provides an index map that identifies all Official Maps of Earthquake Fault Zones delineated by the California Geological Survey through December 2010 under the Alquist-Priolo Earthquake Fault Zoning Act. According to the most recent data, the proposed project is not located within an Alquist-Priolo earthquake fault zone; however, the project site is to the north of the Pitas Point quadrangle (CGS 2018c). The northwestern corner of the Pitas Point quadrangle encompasses a very small portion of Santa Barbara County, consisting of the Rincon Point neighborhood south of Rincon Point Lane. The fault line within the Pitas Point Quadrangle that is closest to the proposed project runs northwest-southeast, north of La Conchita Beach in Ventura County, approximately two miles southeast from Rincon Beach County Park (Dibblee and Ehrenspeck 1986).

According to the City of Carpinteria's General Plan Fault Map, the Rincon Creek fault is located to the north of the proposed project and the Carpinteria Fault is located to the south (City of Carpinteria 2003). In the immediate vicinity of the proposed trail and parking lot, the project is located on the up-thrown side on an inferred fault located to the north of US Highway 101 near the connection to Highway 150 (City of Carpinteria 2003). According to the Santa Barbara County's South Coast Seismic Tectonic Map, the entire south coast portion of the county, including the project site, is rated as having a high seismic potential with a moderate possible variation from the assigned rating (County of Santa Barbara 2011). The Santa Barbara County South Coast Seismic Tectonic Map indicates that the Red Mountain fault is the closest known potentially active fault and traverses the proposed trail near the intersection of the UPRR and the trail alignment. The Red Mountain fault is approximately 39 km (24 miles) long and trends in a generally east-west direction, running parallel to the coastline, near the project area. A maximum credible earthquake of moment magnitude 6.8 has been assigned to this reverse displacement fault (CGS 1996).

The proposed project consists of a shared-use path with pedestrian bridge and other trail improvements. The project would not introduce new buildings that would be subject to structural damage in the unlikely event of strong seismic ground shaking. Moreover, there are no existing buildings within the project area that would pose a risk of loss, injury, or death as a result of potential structural damage caused by earth movement. However, the pedestrian bridge structure could be damaged by seismic activity if not designed to withstand the potential peak ground acceleration of 0.8 g, as identified in the Bengal geotechnical report (Appendix E).

Previously manipulated and engineered slopes along the trail alignment are proposed to be re-graded to achieve a finished slope face that is more gradual (less steep) than the existing slope faces. Slopes adjacent to US Highway 101 would be reshaped with those above the trail having a slope ratio of 1.25:1, fill slopes (which would be present only adjacent to the bridge over the UPRR) are proposed to have slope ratios between 2:1 and 4:1. For the portion of the path on the ocean side of the UPRR alignment, the regraded slopes for the trail "bench" would employ cut slopes with a ratio of 1:1 above the trail, while a ratio of 1.25:1 would be employed for the "reinforced" fill slopes below the trail. These slope angles are each shallower than existing conditions, and mid-elevation benches in the slopes would further decrease the potential for mass soil movement (shallow landslides). It is important to note that all of the earthwork proposed for the project involves manipulation of manufactured slopes (previously modified landforms) and not natural topography. In addition, the project proposes to vegetate all new slope areas to minimize the potential for shallow erosion to occur.

The Carpinteria Valley is subject to geologic hazards related primarily to earthquakes and secondary hazards, such as landslides and liquefaction; the project includes manufactured slopes and a bridge structure that could be damaged by seismic ground shaking. As such, potential impacts relating to adverse effects caused by strong seismic ground shaking, or seismic related ground failure would be potentially significant. **Mitigation Measure (MM) GEO-1** through **MM-GEO-3** would reduce impacts to **less than significant with mitigation**.

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

Soils within the project site have been classified as Xerorthents, cut and fill areas (USDA 2020). The NRCS Web Soil Survey provides an erosion hazard rating that indicates the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. Xerorthents in the project area have a moderate erosion hazard rating, which indicates that some erosion is likely and that erosion control measures may be needed (USDA 2020). The project does propose to vegetate all new slope area to minimize the potential for soil erosion to occur.

To prepare the site for trail construction, the trail alignment along with adjacent slopes would be graded to meet the proposed finished grade surface and to achieve stable slope profiles above and below the trail. It is anticipated that total cut would be approximately 107,386 cubic yards and total fill would be approximately 14,860 cubic yards during the grading phase. Cut material on site would be utilized for the necessary fill material, as feasible. The re-grading of previously manufactured slopes is intended to reduce the angle of the slope face, decreasing historic erosion rates and increasing the long-term stability of the slope faces. The lower angle slopes would not be noticeably different from the existing manufactured slopes but should eliminate or greatly reduce the amount of soil materials moving down the slope areas to be deposited on the trail or areas below the trail. Erosion potential would be lessened with the proposed engineered slope design. However, soil erosion could be increased unless proper slope construction techniques are employed. Accordingly, soil erosion impacts would be potentially significant. **MM-GEO-3** would reduce impacts to **less than significant with mitigation**.

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

Due to relatively low strength of the underlying Monterey Formation (Tm) siltstone/shale bedrock, the single span bridge structure could experience differential settlement and related damage or collapse, a potentially significant impact unless mitigation is required. The Bengal geotechnical report also concluded that from a slope stability perspective, the slopes along the coastal bluff, both above and below the existing unsanctioned County trail are problematic with respect to local/surficial slope instability. The proposed grading plans were reviewed by Bengal and existing slopes and proposed cut slopes were analyzed for gross stability. Shear strength test results were obtained and slope stability analyses were performed to evaluate the global or overall static as well as seismic loading conditions. Based on the Bengal slope stability analysis, the subject slopes containing the proposed trail alignment are considered to have adequate stability against static loading or under normal, short- and long-term service conditions. However, with seismic activity, shallow slope instability could occur. As such, shallow slope instability associated with seismic activity is considered potentially significant. **MM-GEO-3** would reduce impacts to **less than significant with mitigation**.

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

The Bengal geotechnical report did not identify soils with expansive characteristics, and therefore the potential is very low for expansive soils to be present within the trail alignment. Potential impacts relating to expansive soil would be **less than significant**.

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

The proposed project does not include restrooms of other waste generating facilities that would require the use of septic tanks, sewers or alternative wastewater disposal systems. **No impact** would occur

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

The soil in the area of the proposed trail was characterized as Xerorthents, cut and fill areas consisting of mechanically manipulated soils where the original profile is no longer discernible (USDA 2020). Monterey

Formation marine siliceous shale of the early to late Miocene age, sand and cobbles of the Santa Barbara formation, and older dissected surficial sediments composed of former alluvial deposits of silt, sand and gravel that in places are weakly consolidated, form the geologic base of the project site (Dibblee and Ehrenspeck 1986). The potential for paleontological resources to be encountered during project grading is low due to the extensive historical cut and fill within the project area and due to the existing quality of soils, which have been mechanically manipulated as a result of previous construction projects.

The Phase 1 survey found that no prehistoric artifacts are mixed with modern debris and that the area has already been subject to extensive ground disturbances associated with construction. The Phase 1 conclusion is confirmed by the previous SAIC investigation (SAIC 1996) that was conducted along the northern edge of the Rincon Beach County Park parking lot for a cellular communications facility. The investigation concluded that prehistoric artifacts were mixed with modern debris and the area had been subject to extensive ground disturbances associated with the construction, and subsequent abandonment, of US Highway 101. Therefore, the prehistoric cultural remains were not considered an important resource and no additional measures were required. Impacts would be **less than significant**

g) Would the project result in considerable cumulative impacts to geology and soils?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to geologic resource impacts. However, the project's contribution to cumulative geologic resource impacts would not be considerable based on the information above because the project impacts would each be reduced to less than significant with incorporation of required mitigation measures.

3.5.5 Mitigation

The potential exists for significant geology-related impacts to occur involving structural damage from seismic events, differential settlement of the pedestrian bridge structure, shallow slope instability associated with seismic activity, and increased soil erosion on slopes graded for the project. The project would require the implementation of **MM-GEO-1** to **MM-GEO-3** to reduce such impacts.

MM-GEO-1 **Seismicity.** The pedestrian bridge shall adhere to the recommendation identified in Appendix E to this Environmental Impact Report to withstand a peak ground acceleration (PGA) at the site of 0.8g generated by an earthquake of moment magnitude Mw=7.4.

Plan Requirements and Timing: Prior to issuance of a grading or building permit, the City of Carpinteria/County of Santa Barbara shall verify the engineering plans include this bridge design specification. ***Monitoring***: City of Carpinteria/County of Santa Barbara public works staff or construction inspector retained for the project shall inspect bridge construction to verify conformance with this specification.

MM-GEO-2 **Differential Settlement of Pedestrian Bridge Foundations.** Bridge foundation construction shall adhere to the recommendation identified in Appendix E to this Environmental Impact Report, which specifies a deep foundation employing cast-in-drilled hole (CIDH) piles. Based on the anticipated loadings, Caltrans Standard Plan 24" CIDH Concrete Piles with 200 kips design capacity are recommended in the geotechnical report. Should hard cemented bedrock be encountered during the installation of the CIDH piles, coring may be necessary.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall verify the engineering plans include this bridge foundation specification. ***Monitoring***: City of Carpinteria/County of Santa Barbara public works staff or construction inspector retained for the project shall inspect foundation construction to verify conformance with this specification.

MM-GEO-3 **Soil Erosion/Slope Stability.** Slope construction shall adhere to the recommendations in the geotechnical report, summarized below.

1. All new fills placed along the trail alignment shall be placed as engineered geotextile-reinforced soils with subsurface/back drains.
2. Manufactured slope profiles shall be no steeper than as specified in the Bengal 2019 geotechnical report (Appendix E), or any updated version thereof which has been prepared to address final trail design.
3. Install adequate surface drainage facilities to collect and dispose of surface runoff properly, consistent with the drainage system designs included in 30% Project Plans for Rincon Multi-Use Trail (Appendix E), or as updated to address final trail design.
4. Hydro-seed the exposed newly cut and fill surfaces. Periodic watering and re-application of hydro-seed shall occur as necessary until vegetation on slope surfaces has been successfully established.

These measures, in conjunction with the slope flattening and load reduction resulting from the proposed slope cutbacks, should substantially reduce the hazards associated with both slope erosion and local/surficial slope instability under both static and seismic loading conditions.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria/County of Santa Barbara shall verify the engineering plans include the above specifications. ***Monitoring***: City of Carpinteria/County of Santa Barbara public works staff or construction inspector retained for the project shall inspect slope and drainage system construction to verify conformance with these specifications.

3.5.6 Level of Significance After Mitigation

Potential impacts related to geology and soils would be reduced to less than significant with implementation of mitigation measures GEO-1, GEO-2, and GEO-3.

3.6 Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) emissions conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.6.1 Existing Conditions

3.6.1.1 Climate Change Overview

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

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

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-20th century and is the most significant driver of observed climate change (EPA 2017; IPCC 2013). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system as discussed further in Section 3.6.1.5, Potential Effects of Climate Change.

3.6.1.2 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), water vapor, hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and

sulfur hexafluoride (SF_6).[1] Some GHGs—such as CO_2, CH_4, and N_2O—occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases (e.g., HFCs, HCFCs, PFCs, and SF_6), which are associated with certain industrial products and processes. A summary of the most common GHGs and their sources is included in the following text.[2] Also included is a discussion of other climate-forcing substances.

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

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. CH_4 is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers; manure management; industrial processes, such as in nitric acid production, nylon production, and fossil-fuel-fired power plants; vehicle emissions; and using N_2O as a propellant (such as in rockets, race cars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric O_3-depleting substances (e.g., chlorofluorocarbons [CFCs], HCFCs, and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to O_3-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as byproducts of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, along with HFCs, to O_3-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF_6 is a colorless gas that is soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** Nitrogen trifluoride is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

[1] California Health and Safety Code 38505 identifies seven GHGs that CARB is responsible for monitoring and regulating to reduce emissions: CO_2, CH_4, N_2O, SF_6, HFCs, PFCs, and nitrogen trifluoride.

[2] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's Glossary of Terms Used in GHG Inventories (CARB 2015), and the EPA's Glossary of Climate Change Terms (EPA 2016).

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

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

Black Carbon. Black carbon is a component of fine particulate matter ($PM_{2.5}$), which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is short lived and varies spatially, which makes it difficult to quantify its global warming potential (GWP). DPM emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining DPM from CARB's regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

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

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

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

3.6.1.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2016). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of one kilogram of a trace substance relative to that of one kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of carbon dioxide equivalent (CO_2e).

The current version of CalEEMod (Version 2016.3.2) assumes that the GWP for CH_4 is 25 (so emissions of one MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the proposed project.

3.6.1.4 Sources of Greenhouse Gas Emissions

Global Inventory

Anthropogenic GHG emissions worldwide in 2017 (the most recent year for which data is available) totaled approximately 50,860 MMT CO_2e, excluding land use change and forestry (Olivier and Peters 2018). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,290 MMT CO_2e (Olivier and Peters 2018). Table 3.6-1 presents the top GHG-emissions-producing countries and the European Union.

Table 3.6-1. Six Top GHG Producer Countries and the European Union

Emitting Countries	2014 GHG Emissions (MMT CO_2e)[a,b]
China	13,530
United States	6,640
European Union	4,560
India	3,650
Russian Federation	2,220
Japan	1,490
Brazil	1,200
Total	**33,290**

Source: Olivier and Peters 2018.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.
[b] GHG emissions do not include land use change and forestry-related GHG emissions.

National and State Inventories

Per the 2020 EPA Inventory of U.S. GHG Emissions and Sinks: 1990–2018, total U.S. GHG emissions were approximately 6,677 MMT CO_2e in 2018 (EPA 2020). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.3% of total GHG emissions (5,428 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO_2 emissions in 2018 (5,032 MMT CO_2e). Relative to the 1990 emissions level, gross U.S. GHG emissions in 2018 were 3.7% higher; however, the gross emissions were down from a high of 15.2% above the 1990 level that occurred in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188 MMT CO_2e) and, overall, net emissions in 2018 were 10.2% below 2005 levels (EPA 2020).

According to California's 2000 through 2018 GHG emissions inventory (2019 edition), California emitted 425 MMT CO_2e in 2018, including emissions resulting from out-of-state electrical generation (CARB 2020). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2018 are presented in Table 3.6-2.

Table 3.6-2. GHG Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	169.5	39.8%
Electric Power	63.1	14.8%
Industrial	89.2	21.0%
Commercial and Residential	41.4	9.7%
Agriculture	32.6	7.7%
High GWP	20.5	4.8%
Recycling and Waste	9.1	2.1%
Total	**425.4**	**100%**

Source: CARB 2020.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.

Between 2000 and 2018, per-capita GHG emissions in California dropped from a peak of 14.0 MT per person in 2001 to 10.7 MT per person in 2018, representing a 24% decrease. In addition, total GHG emissions in 2018 were approximately 1 MMT CO_2e more than 2017 emissions (CARB 2020).

The City of Carpinteria (City) provided an update to their GHG emission inventory in their Energy and Climate Action Plan 2017 Progress Report (County of Santa Barbara 2018). GHG emissions for the County of Santa Barbara (County) in 2016 are presented in Table 3.6-3.

Table 3.6-3. GHG Emissions Sources in the County of Santa Barbara

Source Category	Annual GHG Emissions (MT CO_2e)	Percent of Total[a]
Transportation	588,246	45.0%
Building Energy	374,164	28.6%
Off-Road	138,950	10.6%
Agriculture	119,360	9.1%
Solid Waste	82,750	6.3%
Water and Wastewater	3,364	0.3%
Totals	**1,306,833**	**100.0%**

Source: County of Santa Barbara 2017.
Notes: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent per year.
Emissions reflect the 2016 County of Santa Barbara GHG inventory.
[a] Percentage of total has been rounded, and total may not sum due to rounding.

3.6.1.5 Potential Effects of Climate Change

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

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a 0.2°C rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about 0.2°C [0.36°F]) per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the Western United States reveal clear signals of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been the greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California, compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). It is predicted that the Sierra snowpack, which accounts for approximately half of the surface water storage in California and much of the state's water supply, will decline by 30% to as much as 90% over the next 100 years (CAT 2006).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid-to-late 21st century in central and, most notably, Southern California. By late-century, all projections show drying, and half of them suggest 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

A summary of current and future climate change impacts to resource areas in California, as discussed in Safeguarding California: Reducing Climate Risk (CNRA 2014), is provided below.

Agriculture. The impacts of climate change on the agricultural sector are far more severe than the typical variability in weather and precipitation patterns that occur year to year. The agriculture sector and farmers face some specific challenges that include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding and extreme drought to destructive storm events; significant shifts in water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests, and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production. These challenges and associated short-term and long-term impacts can have both positive and negative effects on agricultural production. Nonetheless, it is predicted that current crop and livestock production will suffer long-term negative effects resulting in a substantial decrease in the agricultural sector if climate change is not managed or mitigated.

Biodiversity and Habitat. The state's extensive biodiversity stems from its varied climate and assorted landscapes, which have resulted in numerous habitats where species have evolved and adapted over time. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites, and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; and threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss has occurs). Habitat restoration, conservation, and resource management across California and through collaborative efforts among public, private, and nonprofit agencies has assisted in the effort to fight climate change impacts on biodiversity and habitat. One of the key measures in these efforts is ensuring species' ability to relocate as temperature and water availability fluctuate as a result of climate change.

Energy. The energy sector provides California residents with a supply of reliable and affordable energy through a complex integrated system. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea-level rise. Increasing temperatures and reduced snowpack negatively impact the availability of a steady flow of snowmelt to hydroelectric reservoirs. Higher temperatures also reduce the capacity of thermal power plants, since power plant cooling is less efficient at higher ambient temperatures. Increased temperatures will also increase electricity demand associated with air conditioning. Natural gas infrastructure in coastal California is threatened by sea-level rise and extreme storm events.

Forestry. Forests occupy approximately 33% of California's 100 million acres and provide key benefits, such as wildlife habitat, absorption of CO_2, renewable energy, and building materials. The most significant climate change-related risks to forests are accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale mortalities and, combined with increasing temperatures, have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions. These factors contribute to decreased forest growth, geographic shifts in tree distribution, loss of fish and wildlife habitat, and decreased carbon absorption. Climate change may result in increased establishment of non-native species, particularly in rangelands where invasive species are already a problem. Invasive species may be able to exploit temperature or precipitation changes or quickly occupy areas denuded by fire, insect mortality, or other climate change effects on vegetation.

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

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the 21st century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies and extreme events, such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves is likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness, such as asthma and allergies. Additional health impacts that may be caused by climate change include cardiovascular

disease, vector-borne diseases, mental health impacts, and malnutrition injuries. Increased frequency of these ailments is likely to subsequently increase the direct risk of injury and/or mortality.

Transportation. Residents of California rely on airports, seaports, public transportation, and an extensive roadway network to gain access to destinations, goods, and services. While the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Particularly, sea-level rise and erosion threaten many coastal California roadways, airports, seaports, transit systems, bridge supports, and energy and fueling infrastructure. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand, which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Water resources in California support residences, plants, wildlife, farmland, landscapes, and ecosystems and bring trillions of dollars in economic activity. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the winter. Increased risk of flooding has a variety of public health concerns, including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively affect groundwater reserves and result in increased overdraft and subsidence. Droughts can negatively impact agriculture and farmland throughout the state. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality. Water temperatures are also prone to increase, which can negatively impact wildlife that rely on a specific range of temperatures for suitable habitat.

In May 2017, the CNRA released the draft Safeguarding California Plan: 2017 Update, which was a survey of programmatic responses for climate change and contained recommendations for further actions (CNRA 2017).

3.6.2 Relevant Plans, Policies, and Ordinances

3.6.2.1 Federal

Massachusetts v. EPA

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

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."

- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

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

Energy Independence and Security Act

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

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

Federal Vehicle Standards

In response to the Massachusetts *v. EPA* ruling, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011. In 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intends to set standards for model years 2022 through 2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines (76 FR 57106–57513).

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

On September 27, 2019, EPA and NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. The Part One Rule impacts some of the underlying assumptions in the CARB EMFAC 2014 and EMFAC 2017 models for criteria air pollutant emissions from gasoline light-duty vehicles, which CARB released off-model adjustment factors for on November 20, 2019, primarily for use in federal Clean Air Act conformity demonstration analyses. Part Two of these regulations has not been adopted yet. Because CARB does not know the full impacts of these rules until Part Two is released, no off-model adjustments factors are available for GHG emissions at this time. In addition, the EMFAC off-model adjustments have not yet been incorporated into CalEEMod. This issue is evolving as California and 22 other states, as well as the District of Columbia and two cities, filed suit against the EPA over the vehicle waiver revocation on November 15, 2019 and a petition for reconsideration of the rule was filed on November 26, 2019 by California and 22 other states, the District of Columbia, and four cities. Accordingly, the timing and consequences of these types of federal decisions and subsequent challenges are speculative at this time.

3.6.2.2 State

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

State Climate Change Targets

Executive Order S-3-05

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

Assembly Bill 32 and CARB's Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. Assembly Bill (AB) 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified

requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

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

Further, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan) in accordance with Health and Safety Code, Section 38561. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020 (CARB 2008). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

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

In the Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 29% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations [referred to as "business-as-usual"]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document (Final Supplement), CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG-reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 22% (down from 29%) from the business-as-usual conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009 through 2016) and the Renewables Portfolio Standard (RPS) (12% to 20%), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 29%) from the business-as-usual conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on

track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are energy, transportation (e.g., vehicles/equipment, sustainable communities, housing, fuels, infrastructure), agriculture, water, waste management, and natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal (CARB 2014).

Based on CARB's research efforts presented in the First Update, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies (CARB 2014).

As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 29% or 16%) from the business-as-usual conditions (CARB 2014).

On January 20, 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017). This update proposed CARB's strategy for achieving the state's 2030 GHG target as established in SB 32 (discussed below), including continuing the Cap-and-Trade Program through 2030. The Second Update incorporated approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document adopted by CARB in March 2017; SLCP Reduction Strategy), and acknowledged the need for reducing emissions in agriculture and highlighted the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the Natural and Working Lands, Agriculture, Energy, and Transportation sectors to inform development of the 2030 Scoping Plan Update (CARB 2017). When discussing project-level GHG emissions-reduction actions and thresholds, the Second Update stated, "Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA" (CARB 2017). The Second Update was approved by CARB's Governing Board on December 14, 2017.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 called for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction targets; made changes to CARB's membership and increased legislative oversight of CARB's climate change-based activities; and expanded dissemination of GHG and other air-quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; required CARB to make available and update (at least annually through its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and required CARB to identify specific information for GHG emissions-reduction measures when updating the Scoping Plan.

SB 605 and SB 1383

SB 605 (2014) required CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state; SB 1383 (2016) required CARB to approve and implement the SLCP Reduction Strategy. SB 1383 also established specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provided direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its SLCP Reduction Strategy in March 2017, which established a framework for the statewide reduction of emissions of black carbon, CH4, and fluorinated gases.

EO B-55-18

EO B-55-18 (September 2018) established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This executive order directed CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Building Energy

Title 24, Part 6 of the California Code of Regulations

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

reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment. The 2019 standards continue to improve upon the 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 standards went into effect on January 1, 2020.

Title 24, Part 11 of the California Code of Regulations

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR 11) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, schools, and hospitals. The CALGreen 2019 standards went into effect on January 1, 2020, and continue to improve upon the 2016 CALGreen standards for new construction of, and additions and alterations to, residential and nonresidential buildings (CALGreen 2016).

The 2019 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards will further reduce energy used and associated GHG emissions compared to current standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

Title 20 of the California Code of Regulations

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

AB 1109

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

Renewable Energy and Energy Procurement

SB 1078

SB 1078 (2002) established the RPS program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368

SB 1368 (2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. This effort helps protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also required the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100

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

Mobile Sources

EO S-1-07

Issued on January 18, 2007, EO S-1-07 set a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations were then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, would achieve, if feasible, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code, Section 65080(b)(2)(K), a SCS does not (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for SBCAG are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SBCAG completed and adopted its 2040 Regional Transportation Plan (2050 RTP/SCS) in August 2013 (SBCAG 2013). In November 2013, CARB, by resolution, accepted SBCAG's GHG emissions quantification analysis and determination that, if implemented, the 2040 RTP/SCS would achieve CARB's 2020 and 2035 GHG emissions-reduction targets for the region. In August 2017, SBCAG adopted the Fast Forward 2040, SBCAG RTP/SCS. Like the 2040 RTP/SCS, the Fast Forward 2040 meets CARB's 2020 and 2035 reduction targets for the region (SBCAG 2017).

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025, cars will emit 75% less smog-forming pollution than the average

new car sold before 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The zero emissions vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (EVs) in the 2018 to 2025 model years.

EO B-16-12

EO B-16-12 (2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This executive order (EO) also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions-reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236

AB 1236 (2015) requires local land use jurisdictions to approve applications for the installation of electric vehicle (EV) charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission, as specified. AB 1236 requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, which creates an expedited and streamlined permitting process for EV charging stations, as specified. The City added Section 86.0151, Electric Vehicle Parking Regulations, to its municipal code in August 2015 in response to the AB 1236 requirements.

SB 350

In 2015, SB 350—the Clean Energy and Pollution Reduction Act—was enacted into law. As one of its elements, SB 350 established a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code, Section 740.12).

EO B-48-18

EO B-48-18 (2018) launched an eight-year initiative to accelerate the sale of EVs through a mix of rebate programs and infrastructure improvements. The order also set a new EV target of 5 million EVs in California by 2030. EO B-48-18 included funding for multiple state agencies, including the CEC, to increase EV charging infrastructure and for CARB to provide rebates for the purchase of new EVs and purchase incentives for low-income customers.

Solid Waste

AB 939 and AB 341

In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery to develop strategies to achieve the state's policy goal. The California Department of Resources Recycling and Recovery has conducted multiple workshops and published documents that identify priority strategies that it believes would assist the state in reaching the 75% goal by 2020 (CalRecycle 2015).

Water

EO B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Other State Regulations and Goals

SB 97

SB 97 (August 2007) directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resources Agency (CNRA) adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines, Section 15064.4(a), state that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or

methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

3.6.2.3 Local

SBCAPCD and SBCAG

The Santa Barbara County Air Pollution Control District (SBCAPCD) is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the County. The SBCAPCD operates monitoring stations in the County, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SBCAPCD's focus is on criteria air pollutants to achieve California Ambient Air Quality Standards and National Ambient Air Quality Standards. It does not generally regulate sources of GHG emissions, except in its role as a reviewing agency for projects subject to CEQA.

SBCAG prepared a 2040 Regional Transportation Plan-Sustainable Communities Strategy (RTP-SCS), adopted in August 2017, which shows how the region will achieve the required GHG per capita emission targets as well the co-benefits of reducing criteria pollutants. The 2040 RTP-SCS is based on a preferred land use and transportation scenario, which lays out one possible pattern of future growth and transportation investment for the region. The 2040 RTP-SCS preferred scenario emphasizes a transit-oriented development and infill approach to land use and housing, supported by complementary transportation and transit investments. The 2040 RTP-SCS meets the requirements of SB 375 and successfully achieves the region's GHG emission targets in 2020 and 2035, while accommodating forecast growth and regional housing needs. The 2040 RTP-SCS would meet the SBCAG region's GHG emission targets from passenger vehicles for 2020 and 2035, achieving reductions in per capita emissions of CO_2 from passenger vehicles of 13.3% in 2020 and 17.7% in 2035, better than the SBCAG target of zero net growth in per capita emissions (SBCAG 2017).

County of Santa Barbara

CEQA Guidelines Section 15183.5(a) states,

> Lead agencies may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in…a separate plan to reduce GHG emissions. Later project-specific environmental documents may tier from…that existing programmatic review…a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan.

The County of Santa Barbara Board of Supervisors adopted the Energy and Climate Action Plan (ECAP) in May 2015 and certified the accompanying EIR (County of Santa Barbara 2015). The ECAP meets the criteria in CEQA Guidelines Section 15183.5(b) for a "plan to reduce GHG emissions." The ECAP commits the County to reduce community-wide GHG emissions by 15% below 2007 levels by 2020 consistent with the California Global Warming Solutions Act of 2006 (Assembly Bill 32) and the related Climate Change Scoping Plan (CARB 2008). The ECAP is a qualified GHG emissions reduction plan for projects built prior to 2020.

The County of Santa Barbara developed a Climate Action Strategy, which is a two-phase project comprised of (1) a Climate Action Study, and (2) an Energy and Climate Action Plan (ECAP). The Climate Action Strategy covers the unincorporated areas of Santa Barbara County where the County of Santa Barbara retains land use permit authority, which includes a portion of the proposed project. The County of Santa Barbara Long-Range Planning Division completed Phase 1 of the Climate Action Strategy, the Climate Action Study, in September 2011. The Climate Action Study provides a summary of policies, programs, and projects that the County of Santa Barbara can implement to reduce GHG emissions in the unincorporated County (County of Santa Barbara 2011). Phase 2, the ECAP, which seeks to reduce the County's GHG emissions through implementation of selected emission reduction measures with the goal of achieving the selected GHG reduction target, was adopted in May 2015 (County of Santa Barbara 2015). The E-CAP is currently being updated to incorporate the longer term GHG goals of the County, which are to reduce its emissions by 50% below 2007 levels by 2030 (County of Santa Barbara 2020).

City of Carpinteria

The City has adopted measures within its Open Space, Recreation & Conservation element of its General Plan to reduce GHG emissions (City of Carpinteria 2003). Measures identified within Section 3.2.2.3 for protecting air quality would also help to reduce GHG emissions. The following policies within that element in addition are included to reduce GHG emissions:

CDS6-f To ensure the efficient utilization of energy resources, design measures shall be incorporated into project design that allow for development projects to exceed the minimum energy requirements of the city's Uniform Codes.

1. Building orientation shall be designed to maximize natural lighting, passive solar heating, and cooling;
2. Landscaping shall be designed to maximize the use of native drought tolerant species and deciduous trees to shade buildings in summer and allow for passive solar heating in winter;
3. Energy efficient street lighting shall be used, with consideration of safety, visual impacts, and impacts to wildlife and sensitive habitat;

4. Design of parking facilities shall take into consideration the layout of entrances and exits so as to avoid concentrations of cars or excessive idling.
5. Alternatively fueled vehicles are to be used in construction and as fleet vehicles, if feasible and available.

C-7a Ensure that major businesses prepare and implement Transportation Systems Management Plans to achieve a reduction in the number of trips generated by their employees and operations by encouraging private sector program elements similar to the following:

- Preferential employee carpool/vanpool parking
- Work-at-home (telecommuting)
- Designation of Company Transportation Coordinator
- The construction of Transit Passenger Shelters (if located along an existing or designed transit route)
- Bus subsidies
- Transit operating subsidies
- Transit pass subsidies
- Buspool or shuttle bus programs
- Vanpool program
- Parking fees
- Showers, lockers and preferred bicycle parking
- Non-peak period shift schedules
- Flexible work hours offered to employees who rideshare
- Provision of luncheon/lounge seating area with vending machines and food preparation facilities
- Other programs and incentives which can feasibly and significantly reduce potential peak period trips.

C-7b Develop safe and direct pedestrian accessibility between residential areas, schools, parks, and shopping areas in both new and existing urban areas.

C-7c Provide safe mobility for the physically handicapped through the design of street improvements and public facilities.

C-7d Practice signal timing that is designed for the safe movement of the aged and the handicapped at locations where such needs exist.

C-7e Provide continuous sidewalks, where appropriate, for safe pedestrian circulation and consider creative alternatives for such issues.

C-7f Earmark a larger portion of development impact fees for alternative transportation programs.

C-7g Create a citywide campaign of prolonged duration promoting alternative transportation.

C-8a	Integrate the development of bicycle routes and pedestrian pathways in additional areas of the city, and encourage the utilization of such routes for commuting as well as recreational purposes.
C-8b	Provide adequate right-of-way and improvements for bicycle lanes, when called for in future street dedications.
C-8c	Provide or require safe and adequate bicycle parking at transportation centers, public parks, recreation areas and other nonresidential locations.
C-8d	Encourage integration of the city's bicycle routes with state and countywide programs.
C-8e	Encourage educational programs on bicycle safety, and complement such programs through bicycle law enforcement.
C-8f	Encourage pedestrian movement by providing pedestrian facilities that are direct and convenient, particularly in the beach and downtown areas.
C-8g	Consider rerouting the Pacific Coast Bikeway to another location parallel to the coastline, such as adjacent to the railroad right of way throughout the city. [5-year]
C-8h	Encourage a bike trail link from Carpinteria to Summerland along the railroad right of way and a coastal link to Ventura paralleling U.S. 101.
C-8i	Inspect, provide, and maintain contiguous bike lanes for a one-half mile radius around each school site.
C-8j	Encourage the School Board to instruct the School District to include bicycle safety as part of the curriculum.
C-8k	Contact the Carpinteria Chapter of the AHA and ask them to include the benefits of bicycling as part of their workplace training program. [2-year]
C-8l	As a requirement of new development, significant attention must be paid to bicycle-friendly infrastructure and the maintenance of nearby old infrastructure.
C-8m	Add more bike lanes to arterial street cross-sections.
C-8n	Develop funding sources for new bicycle infrastructure including diversion of funds from sources currently applied to single occupant vehicle infrastructure.
C-8o	Correct bike lanes at intersections, allowing for straight through bike lanes adjacent to auto lanes, when a right-turn lane exists.
C-8p	Correct pressure sensitive signals to respond to weight of bicyclists.
C-8q	Encourage the placement of bicycle lockers at shopping centers and major traffic areas.
C-8r	Encourage large employers to place bicycle lockers in convenient locations on their premises.

C-9a	Continue cooperation with the Santa Barbara Metropolitan Transit District (SBMTD), Caltrans and other transportation agencies, in order to assure that all City residents have adequate access to public transit as an alternative to the automobile.
C-9b	Develop the circulation system in a manner that will maximize route efficiency for transit lines within the city.
C-9c	Coordinate with SBMTD, Caltrans and other transportation agencies in the development of route systems and transfer points.
C-9d	Promote efficient and attractive public transit which maintains acceptable personal safety, and minimizes the disruption of neighbors attributable to transportation facilities and operations.
C-9e	Encourage privately owned transit systems to interface with the public transit systems.
C-9f	Encourage SBMTD and others to develop a variety of public transit modes and schedules coordinated with those of adjacent cities, while meeting residential and seasonal transit needs. Further, support development of a Ventura/Santa Barbara express bus commuter line with stops in Carpinteria.
C-9g	Continue cooperation with SBMTD to ensure frequent, predictable, safe and reliable neighborhood shuttle bus service.
C-9h	Encourage MTD to promote use of Parking Lot 3 as a park and ride lot, and encourage Caltrans to establish and promote its parcel southwest of the Bailard/Highway 101 interchange for a park and ride lot.
C-9i	Work with MTD to promote increased bus use and explore providing expanded inner city/neighborhood shuttle service within the city. [2-year]
C-9j	Encourage the growth of low impact and non-polluting industry, and promote improved congestion management techniques. This may take the form of local business ordinances and might be applied through the permitting process.
C-9k	Provide incentives to businesses that offer flexible shift/start times, compressed work week opportunities, and telecommuting options.
C-9l	Design and place improved signage for parking lots, sites of interest, business districts and recreational areas.
C-9m	Work with SBCAG's Traffic Solutions program to promote and educate citizens and employers about alternative transportation including bicycling, carpooling, vanpooling, buses, telecommuting, staggered start/stop times, compressed work weeks, and other alternatives as they are developed.
C-9n	Require new development plans to include significant attention to alternative modes of transportation.
C-9o	Require well-designed walkways as a condition to new development approval.
C-9p	Establish a regulatory framework for siting antennas and telecommunication equipment that protects visual resources. [2-year]

C-9q	Participate in countywide planning for telecommunications.
C-9r	Encourage local businesses to participate in electronic commerce.

3.6.3 Thresholds of Significance

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

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Appendix G thresholds for GHGs do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). Additional guidance regarding assessment of GHGs is discussed below.

County of Santa Barbara

The County adopted the developing interim greenhouse gas (GHG) emissions thresholds to apply to new development projects while the County updates its Energy and Climate Action Plan (ECAP). The updated ECAP, now referred to as the 2030 Climate Action Plan (CAP), will identify reductions needed in both existing and new developments in the county to meet its 2030 GHG emissions reduction target. In July 2020, the County adopted a new target to reduce its emissions by 50% below 2007 levels by 2030 with direction from the Board of Supervisors (County of Santa Barbara 2020). The interim thresholds will help the County process discretionary projects under the California Environmental Quality Act (CEQA) and continue to achieve GHG emissions reductions from new development while it prepares the 2030 CAP.

The County Planning and Development Department developed the interim GHG emissions thresholds to assist project applicants to comply with the requirements of CEQA regarding potentially adverse impacts to climate change. The determination on whether or not a project may have a significant effect on the environment shall be based in part on the thresholds of significance. The proposed interim thresholds for GHG emissions are quantitative measures of environmental change. Thresholds of significance supplement provisions in the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines) for the determination of significant environmental effects, including Sections 15064, 15065, 15382, and Appendix G incorporated herein. The primary purpose of the interim GHG emissions thresholds is to provide a means to identify proposed local plans and development projects that may have a significant adverse effect related to GHGs. Subsequent sections of this memorandum present the justifications for the recommended interim GHG emissions thresholds. These changes were incorporated into the County's Environmental Thresholds and Guidelines Manual as amended on October 27, 2020 (County of Santa Barbara 2020).

The CEQA Guidelines address GHG emissions as a cumulative impact due to the global nature of climate change (14 CCR 15064.4[b]). As the California Supreme Court explained, "because of the global scale of climate change,

any one project's contribution is unlikely to be significant by itself" (Cleveland National Forest Foundation v. San Diego Assn. of Governments [2017] 3 Cal.5th 497, 512.). A project's significant GHG impacts must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact (14 CCR 15064.4[b] and 15183.5). Therefore, the impacts analysis of GHG emissions is global in nature and should be considered in a broader context. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions (14 CCR 15064.4[b]). The interim GHG emissions thresholds are set at a level of impact that identifies either (1) a cumulatively considerable contribution to an existing adverse condition, or (2) a cumulatively significant impact in combination with other projects causing related impacts.

The interim thresholds that apply to land use development projects, which include both project level residential and non-residential development and plans (e.g., specific plans and community plans). These thresholds would not apply to GHG-emitting power plants, oil and gas facilities, or other industrial stationary sources as the County has an adopted bright line threshold of 1,000 MT CO_2e per year for industrial stationary sources. The interim thresholds will only apply to non-exempt discretionary projects under CEQA. Under Step 1, applicants first compare non-exempt project applications against a screening threshold. Applicants can either qualitatively compare the project size to project screening criteria, or, if the screening criteria are not applicable, quantitatively calculate project-specific emissions (see Table 3 of the GHG memorandum). Examples of projects that may not be able to use project screening criteria include (1) project types not included in Table 3 of the GHG memorandum, or (2) projects that include emissions sources not accounted for in the modeled assumptions for the proposed land use type shown in Table 3 of the GHG memorandum. The screening threshold shall be no greater than 300 MT CO_2e per year, based on the estimated effectiveness of mitigation measures for new development. This threshold would result in approximately 15% of all applicable future projects and 87% of all applicable future land use emissions being subject to the efficiency threshold under Step 2. Under Step 2, any project with 2030 estimated emissions exceeding the screening threshold will be subject to an efficiency GHG emissions threshold based on the project's estimated service population. For projects exceeding the screening threshold, an efficiency threshold of 3.8 MT CO_2e/year per service population (SP) in 2030 will apply. Projects subject to the efficiency threshold amortize any construction emissions over the lifetime of the project (e.g., 30 years). The efficiency threshold would apply to the sum of the amortized construction emissions and the estimated annual operational emissions. Furthermore, until the 2030 CAP is adopted, the County considers projects or plans that have emissions below interim thresholds to be consistent with County GHG emission reduction plans. The interim thresholds are part of the County's GHG emissions reduction strategy and were informed by the County's 2030 target. The interim thresholds provide a pathway for projects and plans to show compliance with County goals (County of Santa Barbara 2020).

City of Carpinteria

The City does not have an adopted GHG threshold or qualified GHG reduction plan for the project to tier off. Therefore, the County of Santa Barbara's Interim GHG Threshold of 300 MT CO_2e per year will be applied to the project.

3.6.4 Impact Analysis

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

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

Construction Emissions

Construction of the project would result in GHG emissions that are primarily associated with use of off-road construction equipment, on-road vendor trucks, and worker vehicles. The County's Interim GHG Thresholds (County of Santa Barbara 2020) recommends the use of a 300 MT CO_2e bright-line threshold for both construction and operation of development projects.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 3.2.4 and Appendix B. Construction of the proposed project is anticipated to commence in March 2022, lasting a total of approximately 24 months. On-site sources of GHG emissions include off-road equipment and off-site sources include on-road vehicles (haul trucks, vendor trucks, and worker vehicles). Table 3.6-4 below presents construction emissions for the project from on-site and off-site emissions sources.

Table 3.6-4. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons			
2022	522.46	0.08	0.00	524.56
2023	182.66	0.04	0.00	183.56
			Total	708.12
			Amortized Emissions over 30 years	23.60

Source: Appendix B.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent

As shown in Table 3.6-4, the estimated total GHG emissions during construction would be approximately 708 MT CO_2e. When construction emissions are amortized over 30 years, the construction emissions would be approximately 24 MT CO_2e per year. As with project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the project would be short term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. As discussed in Section 3.6.3, Thresholds of Significance, the amortized construction emissions will be added to operational emissions and compared to the significance threshold.

Loss of Sequestered Carbon

The calculation methodology and default values provided in CalEEMod (CAPCOA 2017) were used to calculate potential CO_2 emissions associated with the one-time change in carbon sequestration capacity of a vegetation land use type. The calculation of the one-time loss of sequestered carbon is the product of the converted acreage value and the carbon content value for each land use type (vegetation community). The mass of sequestered carbon per unit area (expressed in units of MT of CO_2 per acre) is dependent on the specific land use type. Assuming that the

sequestered carbon is released as CO_2 after removal of the vegetation, annual CO_2 is calculated by multiplying total biomass (MT of dry matter per acre) from IPCC data by the carbon fraction in plant material, and then converting MT of carbon to MT of CO_2 based on the molecular weights of carbon and CO_2.

It is conservatively assumed that all sequestered carbon from the removed vegetation would be returned to the atmosphere; that is, the wood from the vegetation communities would not be re-used in a solid form or another form that would retain carbon. GHG emissions generated during construction activities, including clearing, vegetation removal, and grading, are estimated in the construction emissions analysis.

CalEEMod calculates GHG emissions resulting from land conversion and uses six[3] general IPCC land use classifications for assigning default carbon content values (in units of MT CO_2 per acre). CalEEMod default carbon content values were assumed to estimate the loss of sequestered carbon (release of CO_2) from the removal of the scrub (14.3 MT CO_2 per acre), forest (111 MT CO_2 per acre), and grassland (4.31 MT CO_2 per acre) vegetation categories, which are based on data and formulas provided in the IPCC reports. The project would permanently disturb 0.75 acres of scrub and temporarily disturb 9.95 acres of scrub as shown in Table 3.3-5 in Section 3.3, Biological Resources. As such, the project is estimated to result in 153.01 MT CO_2 through carbon loss.

When amortized over 30 years, this would result in annual carbon loss of 5.10 MT CO_2 per year. When added to the amortized construction emissions, the project would result in 28.70 MT CO_2e per year.

Operational Emissions

CalEEMod Version 2016.3.2 was used to estimate potential project-generated operational GHG emissions from area sources (landscape maintenance), mobile sources, solid waste, and water supply and wastewater treatment. Emissions from each category are discussed in the following text with respect to the project. See Section 3.2.4 for a discussion of operational emission calculation methodology and assumptions, specifically for area and mobile sources. Operational year 2024 was assumed as it is the first full year of operation following completion of construction.

Solid Waste

The project would generate solid waste and would, therefore, result in CO_2e emissions associated with landfill off-gassing. Solid waste generation was derived from the CalEEMod default rates for each land use type. Emission estimates associated with solid waste were estimated using CalEEMod. Trash and recycling cans would be provided in the existing dirt parking lot at the western trail terminus. Waste collection services would be provided by E. J. Harrison and Sons or other local service provider and would occur weekly. Existing trash and recycling cans located in Rincon Beach County Park at the eastern trail terminus would be available to serve the trail.

Water Supply and Wastewater

Water supplied to the project requires the use of electricity. Accordingly, the supply, conveyance, treatment, and distribution of water would indirectly result in GHG emissions through use of electricity. Annual water use for the project and GHG emissions associated with the electricity used for water supply were calculated based upon default water use estimates for each land-use type, as estimated by CalEEMod and Southern California

[3] Forest land (scrub), forest land (trees), cropland, grassland, wetlands, and other.

Edison factors. The water use would be associated with watering of landscaping around the trail. This is conservative as watering is only needed for the first couple of years to establish the plantings.

Emissions Estimates

CalEEMod was used to estimate potential project-generated operational GHG emissions from area sources (landscaping), mobile sources, solid waste, and water supply and wastewater treatment. Emissions from each category are discussed in the following text. Operational year 2024 was assumed as the first full year of operation upon construction completion. The projects estimated operational emissions are shown in Table 3.6-5.

Table 3.6-5. Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	0.00	0.00	0.00	0.00
Mobile	0.17	0.00	0.00	0.17
Waste	0.03	0.00	0.00	0.06
Water	1.86	0.00	0.00	1.87
			Subtotal	*2.10*
			Amortized Construction Emissions over 30 Years	*23.60*
			Amortized Loss of Sequestered Carbon over 30 Years	*5.10*
			Total	**30.80**

Notes: CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide
See Appendix B for complete results.

As shown in Table 3.6-5, project GHG emissions generated from operational activities are estimated to be approximately 2 MT CO_2e per year in 2024. Total operational emissions combined with amortized construction emissions and vegetation removal would be 31 MT CO_2e per year, assuming a 30-year project life. As such, the total estimated emissions would be less than the County's bright-line significance threshold of 300 MT CO_2e per year. Therefore, impacts would be **less than significant**.

Consistency with GHG Reduction Plans

The Board adopted the ECAP in 2015 as the County's GHG emission reduction plan. The County has been implementing the ECAP since 2016 but is not projected to meet the plan's 2020 GHG emission reduction goals, according to the 2016 GHG Emissions Inventory Update and Forecast and the 2017 ECAP Progress Report. The final ECAP progress report will be released in 2021, using data through 2020. Until the 2030 CAP is adopted, the County considered projects or plans that have emissions below interim thresholds to be consistent with County GHG emission reduction plans. The interim thresholds are part of the County's GHG emissions reduction strategy and were informed by the County's 2030 target. The interim thresholds provide a pathway for projects and plans to show compliance with County goals and State GHG Reduction Plans, Policies, and Regulations. The Board's 2030 GHG emission reduction goal (50% reduction from 2007 levels by the year 2030) is consistent with the state's direction under Senate Bill 32 as codified in the California Health and Safety Code, Division 25.5, Part 4, Section 38566 (40% reduction below 1990 levels by 2030). CARB's 2017 Scoping Plan (CARB 2017) describes the state's strategy for achieving California's 2030 GHG emission reduction target. The 2017 Scoping Plan does not prescribe or require specific actions by local government agencies; rather, the Scoping Plan provides guidance to local agencies and CARB supports programs that assist local agencies. Local

government efforts to reduce emissions within their jurisdiction are critical to achieving the state's long term GHG goals, and can also provide important co-benefits, such as improved air quality, local economic benefits, more sustainable communities, and an improved quality of life. CARB recommends statewide targets of no more than 6 MT CO_2e per capita by 2030, and no more than 2 MT CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the state, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term state emissions reduction goal of 80% below 1990 levels by 2050. This limit represents California's and these other governments' recognition of their "fair share" to reduce GHG emissions to the scientifically based levels to limit global warming below 2°C.

CARB recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the state's sustainable development objectives and develop plans to achieve the local goals. The County's interim GHG emission efficiency threshold is considerably lower than the state's 2030 per capita target. Therefore, analysts can apply the County's interim threshold with confidence that it aids the state in achieving its target, as well.

As shown, the emissions would be less than the County's bright-line threshold of 300 MT CO_2e per year. Therefore, the project would have a **less than significant** impact.

3.6.5 Mitigation

No mitigation measures would be required. However, **Mitigation Measure (MM) BIO-3** requires temporarily impacted vegetated areas shall be restored on site at a 1:1 ratio. Any remaining on-site mitigation potential (in disturbed land/disturbed areas or developed areas) shall be restored at a ratio of 2:1 for coastal sage scrub and coastal bluff scrub permanently removed on site. This mitigation would require additional plantings to offset the impacted species identified in Table 3.3-5.

3.6.6 Level of Significance After Mitigation

Sequestered Carbon

CalEEMod calculates GHG emissions resulting from land conversion and uses six[4] general IPCC land use classifications for assigning default carbon content values (in units of MT CO_2 per acre). CalEEMod default carbon content values were assumed to estimate the loss of sequestered carbon (release of CO_2) from the removal of the scrub (14.3 MT CO_2 per acre), forest (111 MT CO_2 per acre), and grassland (4.31 MT CO_2 per acre) vegetation categories, which are based on data and formulas provided in the IPCC reports. In accordance with **MM-BIO-3**, the project must restore temporarily vegetated areas at a 1:1 ratio and permanently removed scrub will be restored at a 2:1 ratio. This would result in a total of 11.45 acres of scrub to be replaced in accordance with **MM-BIO-3**. This would result in the sequestration of 163.74 MT CO_2, or 5.46 MT CO_2 per year when amortized over 30 years. The project's operational emissions plus amortized construction emissions, vegetation removal, and carbon sequestration would result in emissions of 25.34 MT CO_2e per year. This would still be less than the County's significance threshold. Impacts would remain less than significant.

[4] Forest land (scrub), forest land (trees), cropland, grassland, wetlands, and other.

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3.7 Hazards and Hazardous Materials

This section describes the hazards and hazardous materials conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.7.1 Existing Conditions

Hazardous materials occur in every community, in relation to residential, commercial, industry, medical practices, research, transportation, construction, and other uses. As a result of natural events, system failures, and accidents (spills), hazardous materials have the potential to pose a risk to the environment and human health. A multitude of local, state, and federals laws exist to regulate the storage, use, handling, transportation and disposal of hazardous materials. To ensure public safety and heighten awareness of hazardous materials exposure risk, businesses and other entities that handle, store, transport, or use hazardous materials are required to file reports with appropriate authorities and maintain emergency response plans in the event of a hazardous materials release.

Dudek performed a regulatory agency records search for the project site and vicinity using the State Water Resources Control Board (SWRCB) GeoTracker database (SWRCB 2021) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2021). These lists are a compilation of information from various sources listing potential and confirmed hazardous waste and hazardous substances sites in California. There are no sites of potential concern listed on the DTSC EnviroStor database within 1 mile of the project site. There are also no potential sites with environmental concern listed on the SWRCB GeoTracker database within 0.25 miles of the project site; the only listed site within a quarter mile is a closed case on the opposite side of the freeway, approximately 850 feet north of the eastern terminus of the trail. Appendix F includes the EnviroStor and GeoTracker database maps of hazardous sites in the vicinity of the Study Area. The closest DTSC-listed sites include:

- Rincon del Mar Ranch – Bates Road (approximately 850 feet northeast of the eastern trail terminus). The case involved the spill of petroleum products, for which no remediation was required; case closed.
- Infrared Industries – 6307 Carpinteria Avenue (approximately 0.5 miles west of the western trail terminus) The case involved the release of TCE (solvent) to soil and shallow groundwater from an underground tank; the tank was removed along with contaminated soil, TCE concentrations in groundwater were below action levels; case closed.
- Vacant Lot – 6185 Carpinteria Avenue (approximately 0.75 miles west of the western trail terminus). There are no specifics provided for this case, but since it is a vacant lot it may have involved illegal dumping. No remediation was required for the incident, and the case was closed.
- Conoco Phillips Kittie Ballard Well Site (approximately 1 mile west of the western trail terminus). This case involved reported oil seeps from a previously abandoned oil well. The well was re-abandoned to current DOGGR standards in 2011, case closed.

As such, the project site has no known history of illicit dumping, oil well drilling, or release of hazardous materials, and has been highly engineered and extensively disturbed related to construction of US Highway 101 and the UPRR. Because the northern trail area (northward of the UPRR) is adjacent to US Highway 101, aerially deposited lead could occur in shallow soils, from the historic presence of lead as a gasoline additive affecting vehicle operations within the US Highway 101 alignment. No other hazardous waste or contaminants are anticipated to be present within the proposed Rincon Trail alignment.

3.7.2 Relevant Plans, Policies, and Ordinances

3.7.2.1 Federal

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act (RCRA). These laws provide for the "cradle to grave" regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The Department of Toxic Substances Control (DTSC) is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended the CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites; required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased state involvement in every phase of the Superfund program; increased the focus on human health problems posed by hazardous waste sites; encouraged greater citizen participation in making decisions on how sites should be cleaned up; and increased the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. Sections 301 through 312 of the Act are administered by EPA's Office of Emergency Management. EPA's Office of Information Analysis and Access implements the SARA Title III Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program (CalARP). As the Certified Unified Program Agency (CUPA) for the majority of the County, the Santa Barbara County Public Health Department, Environmental Health Services implements the CalARP program.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations, the Hazardous Materials Transportation Act. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. These agencies also govern permitting for hazardous materials transportation. The Hazardous Materials Transportation Act reflects laws passed by Congress as of January 2, 2006.

EPA Regional Screening Levels

The federal EPA provides regional screening levels for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). Residential Screening Levels (RSLs) are available on the EPA's website and provide a screening level calculation tool to assist risk assessors, remediation project managers, and others involved with risk assessment and decision making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment (HHRA) Note 3, which incorporates HERO recommendations and DTSC-modified screening levels (DTSC-SLs) based on review of the EPA RSLs. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended, and Related Authorities

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288), as amended (42 USC 5121–5206), and implementing regulations (Code of Federal Regulations, Title 44, Sections 206.31–206.48) provide the statutory framework for a presidential declaration of an emergency or a declaration of a major disaster. Such declarations open the way for a wide range of federal resources to be made available to assist in dealing with an emergency or major disaster. The Stafford Act structure for the declaration process reflects the fact that federal resources under this act supplement state and local resources for disaster relief and recovery. Except in the case of an emergency involving a subject area that is exclusively or preeminently in the federal purview, the governor of an affected state, or acting governor if the governor is not available, must request such a declaration by the president.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that: (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Stafford Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.

3.7.2.2 State

Government Code Section 65962.5(a), Cortese List

The Hazardous Waste and Substance Sites Cortese List is a planning document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the CalEPA to develop at least annually an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

California Unified Program for Management of Hazardous Waste and Materials

California Health and Safety Code (HSC), Division 20, Chapter 6.11, Sections 25404- 25404.9 Sections– Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Under the California Environmental Protection Agency (CalEPA), the Department of Toxic Substances Control (DTSC) and Enforcement and Emergency Response Program (EERP) administer the technical implementation of California's Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level (CalEPA 2021). Certified Unified Program Agencies (CUPAs) implement the hazardous waste and materials standards. This program was established under the amendments to the California HSC made by SB 1082 in 1994. The CUPA for the project area is the Santa Barbara County Public Health Department, Environmental Health Services.

Hazardous Waste Control Law

The DTSC regulates the generation, transportation, treatment, storage and disposal of hazardous waste under RCRA and the California Hazardous Waste Control Law (22 CCR 6.5). Both laws impose "cradle to grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment. CalEPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other CUPAs.

Aboveground and Underground Petroleum Storage Tanks

Title 22 California HSC, Division 20, Chapter 6.67, Sections 25270 to 25270.13 – Aboveground Petroleum Storage Act

This law applies if a facility is subject to Spill Prevention, Control and Countermeasure (SPCC) regulations under Title 40 U.S.C. Part 112, or if the facility has 10,000 gallons or more of petroleum in any or combination of Aboveground Storage Tanks (ASTs) and connecting pipes. If a facility exceeds these criteria, it must prepare a SPCC plan.

Low-Threat Underground Storage Tank (UST) Case Closure Policy

This policy applies to petroleum Underground Storage Tank (UST) sites subject to Chapter 6.7 of the Health and Safety Code. This policy establishes both general and media-specific criteria. If both the general and applicable media-specific criteria are satisfied, then the leaking UST case is generally considered to present a low threat to human health, safety and the environment. This policy recognizes, however, that even if all of the specified criteria in the policy are met, there may be unique attributes of the case or site-specific conditions that increase the risk associated with the residual petroleum constituents. In these cases, the regulatory agency overseeing corrective action at the site must identify the conditions that make case closure under the policy inappropriate.

Regional Water Boards and local agencies have been directed to review all cases in the petroleum UST Cleanup Program using the framework provided in this policy. These case reviews shall, at a minimum, include the following for each UST case:

1. Determination of whether or not each UST case meets the criteria in this policy or is otherwise appropriate for closure based on a site-specific analysis.
2. If the case does not satisfy the criteria in this policy or does not present a low-risk based upon a site-specific analysis, impediments to closure shall be identified.
3. Each case review shall be made publicly available on the State Water Resources Control Board's GeoTracker web site in a format acceptable to the Executive Director.

Title 27 of the California Code of Regulations, Solid Waste

Title 27 of the California Code of Regulations contains a waste classification system that applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management sites for treatment, storage, or disposal (27 CCR 2).

Human Health Risk Assessment Note 3 –DTSC-Modified Screening Levels (DTSC-SLs)

Human Health Risk Assessment (HHRA) Note Number 3 presents recommended screening levels (derived from the EPA RSLs using DTSC-modified exposure and toxicity factors) for constituents in soil, tap water, and ambient air. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Environmental Cleanup Levels

Environmental Screening Levels (ESLs) provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESLs were developed by staff at the San Francisco Bay Regional Water Quality Control Board; however, they are used throughout the state. While ESLs are not intended to establish policy or regulation, they can be used as a conservative screening level for sites with contamination. Other agencies in California currently use the ESLs (as opposed to RSLs). In general, the ESLs could be used at any site in the State of California, provided all stakeholders agree (SFBRWQCB 2020). In recent experience, regulatory agencies in various regions use ESLs as regulatory cleanup levels. The ESLs are not generally used at sites where the contamination is solely related to a leaking underground storage tank (LUST); those sites are instead subject to the Low-Threat Underground Storage Tank Closure Policy.

Senate Bill 1889, Accidental Release Prevention Law/CalARP Program

Senate Bill 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as “regulated substances” that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government, and private agencies. The plan is administered by Governor’s Office of Emergency Services (CalOES) and includes response to hazardous materials incidents. The CalOES coordinates the response of other agencies, including CalEPA, California Highway Patrol, California Department of Fish and Wildlife, and Regional Water Quality Control Board.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of Title 24 of the California Code of Regulations. It is created by the California Building Standards Commission and it is based on the International Fire Code (IFC) created by the

International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

California Emergency Services Act

This Act was adopted to establish the state's roles and responsibilities during human-made or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or the resources of the state. This Act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The act is activated after the following occurs: (1) a local declaration of emergency; or (2) the CalEMA gives concurrence with the local declaration, or the Governor issues a Proclamation of a State Emergency. Once the Natural Disaster Assistance Act is activated, local government is eligible for certain types of assistance, depending upon the specific declaration or proclamation issued.

Title 14, Division 1.5 of the California Code of Regulations

California Code of Regulations, Title 14, Division 1.5 establishes the regulations for the California Department of Forestry and Fire Protection (CAL FIRE) and is applicable in all State Responsibility Areas (SRAs)—areas where CAL FIRE is responsible for wildfire protection. Any development in SRAs must comply with these regulations. Among other things, Title 14 establishes minimum standards for emergency access, fuel modification, setbacks to property line, signage, and water supply.

California Public Resources Code Sections 4201–4204

These sections of the California Public Resources Code require the California Department of Forestry to classify all SRAs into Fire Hazard Severity Zones. The purpose of this code is to provide classification of lands within SRAs in accordance with the severity of fire hazard present for the purpose of identifying measures to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

3.7.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The Safety Element of the General Plan/Local Coastal Land Use Plan (City of Carpinteria 2003) addresses physical hazards related to earthquakes, fire, flooding, hazardous material uses and transportation, soil and slope stability hazards.

Objective S-6 Minimize the potential risks and reduce the loss of life, property and the economic and social dislocations resulting from hazardous materials accidents at large industrial facilities, at facilities handling acutely hazardous materials, and along transportation corridors.

S-6a The City should maintain lists of facilities in the planning area that involve the use, storage, and/or transportation of hazardous materials.

S-6b City policies concerning the use, storage, transportation and disposal of hazardous materials, and regarding underground or above-ground storage tanks shall reflect the County of Santa Barbara and the State Regional Water Quality Control Board policies and requirements and shall ensure that the use, storage, transportation and disposal of hazardous materials does not result in hazardous discharge or runoff.

S-6c The City should consider the presence of large industrial facilities, facilities that handle acutely hazardous materials or pesticides, and railroad and utilities right-of-ways in land use planning.

S-6d The City shall support protective measures against the spillage of hazardous materials, including crude oil, gas and petroleum products, and shall support effective containment and cleanup facilities and procedures for accidental spills that occur.

S-6e Where feasible, new hazardous industrial development shall be located away from existing developed areas.

Santa Barbara County Comprehensive Plan – Hazardous Waste Element

The Hazardous Waste Element of the Santa Barbara County Comprehensive Plan (County of Santa Barbara 2009) provides goals and policies for hazardous waste generated within the County. Goals and policies that could be considered applicable to the proposed project include materials storage and contaminated sites, as presented below.

Goal 9-1 To protect the public health and safety and the environment from risks posed by improper storage of hazardous materials and hazardous waste.

Policies **9-1** The County and cities shall encourage the proper storage of hazardous materials and hazardous waste through continued inspection efforts and public education regarding proper storage methods and regulations.

Goal 10-1 To protect public health and safety and the environment from risks due to the presence of abandoned or contaminated sites.

Policies **10-1** The County and cities should work with other involved agencies to establish a coordinated interagency effort for identification, regulation, mitigation, and notification of contaminated sites.

10-2 The County and cities in conjunction with the State Department of Health Services shall encourage on-site treatment and remediation to reduce the transport of hazardous waste from contaminated sites.

3.7.3 Thresholds of Significance

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

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous material.
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
g) Result in cumulatively considerable impacts to hazards and hazardous materials.
h) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

3.7.4 Impact Analysis

The following analysis of potential project impacts is provided, based upon each of the above identified significance thresholds.

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

The use/operation of the proposed shared-use path and trail amenities would not involve the use of, nor generate, hazardous materials. Therefore, no impacts with regard to the transport, use, accidental release or disposal of hazardous materials would occur. **No impact** would occur*.*

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 proposed project would require heavy construction equipment, which involves the use of hydrocarbon fuels and lubricants that are considered hazardous materials, Concrete is considered a hazardous material until it cures, and is included in the project construction. Paint or other surface coatings are also considered hazardous materials, until they are fully dried; the bridge and certain fencing elements may involve paint application on site. During construction, hydrocarbon fuels and lubricants, paints and concrete may inadvertently enter the stormwater drainage system. A Storm Water Pollution Prevention Plan (SWPPP) covering

water quality protection during the construction phase of the project would be required to be prepared and implemented by the applicant pursuant to the National Pollutant Discharge Elimination System (NPDES) State Construction Activities Storm Water General Permit.. Accordingly, project hazardous materials impacts upon water quality from accidental releases during construction could be potentially significant. **Mitigation Measure (MM) WAT-2** would reduce impacts to **less than significant with mitigation.**

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

No existing or proposed public schools are located within a quarter mile of the project site. Additionally, no hazardous materials would be kept on site once the proposed project is operational. Therefore, there would be no impact to adjacent schools from the use or handling of any hazardous materials on the project site. **No impact** would occur.

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

The project site is not included on a list of hazardous materials sites (refer to Section 3.7.1, Existing Conditions). Therefore, the project does not have the potential to expose people to a significant risk as a result of a known hazardous materials site. However, the northern portion of the trail alignment is immediately adjacent to the US Highway 101 alignment, and therefore aerially deposited lead (ADL) could occur in shallow soils, from the historic presence of lead as a gasoline additive affecting vehicle operations within the US Highway 101 alignment. Because of proposed grading for the trail, surface soils that could potentially contain ADL are likely to be removed, and transported off the site. However, some soils containing ADL could be used as fill for the project, or could be used off site as fill in areas where the public could have exposure to the soils. Consequently, impacts from ADL containing soil could be potentially significant. **MM-HAZ-1** would reduce impacts to **less than significant with mitigation**.

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

The project site is not located within the airport land use plan for any public use airport and is also not within two miles of a public airport. The closest public airport to the project site is the Santa Barbara municipal airport, located approximately 30 miles to the northwest. **No impact** would occur.

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

The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Access to the proposed trail would be provided via the existing unimproved parking lot at the western end of the trail that connects to Carpinteria Avenue and also at Rincon Beach County Park from Bates Road, both of which are public streets that could be accessed by emergency vehicles and personnel. The Carpinteria-Summerland Fire Protection District will review the proposed project to ensure no interference with emergency response or evacuation would occur during construction, as potentially related to truck traffic on area roadways. The proposed project is designed to correct unsafe conditions such

as those that exist in the current alignment of the Pacific Coast Bikeway along US Highway 101 and the common practice of trespassing along the railroad corridor to access Rincon Beach County Park from the City of Carpinteria, thereby, reducing potential emergency events. Consequently, **no impact** would occur.

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

According to the City of Carpinteria's General Plan/Coastal Plan Fire Hazards Zones Map, the project alignment is located within a moderate fire hazard area (City of Carpinteria 2003). According to the Santa Barbara County's Fire Protection Districts, High Fire Hazard Areas and Flood Hazard Areas Map, the proposed project is not located within a fire hazard area (County of Santa Barbara 2017. The proposed project would not involve the construction of buildings or introduce substantial numbers of people into the area. The proposed project is designed to prevent unwarranted fire hazards to the land and public safety through vegetation control and use of native plant species along the alignment and within the proposed parking area. **No impact** would occur.

h) Would the project result in cumulatively considerable impacts to hazards and hazardous materials?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to hazardous materials/safety impacts. However, based on the analysis above, and with adherence to applicable Objectives and Policies found in the City and County's General Plan/Local Coastal Land Use Plans, the project with required mitigation incorporated is not expected to result in any site-specific public health risk or hazard. The project's contribution to cumulative hazards impacts would not be considerable.

3.7.5 Mitigation

The project would require the implementation of **Mitigation Measure (MM) HAZ-1** to reduce impacts from the potential exposure of the public to soils containing aerially deposited lead. The project would also require the implementation of **MM-WAT-2** (refer to Section 3.8, Hydrology and Water Quality) to reduce impacts upon surface water quality from accidental release of hazardous materials during construction.

Required Mitigation Measures

MM-HAZ-1 Aerially Deposited Lead (ADL). Surface soils within the trail alignment segment north of the UPRR corridor shall be tested for potential ADL presence to determine if such soils may be used as fill, or must be disposed in a properly licensed landfill. Using the risk based screening levels developed by California Office of Environmental Health Hazard Assessment (OEHHA), excavated soils with a lead concentration less than or equal to 80 mg/kg total lead (analyzed by USEPA Method 6010 or 6020) would be acceptable for reuse without restrictions, including as fill material within the Rincon Trail project. Excavated soils that are considered a California hazardous waste (total lead concentration greater than or equal to 1,000 mg/kg or a soluble lead concentration greater than or equal to 5 milligrams per liter [mg/L] as determined by the California Waste Extraction Test [CAWet]) or are a RCRA hazardous waste and must be disposed of in a Class I hazardous waste landfill. Excavated soils with lead concentrations below 1,000 mg/kg but above 80 mg/kg total lead may be eligible for reuse with specific restrictions to reduce or eliminate exposure, with prior written approval from DTSC, or may be disposed of at an appropriately permitted landfill.

Plan Requirements: ADL testing requirements and soil re-use restrictions according to identified ADL concentration shall be shown on grading and building plans. Since excess soil material would be generated through proposed grading activities, soils containing greater than 80 mg/kg total lead shall

not be used as fill material for the project but shall be exported off site. Soil containing total lead greater than 1,000 mg/kg shall be disposed in a Class I hazardous waste landfill. ***Timing***: Condition shall be adhered to throughout all grading and construction activities. ***Monitoring***: City of Carpinteria and County staff shall ensure measures are on plans. City and County Grading Inspectors shall spot check and ensure compliance on site.

3.7.6 Level of Significance After Mitigation

With incorporation of **MM-HAZ-1** to address the potential for ADL to be present in shallow soils, and incorporation of **MM-WAT-2** (refer to Section 3.8) to reduce impacts upon surface water quality from accidental release of hazardous materials during construction, residual impacts related to hazardous materials would be less than significant.

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3.8 Hydrology and Water Quality

This section describes the hydrology and water quality conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project. This section is based partially upon a drainage analysis prepared by Bengal Engineers, Drainage System Feasibility Discussion: The Rincon Multi-Use Trail, City of Carpinteria, which is included as Appendix G of this Environmental Impact Report.

3.8.1 Existing Conditions

Surface Drainage / Storm Water Run-off

The proposed trail route is located along areas that have been subject to fill placement, abandoned roadways, or old terraced road and rail cuts; the trail would be exclusively located within area that has been subject to artificial landform modification over the years. Please refer to Section 3.5 (Geology & Soils) for a detailed description of landform modification that has occurred within the trail alignment. A small unsanctioned trail exists in some areas of the proposed trail, including the portion of the proposed trail from the railroad crossing to the Rincon Beach County Park parking lot. At both ends of the trail are pre-existing parking areas; Rincon Beach County Park has a paved lot and at Carpinteria Avenue there is an existing dirt lot which would continue to provide informal parking for the proposed project.

The proposed Carpinteria Avenue trail head and parking lot is currently unimproved with an area crowned in the approximate center of the lot for drainage purposes. It is anticipated that the majority of the storm water runoff from the lot enters Highway 150, and then drains onto the southbound freeway on ramp and ultimately collects into the freeway drainage system; drainage from this freeway sub-area is currently conveyed by a storm drain which outlets at the beach. The remaining runoff likely enters Carpinteria Avenue and drains to the southern edge curb line, then west until it enters at a drop inlet located within the curb.

The Rincon Beach County Park parking lot has three visible drainage points. An infiltration area is located along the south side of the parking lot and serves the westernmost portion of the parking area, although most of the runoff from this area enters a drop inlet located at the western terminus of the parking area, which continues draining to the beach below. The eastern portion of the parking area drains from the County property onto Bates Road, where it enters a drop inlet located just north of the park entrance on the west side of the road, and likely into Rincon Creek through the existing storm drain system.

The majority of the length of proposed trail is outside of the City of Carpinteria's and Santa Barbara County's respective 2013 Statewide Phase II Small Municipal Separate Storm Sewer (MS4) General Permit (2013 General Permit) boundaries, and thus the majority of the project is exempt from the Post Construction Requirements (PCRs) of the 2013 General Permit. Because the project is not regulated by the 2013 General Permit and PCRs therein, the project may not fully avoid potential water quality impacts unless it achieves compliance with active construction and post-construction requirements of the Statewide Construction General Permit (CGP).

Flooding

The proposed alignment is not located within a 100-year flood hazard zone (FEMA 2019), nor is it within a Tsunami Inundation Zone (CDOC 2009).

Sea Level Rise (SLR)

Sea level rise is anticipated to occur because of an increase in the average oceanic temperatures globally, leading to the melting of polar ice caps. Some of the negative effects of sea level rise include flooding of low elevation areas that are currently above mean sea level, and increased erosion rates within areas along the ocean. The release of greenhouse gas (GHG) emissions is a key factor in the potential warming of the atmosphere and ocean temperature increases, and therefore projections of sea level rise rely heavily upon the predicted GHG emissions in the coming decades, on a world-wide basis. This methodology has led to the identification of a range for the possible elevation increases of sea levels at future reference time periods. For the local region, the issue of sea level rise has been addressed in several studies including *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan* and *City of Carpinteria's Sea Level Rise Vulnerability Assessment* (SLRVA) (Carpinteria 2019).

The above studies of local sea rise potential identify a low, medium, high and extreme (worst-case highest) increase in sea level for the planning year horizons of 2030, 2060, and 2100, which are based upon the range for global GHG emissions in the same target years. Table 3.8-1 summarizes the sea level elevation increases using the "high GHG emissions" scenario for each target year.

Table 3.8-1. Sea Level Rise Projections for Carpinteria Coastline

Projected Horizon Year/Time	Sea Level Rise (inches/feet)	Probability of Occurring in Projected Year [1]
2030	10.2 inches/ ~1 foot	<0.5%
2060	27.2 inches/ ~2 feet	~2%
2100	60.2 inches/ ~5 feet	~2%

Source: City of Carpinteria 2019.

[1] The range of probabilities relate to scenarios in future greenhouse gas (GHG) emissions as well as sea level rise uncertainties largely associated with the rate of global ice sheet melt.

The range in predicted sea level rise for Year 2100 is a low of 2 feet up to an extreme (worst-case) of 10 feet (Carpinteria 2019). Using the "high GHG emissions" scenario, the Carpinteria SLRVA mapped the extent of sea level rise hazard for each of the target assessment years. The portion of the proposed Carpinteria Rincon Trail on the north side of the UPRR alignment is located outside of the sea level rise hazard zone through Year 2100. The portion of the proposed Carpinteria Rincon Trail on the south side of the UPRR alignment is located right at the boundary of the Year 2030 / Year 2060 hazard zones (Carpinteria 2019). The County of Santa Barbara sea level rise mapping is not as detailed but indicates that the Rincon Beach County Park facilities could be inundated by approximately Year 2060 (Santa Barbara County 2017). The 2100 hazard zone boundary extends up from the ocean to the western edge of US Highway 101 at the Wave Overhead crossing of the UPRR alignment and expands further east to include the entire US Highway 101 corridor at approximately the western end of the Rincon Beach County Park parking lot (Carpinteria 2019). The location of the southern portion of the trail within the sea level rise hazard zone indicates there would be the potential for accelerated erosion and increased sea cliff retreat to affect the southern trail segments. US Highway 101 and the coastal bike route southward from Rincon Point Road/Bates Road could become permanently inundated by 2100 absent engineering solutions, according to this mapping (Carpinteria 2019).

3.8.2 Relevant Plans, Policies, and Ordinances

3.8.2.1 Federal

Clean Water Act

The federal CWA is the primary surface water protection legislation throughout the country. By employing a variety of regulatory and nonregulatory tools, including establishing water quality standards, issuing permits, monitoring discharges, and managing polluted runoff, the CWA aims to restore and maintain the chemical, physical, and biological integrity of surface waters to support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." The CWA regulates both the pollutant content of point-source discharges, as well as addressing polluted runoff (nonpoint-sources).

Section 401

CWA Section 401 requires that state water quality standards be met and that construction, dredging, and disposal activities not cause concentrations of chemicals in the water column that exceed state standards. CWA Section 401 requires a water quality certification from the SWRCB (as delegated to RWQCBs).

Section 402

CWA Section 402 states that discharge of pollutants to waters of the United States is unlawful unless the discharge is authorized and in compliance with an NPDES permit. The USEPA has granted the state primacy in administering and enforcing the provisions of the CWA and the NPDES Program. The NPDES permit program is the primary federal program that regulates point-source and non-point-source discharges to the waters of the United States (see also NPDES Program below).

National Flood Insurance Program

FEMA's National Flood Insurance Program includes a flood hazard mapping program, in which FEMA identifies flood hazards and assesses flood risks. Under this program, FEMA produces Flood Insurance Rate Maps (FIRMs) which delineates flood risk areas and risk levels. Areas identified as at risk for flooding on the FIRMs are referred to as Special Flood Hazard Areas, which are those areas at risk of the 100-year flood (1% annual chance of flooding). It also delineates areas that are in moderate flood hazard areas, or those areas between a 0.2% annual chance of flooding (500-year flood) and 1.0% chance of flooding (a Special Flood Hazard Area). Special Flood Hazard Areas are further divided into zones, which provide information on the degree of flooding within the risk area, including average depth of flooding.

3.8.2.2 State

Porter-Cologne Act

The Porter-Cologne Act) (California Water Code section 13000 et seq.) is the primary law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of

water. The Porter-Cologne Act applies to surface waters, wetlands, groundwater, and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act, the policy of the state is as follows:

- That the quality of all the waters of the State shall be protected,
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason, and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine RWQCBs (based on hydrogeologic barriers) and the SWRCB, who are charged with implementing its provisions, have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions in each of nine hydrologic regions.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB and RWQCBs are responsible for preserving, enhancing, and restoring "the quality of California's water resources and ensuring their proper allocation and efficient use for the benefit of present and future generations." The SWRCB develops statewide regulations governing water use and point-source and nonpoint-source pollutant discharge, while the RWQCBs work in smaller regions throughout the state to implement SWRCB policies and regulations. RWQCBs also establish additional region- and area-specific regulations and policies to achieve water quality goals under the CWA and the Porter-Cologne Act.

California Ocean Plan

The SWRCB adopted the California Ocean Plan in 1972 and amended it recently in 2015 and again in 2019 (SWRCB 2019). The Ocean Plan provides control for the discharge of waste to ocean waters and ensures the protection of beneficial uses of ocean waters. The Ocean Plan sets forth water quality objectives (WQOs) for protection of marine aquatic life and sets forth objectives for bacterial, physical, chemical, and biological characteristics for ocean waters. Compliance is determined from samples collected within the waste field where initial dilution is completed. In cases where there is conflict between limitations set forth in the Ocean Plan and those set forth in other federal or state legislation, the more stringent limitations apply. The 2019 update of the Ocean Plan includes an amendment to address issues associated with desalination facilities (Desalination Amendment).

Water Quality Control Plan for the Central Coast Basin

The City of Carpinteria and County of Santa Barbara are within the jurisdiction of the Central Coast RWQCB. This region's Water Quality Control Plan for the Central Coast Basin (Basin Plan) (RWQCB 2017) details the existing and potential beneficial surface and groundwater uses in the region, as well as water quality objectives and implementation measures throughout the basin. The Basin Plan includes water quality objectives and implementation measures for water quality parameters, including the following:

Ocean Waters

- Dissolved Oxygen
- pH
- Radioactivity

National Pollutant Discharge Elimination System Program

General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities

In California, the SWRCB administers regulations promulgated by the USEPA (55 CFR 47990) requiring the permitting of stormwater-generated discharges under the NPDES. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order 2009-0009 DWQ amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES Permit CAS000002). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the submittal of a Notice of Intent) and the development and implementation of an SWPPP. The SWPPP should contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for non-visible pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

3.8.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City of Carpinteria's General Plan/Local Coastal Land Use Plan Safety Element includes the following objectives and policies relevant to flood hazards and the proposed project (City of Carpinteria 2003):

Objective S-4 Minimize the potential risks and reduce the loss of life, property and the economic and social dislocations resulting from flooding.

Policy S-4a All new development proposed in the 100-year floodplain must adhere to the County of Santa Barbara Floodplain Management Ordinance, Chapter 15-A of the County Code.

Policy S-4b The development of critical facilities within the 100-year floodplain should be discouraged.

Policy S-4c Setbacks from flood control channels, as determined by the Santa Barbara County Flood Control District, will be required to allow access to maintain and enable proper operation of the channels.

Policy S4-e The City shall establish setback guidelines for land use planning purposes along natural creek, river, or stream floodplains, and identify and pursue opportunities to eliminate existing concrete channels and/or banking from creeks, rivers, or streams

The General Plan/Local Coastal Land Use Plan Open Space, Recreation and Conservation Element includes the following objectives and policies relevant to hydrology and water quality:

Objective OSC-6 Preserve the natural environmental qualities of creekways and protect riparian habitat.

Policy OSC-6d Carry out and maintain all permitted construction and grading within stream corridors in such a manner so as to minimize impacts on biological resources and water quality such as increased runoff, creek bank erosion, sedimentation, biochemical degradation, or thermal pollution.

Policy OSC-6e Natural drainage patterns and runoff rates and volumes shall be preserved to the greatest degree feasible by minimizing changes to natural topography, and minimizing the areas of impervious surfaces created by new development.

Policy OSC-6f All development shall be evaluated for potential adverse impacts to water quality and shall consider Site Design, Source Control and Treatment Control BMPs in order to minimize polluted runoff and water quality impacts resulting from the development. In order to maximize the reduction of water quality impacts, BMPs should be incorporated into the project design in the following progression: (1) Site Design BMPs, (2) Source Control BMPs, and (3) Treatment Control BMPs.

Objective OSC-10 Conserve all water resources, and protect the quality of water

Policy OSC-10a Minimize the erosion and contamination of beaches. Minimize the sedimentation, channelization and contamination of surface water bodies.

Policy OSC-10c Degradation of the water quality of groundwater basins, nearby streams or wetlands, or any other waterbody shall not result from development. Pollutants such as sediments, litter, metals, nutrients, chemicals, fuels or other petroleum hydrocarbons, lubricants, raw sewage, organic matter and other harmful waste shall not be discharged into or alongside any waterbody during or after construction.

Santa Barbara County Coastal Land Use Plan

The County's Coastal Land Use Plan applies to the coastal areas of the County, including the project site. The following policy of the Coastal Land Use Plan is relevant to the Proposed Project related to hydrology and water quality (County of Santa Barbara 2019):

Policy 3-12 Permitted development shall not cause or contribute to flood hazards or lead to expenditure of public funds for flood control works, i.e., dams, stream channelizations, etc.

3.8.3 Thresholds of Significance

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

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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.

   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.

f) Result in cumulatively considerable hydrological or water quality impacts.

3.8.3.1 Local Significance Thresholds

The City of Carpinteria's Guidelines for the Implementation of the California Environmental Quality Act of 1970, as Amended (1997), states that the following conditions or impacts shall be considered significant:

Hydrology

Flooding

a) Significant impacts result if the project would impose flood hazards on other properties.

b) The Municipal Code prohibits development within areas of special flood hazard except under certain circumstances. The policy requires approval by the Floodplain Administrator before construction, development or alteration begins within any area of special flood hazard.

If the project would result in increased runoff:

a) Impacts on hydrologic conditions may be significant because the area available for aquifer recharge is reduced. This may impact well water supplies.

b) There may be significant impacts on stream hydrology if uncontrolled runoff results in erosion and subsequent sedimentation of downstream water bodies.

   Threshold:

   - moderate to large-scale projects where grading would occur during rainy season; or
   - projects proximate to bodies of water or drainageways.

If project would result in modifications to existing drainage patterns:

a) There may be significant impacts on biological communities if drainage patterns are changed.
Threshold:

- Projects where drainage patterns are influenced such that existing vegetation would decline because long-or short-term soil-plant-water relationships would no longer meet habitat requirements.
- Projects which would result in substantial changes to streamflow velocities.

Water Quality

Pollution/Contamination

a) Impacts on water quality may result in significant human health and safety impacts.
Threshold:

- Projects which would generate any amount of highly noxious substance.
- Projects which would generate large amounts of substances which in small amounts are insignificant but are cumulatively hazardous.
- Projects that would result in the deterioration of the quality of a drinking water source.

b) Impacts on water quality may have significant impacts on biological communities.
Threshold:

- Projects which would generate, or result in the accumulation of substances which affect health, or cause genetic defects of wildlife either by direct physical contact with contaminated water, or by water quality changes which cause decline in riparian or lacustrine vegetation which provide wildlife habitat.

c) Project would be significant if it would result in erosion and subsequent sedimentation of water bodies:
Threshold:

- moderate to large-scale grading project (>2,000 cubic yards per graded acre)
- projects that results in loss of vegetation on slopes (e.g., brush management measures).

3.8.4 Impact Analysis

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

Because the majority of the length of proposed trail is outside of the City of Carpinteria's and Santa Barbara County's respective 2013 Statewide Phase II Small Municipal Separate Storm Sewer (MS4) General Permit (2013 General Permit) boundaries, the majority of the project is exempt from the Post Construction Requirements (PCRs) of the 2013 General Permit. Nonetheless, the proposed project has been designed to reduce or minimize the potential for adverse impacts on stormwater quality. The proposed trail would result in approximately 2,800 linear feet (or 1.0 acre) of impermeable surfaces (concrete) but would also include native restoration plantings or hydro-seed application at graded areas along the alignment. Native plantings or the

application of hydro-seed would stabilize slope areas to minimize soil erosion and avoid sediment-related water quality impacts. The re-contouring of existing manufactured slopes to employ a shallower slope angle, revegetation of project slopes, and bench-work to intercept sheet flow across extensive slope faces are the principal project design components intended to ensure the avoidance of water quality impacts. In addition, trail use would be limited to pedestrians and cyclists, motor vehicles would be prohibited except for emergency response or infrequent maintenance activities. Consequently, petroleum distillate contaminants associated with many transportation facilities would not be associated with the proposed mixed-use trail. The use of the trail by pets may lead to pet waste contamination of water runoff. Dog feces, if left behind, can contribute to high bacteria counts in runoff water. However, pet waste receptacles with bags will be provided at the trailheads within the parking areas to encourage clean-up by pet owners and trail users. Because of the potential for sediment and other impurities to affect stormwater quality, the project's long-term impacts to water quality would be potentially significant. **Mitigation Measure (MM) WAT-4**, **MM-WAT-5**, and **MM-WAT-6** are intended to address these long-term water quality impacts and are required to be incorporated.

The proposed project must also meet the construction-related standards set out in the County's and City's Storm Water Management Plans. During construction, soil, dust, paints and concrete may inadvertently enter the stormwater drainage system. A Stormwater Pollution Prevention Plan (SWPPP) covering water quality protection during the construction phase of the project would be required to be prepared and implemented by the applicant pursuant to the National Pollutant Discharge Elimination System (NPDES) State Construction Activities Storm Water General Permit. The General Permit, which is implemented by the State Water Resources Control Board, is required for projects disturbing one acre or more of soil. The SWPPP is required to include BMPs to be implemented during construction to control the discharge of materials from the site, and may include temporary retention basins, straw bales, sand bagging, mulching, erosion control blankets or soil stabilizers. Standard erosion control measures, as identified below, would ensure that the project does not have the potential to result in substantial soil erosion affecting water resources. Accordingly, the project would result in water quality impacts that are significant without mitigation. **MM-WAT-1, MM-WAT-2** and **MM-WAT-3** are intended to reduce these short-term water quality impacts to less than significant levels and are required to be incorporated. **Impacts would be less than significant with mitigation incorporated.**

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?

The project would not significantly deplete groundwater supplies or interfere substantially with groundwater recharge. Given the relatively small size of the alignment (approximately 1.0 acre of trail surface) and the use of native vegetation restoration where feasible, the project would not significantly interfere with natural groundwater recharge. With respect to groundwater depletion, no new water supply would be required to serve the proposed trail use; native vegetation employed for biological restoration and project landscaping would not require irrigation following an initial grow-in period. Cut and fill areas are typically well drained with a very rapid surface runoff (USDA 2019) which will be addressed through project design features and standard stormwater and erosion control measures to ensure no adverse effects on existing groundwater supplies will occur from project implementation. The project's impact on groundwater supplies would be **less than significant**

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on or off-site?

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site?

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?

iv. impede or redirect flood flows?

The project would moderately alter the existing drainage patterns of the site, via regrading of project slopes and short-term removal of vegetation, as well as through introduction of the impervious trail surface (approximately 1 acre of new impervious surface). Increased stormwater runoff and erosion potential during construction and until new vegetation is established are addressed under **MM-WAT-1, MM-WAT-2,** and **MM-WAT-3**. Long-term stormwater runoff from the trail surface would be collected by a concrete v-ditch adjacent to the trail, and released through a series of short length storm drains with discharge along the adjacent beach. The provision of project-specific storm drains would accommodate the storm runoff volumes anticipated from the project's impervious surfaces, and also avoid directing stormwater to existing public storm drain systems in the project vicinity that could lack surplus capacity to accommodate the project. Release of project storm drainage along the beach would not result in substantial erosion, as the introduction of impervious surface would be minimal compared to the overall project drainage area and the trail drainage will be divided into 6 separate outlets to minimize the discharge volume from any of the outlets. Illustration 3.8-1 illustrates these 6 outlets, three exist (blue color) and three would be new (magenta).

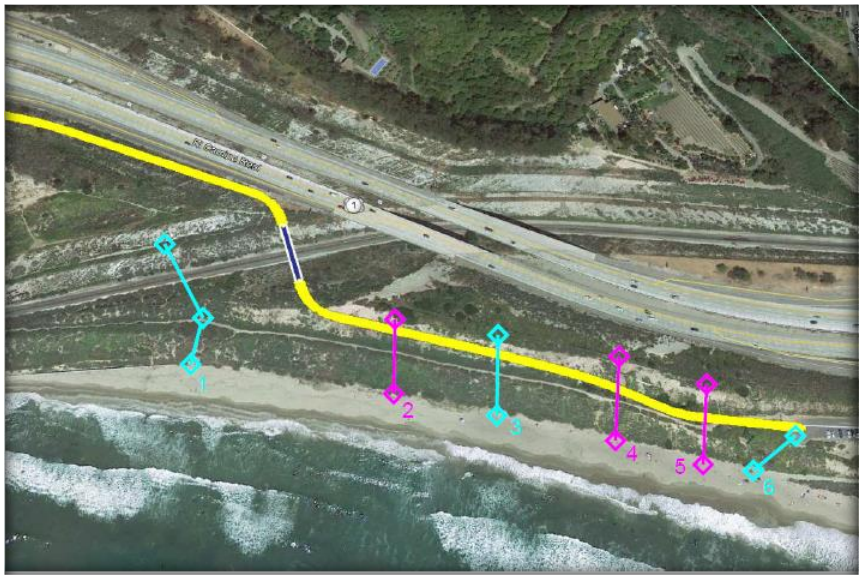
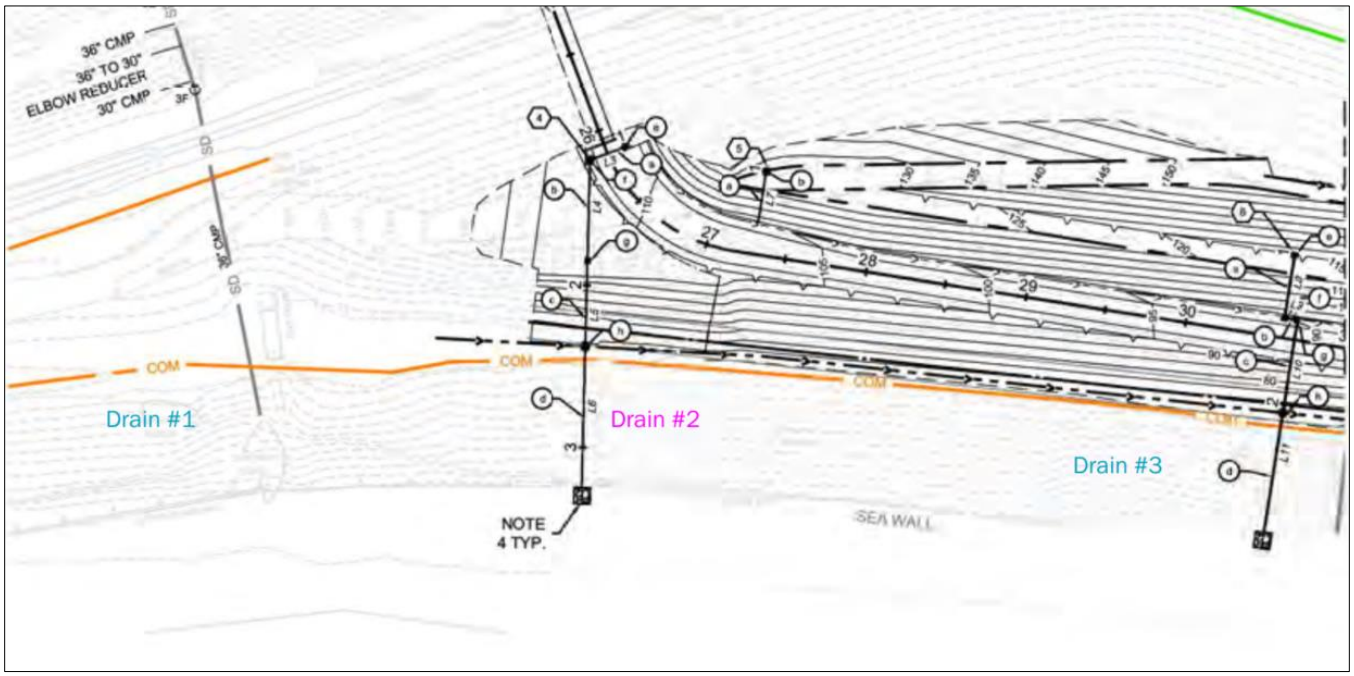


Illustration 3.8-1 Major Storm Drainage Components of the Project

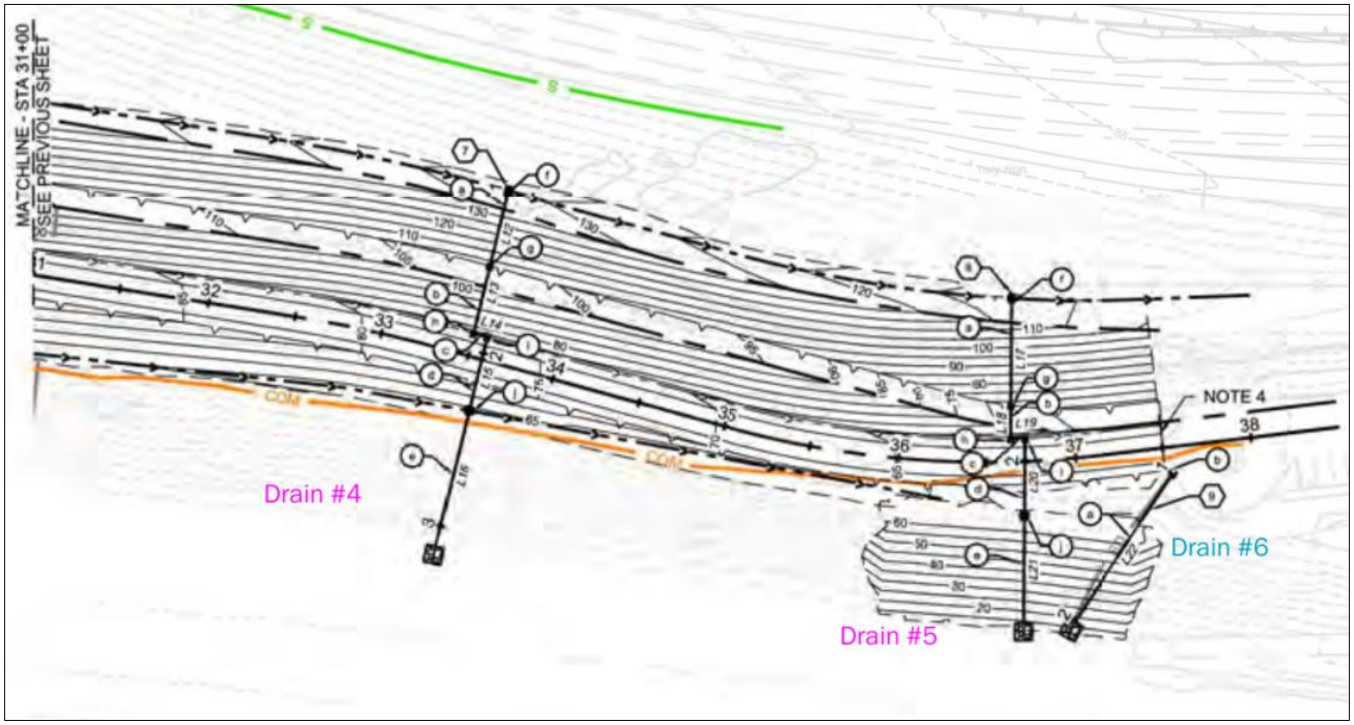
SOURCE: Bengal Engineering

Illustrations 3.8-2 and 3.8-3 provide plan sheet excerpts of the proposed drainage system outlets, with connection to other drainage conveyance elements.



SOURCE: Bengal Engineering

Illustration 3.8-2 Design Details for Storm Drain Outlets #1 - #3



SOURCE: Bengal Engineering

Illustration 3.8-3 Design Details for Storm Drain Outlets #4 - #6

The proposed storm drain system includes concrete v-ditch for collection and conveyance of runoff water, drop inlets connecting to vertical drainpipes, and outlets at the beach elevation. The concrete v-ditch components would be durable, and not prone to weathering or failure over time. The vertical drains are proposed to be composed of a 12-inch diameter corrugated metal pipe. The pipe would be buried to cross beneath the trail section and would descend partly down the bluff face. However, in order to allow visual access for inspection of the pipe integrity, the lower portion of the storm drainpipe would be mounted on the surface of the slope/bluff face. The corrugated metal material was selected for weight consideration and as a superior material to PVC for withstanding damage from fire or sun exposure. However, the metal is prone to rust or corrosion, with the potential for collapse or failure over time. Leaks from the vertical drains would contribute to erosion of the bluff face, failure of a vertical storm drain could lead to significant erosion of the bluff face. The storm drains would be installed by the project, **MM-WAT-5** requires periodic inspection and maintenance of the storm drains in perpetuity to prevent failure of such facilities. Accordingly, the project's impacts on existing drainage patterns and storm drain systems would be potentially significant. Incorporation of **MM-WAT-5** would reduce impacts to **less than significant with mitigation**.

The proposed project does not include housing units or habitable structures other than minor trail amenities and ancillary support features, such as the proposed pedestrian bridge over the UPRR corridor. Furthermore, according to the current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the area (Panel 06083C1438H), the project is not located within a 100-year or a 500-year flood boundary (FEMA 2019). According to the Santa Barbara County's Fire Protection Districts, High Fire Hazard Areas and Flood Hazard Areas Map, the proposed project is not located within a 100-year flood hazard overlay (County of Santa Barbara 2017). The project alignment would not be located in the vicinity of a levee or dam.

The bluff face portion of the project south of the UPRR corridor is identified in both the City of Carpinteria's Sea Level Rise Vulnerability Assessment and the County of Santa Barbara's Vulnerability Assessment as being an area expected to be susceptible to erosional impacts as a result of sea level rise, which could reach up to a worst-case maximum of 10 feet by year 2100 (City of Carpinteria 2019). In fact, the erosion hazard limits associated with sea level rise in year 2100 extend to US Highway 101, in the areas just east of the UPRR undercrossing of US Highway 101 (City of Carpinteria 2019). Using the "high GHG emissions" scenario, the alignment of the trail south of the UPRR crossing generally follows the boundary between the Year 2030 hazard area and the Year 2060 hazard area. The drainage system outlets infrastructure would be located within the Year 2030 hazard area, on the ocean side of the trail. Based upon the "high GHG emissions:" the probability that sea level rise would reach 1 foot by the year 2030 is 0.5%; the probability it will reach 2 feet by 2060 is 2%. With sea level one to two feet higher, the bottom of the storm drain outlets could be submerged at times, and the face of the bluff adjacent to the drains could experience accelerated erosion. Some additional maintenance may be required to replace corroded elements at the bottom of the drain outlets or to re-anchor the lower end of the drain outlets to the bluff face. However, wholesale replacement of the bluff-face vertical down drain portions of the storm drain system because of sea level rise damage is not anticipated to be required even by the Year 2060, and based on the "high GHG emissions" estimate. Similarly, the trail itself would not be directly threatened by the 2-foot sea level rise predicted by 2060, which has only a 2% calculated probability of occurrence.

By the Year 2100, there is a 2% probability of a 5-foot rise in sea level elevation along the coast adjacent to Carpinteria Bluffs and Rincon Point using the "high GHG emissions" scenario (City of Carpinteria 2019). With this magnitude of sea level rise, the erosion hazard zone would extend from the ocean up

to the US Highway 101 corridor, east (or south) of the UPRR crossing, which would envelop the entire southern portion of the trail alignment and the Rincon Beach County Park facilities. Accelerated erosion would primarily result from wave action superimposed on the higher elevation sea level surface, jeopardizing the base area of the existing coastal bluff/sea cliff. Bluff retreat/erosion rates for the Monterey formation in southern Santa Barbara County average approximately ½ foot per year (Santa Barbara County 2017); however, the anticipated acceleration of bluff retreat rates from sea level rise have not been quantified.

The proposed trail is set back from the base of the bluffs by a distance ranging between 60 and 100 feet horizontally. Even if the bluff retreat rates were to double from the influence of sea level rise (i.e., 1 foot per year), the closest portion of the trail to the base of the existing sea cliff would represent a horizontal distance equivalent to 60 years of erosion. While storm drain outlets on the bluff face may need to be periodically repaired or replaced in this 60-year period, the trail itself likely would not be threatened within this timeframe. For transportation infrastructure, a useful life of 50-75 years is typically employed (50 years for pavement, 75 years for bridges, Caltrans 2018). Thus, even with accelerated erosion of the bluff face caused by coastal flooding (i.e., greater wave uprush or more frequent inundation of the bluff base), the alignment of the trail south of the UPRR corridor is not anticipated to be impacted by sea level rise or exacerbated coastal flooding over the useful life of the project. In addition, recommendations prescribed in the geotechnical report (Bengal 2019) for the slope created above and below the trail bench would increase the stability of these slopes and reduce the existing erosion rates for the bluff faces along the southern trail alignment, which could partially offset the predicted acceleration of erosion rates associated with sea level rise. **No flood hazard impacts** would occur.

The City of Carpinteria's Sea Level Rise Vulnerability Assessment indicates that the Rincon Beach County Park could be at risk for inundation by 2060 (Carpinteria 2019). To protect similar recreation facilities, the City of Santa Barbara and City of Carpinteria have a long-standing practice of building a winter sand dune or berm along their respective beaches. Creation of a winter sand berm might be one feasible approach used by the County in the future to protect the Rincon Beach County Park facilities. Extending the creation of such an annual winter berm eastward along the base of the bluffs also could be one method contemplated for slowing overall bluff retreat rates that have been accelerated by sea level rise.

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

Inundation by seiche, tsunami, or mudflow can result from strong seismic activity, and such inundation is especially of concern where it could affect development involving pollutant sources potentially released to the environment. According to the City of Carpinteria's General Plan/Coastal Plan Fault Map, the Rincon Creek fault is located to the north of the proposed project and the Carpinteria Fault is located to the south (City of Carpinteria 2003). Although the Pacific Ocean is located to the south of the proposed project site, the proposed trail is located at elevations ranging from 40 feet above sea level to 185 feet above sea level. Where the trail is aligned along the bluffs, the elevation ranges from approximately 65 to 75 feet above sea level. According to the California Department of Conservation Tsunami Inundation Map For Emergency Planning - Carpinteria Quadrangle, the project site is not located within an area of potential tsunami inundation (CDOC 2009). The proposed project is not located near an enclosed or partially enclosed body of water; therefore, there would not be subject to inundation by seiche. Areas susceptible to debris and mud flows correspond to the areas with a high potential for earthquake-induced landslides. The City of Carpinteria's General Plan Slope Stability Hazards Map indicates that the project

is not located within a high landslide potential area or a high rock fall potential area (City of Carpinteria 2003). Finally, the project does not involve any hazardous materials or other pollutants that could be released in the event of inundation of the project site. Impacts relating to inundation by seiche, tsunami or mudflow would be **less than significant.**

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

Because the majority of the length of proposed trail is outside of the City of Carpinteria's and Santa Barbara County's respective 2013 Statewide Phase II Small Municipal Separate Storm Sewer (MS4) General Permit (2013 General Permit) boundaries, the majority of the project is exempt from the Post Construction Requirements (PCRs) of the 2013 General Permit. The project proposes drought-tolerant native landscaping with no permanent irrigation source, and therefore groundwater extraction to support the project would be temporary during plant establishment and would not conflict with any adopted sustainable groundwater management plan. Temporary irrigation during the plant establishment period (first year) would be provided via small-scale water trucks. **No impacts** would occur to a water quality control plan or sustainable groundwater management plan.

f) Would the project result in cumulatively considerable hydrological or water quality impacts?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to hydrology and water quality impacts. However, based on the analysis above, and with adherence to applicable Objectives and Policies found in the City and County's General Plan/Local Coastal Land Use Plans, the project's contribution to cumulative water resource impacts would not be considerable and would be further reduced through the implementation of the project specific measures below.

3.8.5 Mitigation

The project would require the implementation of **MM-WAT-1** through **MM-WAT-5** to reduce potential project impacts to surface water quality.

MM-WAT-1 **Obtain Coverage Under Construction General Permit**. The project shall obtain coverage under a Construction General Permit via the State Water Resources Control Board (SWRCB) (Water Quality Order 99-08-DWQ).

Plan Requirements: The requirement to obtain coverage from the SWRCB under a Construction General Permit shall be indicated on grading plans. ***Timing***: Evidence of coverage under a Construction General Permit shall be provided to the City of Carpinteria Public Works Department and County of Santa Barbara Public Works Division prior to the initiation of grading. ***Monitoring***: City and County Public Works staff shall confirm evidence of the Construction General Permit issuance prior to issuance of grading permits.

MM-WAT-2 **Stormwater Pollution Prevention Plan.** The construction contractor shall prepare a Stormwater Pollution Prevention Plan that includes Best Management Practices (BMPs) to be implemented and monitored prior to and during construction. The following BMPs shall be incorporated into the SWPPP to minimize potential construction-related water quality impacts:

1. Disturbed areas shall be stabilized or re-vegetated prior to the start of the rainy season. The work area shall be flagged to identify its limits. Vegetation shall not be removed or intentionally damaged beyond these limits.
2. Construction materials shall be placed in designated areas where they could not enter water bodies or storm drains due to spillage or erosion.
3. Waste and debris generated during construction shall be stored in designated waste collection areas and containers away from watercourses and shall be disposed of regularly.
4. During construction, washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site. Wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands. The concrete washout area shall be isolated from water bodies, and wash water and waste shall be removed from the project site. The location of the washout area shall be clearly noted at the construction site with signs.
5. All fueling of heavy equipment shall occur in a designated area removed from water bodies and other drainages, such that any spillage would not enter surface waters. The designated refueling area shall include a drain pan or drop cloth and absorbent materials to clean up spills. The location of the fueling area shall be clearly noted at the construction site with signs.
6. Vehicles and equipment shall be maintained properly to prevent leakage of hydrocarbons and coolant and shall be examined for leaks on a daily basis. All maintenance shall occur in a designated off-site area. The designated area shall include a drain pan or drop cloth and absorbent materials to clean up spills.
7. Any accidental spill of hydrocarbons or coolant that may occur on the construction site shall be cleaned up immediately. Absorbent materials shall be maintained on the construction site for this purpose.
8. Special considerations for work during the rainy season: stockpiled soils should be covered at the end of the work day, and concrete pouring shall be avoided within 15 days of a forecasted rain event to allow full curing, due to its toxic nature until it has fully cured.

Plan Requirements: A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented prior to construction and shall include the above elements. The SWPPP shall be submitted to City and County Public Works for review and approval prior to the issuance of grading permits for the project. ***Timing***: The stormwater features and BMPs shall be installed and operational prior to initiation of grading. ***Monitoring***: City and County Public Works staff shall site inspect for installation and maintenance in accordance with the approved plan and periodically thereafter to ensure proper maintenance over the duration of construction activities.

MM-WAT-3 **Erosion and Sediment Control Plan.** Best available erosion and sediment control measures shall be implemented and maintained during grading and construction. Best available erosion and sediment control measures may include, but are not limited to use of sediment basins, gravel bags, silt fences, geo-bags or gravel and geotextile fabric berms, erosion control blankets, coir rolls, jute

net and straw bales. Construction access points shall be stabilized using gravel beds, rumble plates or other measures to prevent sediment from being tracked onto adjacent roadways. Any sediment or other materials tracked off site shall be removed the same day as they are tracked using dry cleaning methods.

Plan Requirements and Timing: An erosion and sediment control plan shall be submitted to and approved by City and County Public Works prior to issuance of grading permits. The plan shall be designed and implemented to address erosion and sediment control during all phases of development of the site. ***Monitoring***: City and County Public Works shall perform site inspections throughout construction.

MM-WAT-4 **Planting of Vegetation.** As soon as practicable following the completion of trail construction, the contractor shall install native plantings for biological restoration and hydro-seed slope areas with an appropriate native plant seed mix, in order to provide long-term stabilization of soils disturbed during construction. Periodic watering and re-application of hydro-seed shall occur as necessary until vegetation on slope surfaces has been successfully established.

Plan Requirements and Timing: Landscaping plans including biological restoration areas and hydro-seeding of manufactured slope areas submitted to Community Development Department/Planning & Development (CDD/P&D) for review prior to approval of a coastal development permit. ***Monitoring***: CDD/P&D shall site inspect vegetation plantings and hydro-seed application before issuing final clearance and acceptance of the trail project.

MM-WAT-5 **Periodic Inspection and Maintenance of Storm Drain Components.** Staff from City and County Parks/Public Works departments shall perform an annual inspection of stormwater components annually, prior to the on-set of the rainy season (November 1) to ensure all components are in good repair and are not blocked by debris or sediment. Any materials found to be obstructing flow in the drainage system shall be removed prior to November 1 each year. The exposed vertical portion of each of the corrugated metal pipe drains shall be examined annually for signs of corrosion, damage or openings in the drain pipe wall. Corrosion visible on the exterior pipe wall shall be treated and sealed promptly, any holes through the pipe wall shall be patched, or the damaged/affected segment shall be replaced or modified.

Plan Requirements and Timing: The applicant shall include these inspection and maintenance requirements in the final drainage system design plans. The plans shall be submitted to Community Development Department/Planning & Development (CDD/P&D) and City and County Public Works for review prior to approval of a grading permit. ***Monitoring***: A memo with the annual inspection notes and corrective maintenance performed shall be prepared and submitted to the City and County Public Works Departments.

MM-WAT-6 To minimize pollutants impacting the ocean, storm drain filters/inserts shall be installed in the project area storm drain inlets. The filters/inserts shall be maintained in working order.

Plan Requirements: Prior to approval of Grading or Building Permits, the applicant shall submit plans identifying the type and location of filters/inserts to Community Development Department/Planning & Development (CDD/P&D) and City and County Public Works for review and approval. The location of such filters/inserts shall be noted on grading and building plans

Filters/inserts shall be installed prior final clearance and shall be cleaned using approved methods at least twice a year, once immediately prior to November 1 (before the start of the rainy season) and once in January. **Monitoring:** CDD/P&D and City and County Public Works shall site inspect periodically throughout the construction phase to ensure proper installation. Records of maintenance shall be maintained by City/County and shall be submitted to CDD/P&D and City and County Public Works on an annual basis prior to the start of the rainy season and for five years thereafter. After the fifth year, the records shall be maintained by the City/County. CDD/P&D and Public Works shall review the maintenance records and site inspect as needed following completion of construction to ensure periodic cleanout

3.8.6 Level of Significance After Mitigation

After implementation of **MM-WAT-1** through **MM-WAT-6**, residual impacts to hydrology and water quality resulting from potential uncontained stormwater runoff or soil erosion and sedimentation during construction and operation of the project would be less than significant.

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3.9 Land Use and Planning

This section describes the existing land uses within the Carpinteria Rincon Trail Project (project or proposed project) site and vicinity, identifies the land use and zoning designations applicable to the project site, provides associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.9.1 Existing Conditions

The proposed Carpinteria Rincon Trail would extend from the eastern end of Carpinteria Avenue to Rincon Beach County Park along abandoned roadways or old terraced road and rail cuts. The current alignment for the Union Pacific Railroad (UPRR) is oriented east/west within the project site, and roughly bisects the proposed trail near the center of its alignment. A small unsanctioned trail exists in some areas of the proposed trail, including the portion of the proposed trail from the UPRR crossing to the Rincon Beach County Park parking lot.

The Land Use Elements in the City General Plan/Local Coastal Land Use Plan and County Comprehensive Plan establish the types and intensities of land uses within these communities and guide growth and development within Carpinteria and unincorporated County lands within the Carpinteria Valley. The Land Use Element is the heart of the Land Use Plan of the two certified Local Coastal Programs (California Coastal Act of 1976 Section 30108.5); however, other elements of the General Plan are also included as components of the Land Use Plan for the purposes of the respective Local Coastal Programs.

The vision for the City includes qualities the community would like to retain and aspects that could benefit from change. The City and surrounding area enjoy a variety of attractive natural resources including safe, clean beaches, coastal bluffs, a salt marsh, several creeks, a narrow valley and a coastal mountain range. These same features contribute to the environmental qualities of the surrounding County lands.

U.S. Highway 101 is located to the north of the proposed trail alignment, with the Pacific Ocean to the south below the Carpinteria bluffs; the UPRR rail corridor bisects the central portion of the trail alignment. Undeveloped bluff open space is located adjacent to the western terminus of the trail and existing informal dirt parking lot, while Rincon Beach County Park and the Rincon Point residential community are located adjacent to the eastern terminus of the trail.

The portion of the project site within the City has a General Plan/Coastal Land Use Plan land use designation of Visitor-Serving Commercial (City of Carpinteria 2003) and has been zoned for Resort Zone District use (City of Carpinteria 2021). The portion of the project within the County of Santa Barbara is designated as Other Recreation/Open Space (County of Santa Barbara 2019) and is zoned Transportation Corridor and Recreation (County of Santa Barbara 2020). The proposed public multi-use trail would conform to the allowed uses under the existing land use designations of the City and County, and would also be consistent with the zoning designations of both jurisdictions.

3.9.2 Relevant Plans, Policies, and Ordinances

3.9.2.1 Federal

There are no federal plans, policies, or ordinances applicable to the land use considerations of the proposed project.

3.9.2.2 State

California Coastal Act of 1976

The California Coastal Act of 1976 (Coastal Act) establishes goals and provisions for a designated Coastal Zone along the entire California coastline. Within the City of Carpinteria, the Coastal Zone is coterminous with the City Boundary. In August 2003, the California Coastal Commission certified the latest update of the City's Coastal Land Use Program, further discussed below. In the Carpinteria Valley outside of the City, the Coastal Zone generally extends inland to State Route 192/150. The California Coastal Commission certified the latest update of the County's Coastal Land Use Program in 1981 (County of Santa Barbara 2019).

Senate Bill 375

The adoption of California's Sustainable Communities and Climate Protection Act, Senate Bill (SB) 375 on September 30, 2008, aligns with the goals of regional transportation planning efforts, regional greenhouse gas (GHG) reduction targets, and land use and housing allocations. SB 375 requires Metropolitan Planning Organizations such as the Santa Barbara County Association of Governments (SBCAG) to adopt a Sustainable Communities Strategy (SCS) within their regional transportation plan to demonstrate achievement of GHG reduction targets. In compliance with SB 375, SBCAG has adopted an SCS that covers all of the City of Carpinteria, as well as other cities and unincorporated portions of Santa Barbara County (SBCAG 2013).

3.9.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

California State Government Code Section 65300 requires that every city adopt a General Plan, sometimes referred to as a City's blueprint for growth and development. The City's General Plan, originally adopted in 1986 and updated in 2003, contains the seven mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise and Safety. The City's General Plan combined several of these required elements with an optional element, resulting in the Open Space, Recreation & Conservation Element. The Carpinteria General Plan also included several additional desired optional elements: The Community Design Element and Public Facilities and Services Element (City of Carpinteria 2003). The Land Use Element is described in further detail below, including applicable objectives and policies. The remaining elements of the Carpinteria General Plan are described within the EIR sections to which they pertain. This document also serves as the City's Local Coastal Land Use Plan, which ensures that the local government's land use plans, zoning ordinances, zoning maps, and implementation actions meet the requirements, provisions and polices of the California Coastal Act.

City of Carpinteria General Plan – Land Use Element

The Land Use Element designates various land uses in the city and specifies the development and land uses which are allowed within each land use district (City of Carpinteria 2003). The Land Use Element is intended to establish and maintain an organized and balanced set of land uses within the City to offer economic, housing, and recreation opportunities while avoiding conflict between land uses. Objectives and polices from the Land Use element which are applicable to the proposed project are presented below.

Objective LU-1 Establish the basis for orderly, well planned urban development while protecting coastal resources and providing for greater access and recreational opportunities for the public.

LU-1d Ensure that the type, location and intensity of land uses planned adjacent to any parcel designated open space/recreation or agriculture (as shown on Figure LU-1) are compatible with these public resources and will not be detrimental to the resource.

Objective LU-3 Preserve the small beach town character of the built environment of Carpinteria, encouraging compatible revitalization and avoiding sprawl development at the city's edge.

LU-3b The Community Design Element shall guide the character of development, and represent a comprehensive statement of the community's visual objectives.

LU-3h Develop land uses that encourage the thoughtful layout of transportation networks, minimize the impacts of vehicles in the community, and encourage alternative means of transportation.

Santa Barbara County Comprehensive Plan

As indicated above, California State Government Code Section 65300 requires all cities and counties adopt a comprehensive, long-term general plan that outlines physical development of the county or city. The County of Santa Barbara refers to theirs as a Comprehensive Plan, to avoid confusion with the City of Santa Barbara General Plan. The comprehensive plan must cover a local jurisdiction's entire planning area so that it can adequately address the broad range of issues associated with the city or county's development. Ultimately, the comprehensive plan expresses the community's development goals and embodies public policy relative to the distribution of future public and private land uses. The Santa Barbara County Comprehensive Plan contains the following Elements: Agriculture, Circulation, Coastal Land use Plan, Conservation, Energy, Environmental Resources Management, Hazardous Waste, Housing, Land Use, Noise, Open Space, Scenic Highways, Seismic Safety & Safety. The Coastal Land Use Plan is described in further detail below, including applicable objectives and policies. The remaining elements of the County Comprehensive Plan are described within the EIR sections to which they pertain.

Santa Barbara County Comprehensive Plan – Coastal Land Use Plan

The Coastal Land Use Plan lays out the general patterns of development throughout areas officially designated within the coastal zone of the unincorporated County. The following policies could be applicable to planning and implementation of the project (County of Santa Barbara 2019).

Policy 7-1 The County shall take all necessary steps to protect and defend the public's constitutionally guaranteed rights of access to and along the shoreline. At a minimum, County actions shall include:

a. Initiating legal action to acquire easements to beaches and access corridors for which prescriptive rights exist consistent with the availability of staff and funds.

b. Accepting offers of dedication which will increase opportunities for public access and recreation consistent with the County's ability to assume liability and maintenance costs.

c. Actively seeking other public or private agencies to accept offers of dedications, having them assume liability and maintenance

responsibilities, and allowing such agencies to initiate legal action to pursue beach access.

Policy 7-2 For all development between the first public road and the ocean granting of an easement to allow vertical access to the mean high tide line shall be mandatory unless:

a. Another more suitable public access corridor is available or proposed by the land use plan within a reasonable distance of the site measured along the shoreline, or

b. Access at the site would result in unmitigable adverse impacts on areas designated as "Habitat Areas" by the land use plan, or

c. Findings are made, consistent with Section 30212 of the Act, that access is inconsistent with public safety, military security needs, or that agriculture would be adversely affected, or

d. The parcel is too narrow to allow for an adequate vertical access corridor without adversely affecting the privacy of the property owner. In no case, however, shall development interfere with the public's right of access to the sea where acquired through use unless an equivalent access to the same beach area is guaranteed.

Policy 7-5 For areas controlled by Federal, State, County, or District agencies, in a zone extending approximately 250 feet inland from the mean high tide line, priority shall be given to coastal dependent and related recreational activities and support facilities. However, camping facilities should be set back from the beach and bluffs and nearshore areas reserved for day use activities. Recreational activities that are not coastal dependent may be located within this 250-foot zone if the less desirable coastal dependent support facilities (parking, restrooms, etc.) are located inland. In no case shall facilities, except for required structures (i.e., lifeguard towers, volleyball nets, etc.), be located directly on the dry sandy beach.

Policy 7-6 Recreational uses on oceanfront lands, both public and private, that do not require extensive alteration of the natural environment (i.e., tent campgrounds) shall have priority over uses requiring substantial alteration (i.e., recreational vehicle campgrounds).

Policy 7-8 Increased opportunities for beach access shall be provided in the Carpinteria planning area.

Policy 7-26 All proposed trails for the coastal zone shall be incorporated into the County's Master Plans89 for hiking, biking, and equestrian trails.

3.9.3 Thresholds of Significance

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

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.
c) Result in cumulatively considerable impacts to land use and planning.

3.9.4 Impact Analysis

a) Would the project physically divide an established community?

The proposed project consists of a shared use path that would provide safe access from the existing eastern terminus of pedestrian and cyclist paths associated with Carpinteria Avenue to Rincon Beach County Park and the Ventura County line. The project site has been extensively graded over time to accommodate the alignment of former and current transportation facilities, including the previous alignment for the State Highway 2 (abandoned), the former location for the Southern Pacific Railroad (abandoned), and the UPRR tracks (active). Topographic benches remnant from these former and current transportation alignments are in some portions of the project site used for unsanctioned trails. The proposed project would not traverse an established community; instead, the project would provide safe, non-vehicular access and connections between neighborhoods in the City of Carpinteria and the Rincon Beach County Park, as well as connecting to other segments of the coastal trail system, benefiting residents, visitors, and land uses near the project site. **No impact would occur.**

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 within the City of Carpinteria has a Carpinteria General Plan/Coastal Land Use Plan land use designation of Visitor-Serving Commercial (2003) and has been zoned for Resort Zone District use. The portion of the project within the County of Santa Barbara is designated as Other Open Land and Recreation and is zoned Transportation Corridor and Recreation (County of Santa Barbara 2010). The proposed trail is an apt use for the City's and County's vision for the properties within each jurisdiction. While the proposed trail in some areas would traverse areas designated as environmentally sensitive habitat area (ESHA), mitigation measures require the restoration of areas outside the trail to fully offset the removal of native plants to accommodate trail construction (refer to Section 3.3, Biological Resources). With the incorporation of mitigation measures identified in this document to reduce environmental impacts to less than significant levels, the proposed project would not conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project. In addition, no habitat conservation plans or natural community conservation plans apply to the project site. Overall, the proposed project would achieve the goal of enhanced coastal access. In addition, with respect to consideration of parking related to coastal access, construction is not anticipated to reduce parking availability. No parking spaces would be removed by the proposed project. However, absent mitigation, impacts due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be potentially significant. **Mitigation Measures (MM) AES-1; MM-BIO-1** through **MM-**

BIO-6; MM-CR-1 through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1** would reduce impacts to conflicts with any land use plan, policy, or regulations to **less than significant with mitigation.**

c) Would the project result in cumulatively considerable impacts to land use and planning?

The proposed project would be consistent with the land use and zoning designations that have been assigned to the project site parcels. It would also implement a number of policies aimed at increasing public access to the beach as well as providing transportation alternatives for non-vehicle travel. While portions of the proposed trail would traverse designated ESHA, **MM-BIO-1** through **MM-BIO-4** would be required to fully offset the project's reduction in habitat area (refer to Section 3.3). In addition, impacts due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be potentially significant. Therefore, **Mitigation Measures (MM) AES-1; MM-BIO-1** through **MM-BIO-6; MM-CR-1** through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1** would reduce impacts to conflicts with any land use plan, policy, or regulations to less than significant with mitigation. Therefore, with implementation of all mitigation included in the EIR, the proposed project would not have a considerable contribution to any cumulative land use or planning impact.

3.9.5 Mitigation Measures

The project would require the implementation of **MM-AES-1; MM-BIO-1** through **MM-BIO-6; MM-CR-1** through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1** to reduce impacts conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect to a less than significant level.

3.9.6 Level of Significance After Mitigation

As discussed above, portions of the trail would traverse areas designated ESHA, which could result in a conflict with resource protection policies related to ESHA, unless appropriate mitigation is incorporated. MM-BIO-1 through MM-BIO-4 (see Section 3.3) prescribes required mitigation measures to satisfy requirements found in City and County policies governing ESHA. In addition, impacts due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be potentially significant. Therefore, **MM AES-1; MM-BIO-1** through **MM-BIO-6; MM-CR-1** through **MM-CR-4; MM-GEO-1** through **MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1** would reduce impacts to conflicts with any land use plan, policy, or regulations. The residual impact to land use and planning would be **less than significant.**

3.10 Noise and Vibration

This section defines terminology used in the discussion of noise and vibration, describes the noise and vibration conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.10.1 Existing Conditions

The assessment of sound and vibration involves terminology that may be unfamiliar to the general public. In order to assist the reader, the following discussion is presented on the fundamentals of sound and vibration. A description of existing noise levels is also provided.

3.10.1.1 Fundamentals of Sound

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting called “A” weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the “noise level” and is referenced in units of dBA.

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level. Changes in a community noise level of less than 3 dBA are not typically noticed by the human ear. Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily noticeable (Caltrans 2013). The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual’s noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment. The background, or ambient, noise level gradually changes throughout a typical day, corresponding to distant noise sources, such as traffic volume, as well as changes in atmospheric conditions.

Noise levels are generally higher during the daytime and early evening hours when traffic (including airplanes), commercial, and industrial activity is the greatest. However, noise sources experienced during nighttime hours when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. In order to evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed “community noise equivalent level” (CNEL) was developed, wherein noise measurements are weighted, added, and averaged over a 24-hour period to reflect magnitude, duration, frequency, and time of occurrence. A complete definition of CNEL and other terminology used to describe noise is provided in Table 3.9-1.

Table 3.9-1. Definitions of Acoustical Terminology

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of two like quantities
Sound Pressure Level (SPL)	10 times the logarithm to the base 10 of the ratio between the square of the sound to the square of the reference sound pressure of 20 µPascals. Sound pressure level is the quantity that is measured by a sound level meter, expressed in dB.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz.
A-Weighted Sound Level (dBA)	SPL in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de- emphasizes low and high frequency components of frequency components of sound in a manner similar to the frequency response of the human ear and correlates well with subjective response to sound. All sound levels in this report are A-weighted.
Noise	Unwanted sound.
Equivalent Sound Level (L_{eq})	The average A-weighted sound level during the measurement period. For this CEQA evaluation, Leq refers to a one-hour period unless otherwise stated.
Lmax, Lmin	The maximum and minimum A-weighted sound level during the measurement period.
L01, L10, L50, L90	The A-weighted sound levels that are exceeded l%, l0%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between 10:00 p.m. and 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The average A-weighted sound level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels during the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Impulsive Noise	Noise loud enough to disrupt normal activities and usually lasting less than one second.

Exterior Noise Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time, and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically “hard” sites and at a rate of 7.5 dBA for each doubling of distance from source to receptor at acoustically “soft” sites. Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively. Sound levels can also be attenuated by man-made or natural barriers. For the purpose of sound attenuation discussion, a “hard” or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically “soft” or absorptive site is characteristic of unpaved loose soil or vegetated ground.

3.10.1.2 Fundamentals of Vibration

Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. The response of humans to vibration is very complex. However, it is generally accepted that human response is best approximated by the vibration velocity level associated with the vibration occurrence.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be perceived by building occupants as perceptible vibration. It is also common for ground-borne vibration to cause windows, pictures on walls, or items on shelves to rattle. Although the perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient magnitude to cause even minor cosmetic damage to buildings.

When evaluating human response, ground-borne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. As for sound, it is common to express vibration amplitudes in terms of decibels defined as:

$$L_v = 20 \log \left(\frac{v_{rms}}{v_{ref}} \right)$$

Where vrms is the RMS vibration velocity amplitude in inches/second and vref is the decibel reference of 1x10-6 inches/second.

To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. The vibration threshold of perception for most people is around 65 VdB (which is equivalent to 0.0018 in/sec RMS). Vibration levels in the 70 to 75 VdB range are often noticeable, but generally deemed acceptable, and levels in excess of 80 VdB are often considered unacceptable (FTA 2018).

Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass, expressed as inches/second or in/sec). Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving and soil compacting, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. A conservative maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings (Caltrans 2020).

3.10.1.3 Existing Noise Conditions

Project Site Noise Levels

Existing noise levels in the City of Carpinteria and surrounding County of Santa Barbara area are affected by several different sources of noise, including automobile and rail traffic, agricultural and industrial activity, and periodic sources such as construction. The major noise sources in Carpinteria are transportation related noise sources, including US Highway 101, freight and passenger railroad service and major arterial roads.

The City of Carpinteria General Plan/Local Coastal Land Use Plan Noise Contour Maps and County of Santa Barbara Noise Element Noise Contour Maps indicate that the proposed project is located within the boundaries for the 65 - 70 dBA noise contour for existing and future conditions (City of Carpinteria 2003; County of Santa Barbara 2009). US Highway 101 and the UPRR are the predominant noise sources in the project area. See Appendix H of this Environmental Impact Report (EIR) for the contour maps described.

3.10.2 Relevant Plans, Policies, and Ordinances

3.10.2.1 Federal

The following federal regulations pertaining to noise would apply to the proposed project.

Federal Highway Administration (FHWA) Standards

CFR Title 23, Part 772 sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the U.S. Department of Transportation (DOT) Highway Administration (FHWA). The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the DOT-FHWA Noise Standards. Title 23 establishes a 67 dBA $L_{eq}(h)$ standard applicable to federal highway projects for evaluating impacts to land uses including residences, recreational uses, hotels, hospitals, and libraries [23 CFR Chapter 1, Part 772, Section 772.19].

Federal Transit Administration (FTA) and Federal Railroad Administration (FRA) Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA 2018) are routinely used for projects proposed by local jurisdictions. The FTA and Federal Railroad Administration (FRA) have published guidelines for assessing the impacts of ground-borne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional wood-frame construction (i.e., most residences) is 0.2 inch/second peak particle velocity (PPV).

3.10.2.2 State

The following state regulations pertaining to noise would apply to the proposed project.

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multifamily residential buildings (CCR Title 24, Part 2). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multifamily residential building or structure is proposed to be located in an

area with CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA (California's Title 24 Noise Standards, Chap. 2-35). The City of Sacramento applies the interior noise criterion of CNEL 45 dBA for single-family residences, in addition to multifamily residential structures.

3.10.2.3 Local

The following local/regional regulations pertaining to noise would apply to the proposed project.

City of Carpinteria General Plan/Local Coastal Land Use Plan 2003

The Noise Element of the *City of Carpinteria General Plan/Local Coastal Land Use Plan* provides objectives, policies, and programs regarding Noise, including the following:

Objective N-5: The City will minimize the effects of nuisance noise effects on sensitive land uses.

N-5a. The City will address nuisance on a case-by-case basis and develop appropriate mitigation measures such as scheduling of events or activities during hours when effects would be minimal.

N-5b. The City will require that construction activities adjacent to sensitive noise receptors be limited as necessary to prevent adverse noise impacts.

N-5c. The City will require that construction activities employ techniques that minimize the noise impacts on adjacent uses.

The *City of Carpinteria General Plan/Local Coastal Land Use Plan* provides guidelines for determining whether or not ambient noise levels are compatible with certain land uses in the City. The guidelines indicate the compatibility of noise-sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL or L_{dn}. Residential uses are normally unacceptable in areas exceeding 70 dB CNEL; and conditionally acceptable between 60 - 70 dB CNEL for multifamily units. Schools, libraries, hospitals, and nursing homes are treated as noise-sensitive land uses, with normally acceptable levels up 60 dB CNEL, and conditionally acceptable levels up to 70 dB CNEL. Commercial/professional office buildings and recreational uses such as golf courses and water recreation have normally acceptable levels up 75 dB CNEL (City of Carpinteria 2003).

City of Carpinteria Municipal Code

The *City of Carpinteria Municipal Code Title 12 – Streets, Sidewalks, and Public Places,* including *Chapter 12.04 – Street Construction and Excavation, Section 12.04.410 – Noise, dust, and debris requirements,* describes the noise standards that are applicable public works construction activity within the City. In addition, *Section 15.16.170 – Hours during which construction may occur, and Section 15.16.180 Exemption — after-hours or emergency permits,* apply to any construction for which a permit is required by the City. The following excerpts from the municipal code are applicable to the project (City of Carpinteria 2020):

> **12.04.410 – Noise, dust, and debris requirements**
>
> Each permittee shall conduct and carry out work permitted under this chapter in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of

neighboring property. The permittee shall take appropriate measures to reduce to the fullest extent practicable in the performance of the work, noise, dust and unsightly debris. During the hours of ten p.m. to seven a.m. the permittee shall not use, except with the express written permission of the engineer, or in case of an emergency as otherwise provided in this chapter, any tool, appliance or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property.

15.16.170 - Hours during which construction may occur.

Any person conducting construction work for which a permit is required pursuant to Titles 14 and 15 shall comply with the following:

A. Construction activities shall be allowed Mondays through Fridays from 7:00 a.m. to 8:00 p.m.;

B. Construction activities shall be allowed on Saturdays from 8:00 a.m. to 8:00 p.m.;

C. Construction activities shall be allowed on Sundays from 10:00 a.m. to 8:00 p.m.

15.16.180 - Exemption; after-hours or emergency permits.

A. The community development director or designee may issue an after-hours construction permit authorizing work, if the director determines that the public interest will be served by such a permit or in the case of an emergency. An after-hours construction permit may be revoked or suspended by the director, or his designee, if it is determined that the activity detrimentally affects the public health, safety, and welfare.

B. The planning commission, or community development director, may impose more restrictive hours of construction as a condition of approval in its action on permits issued pursuant to Titles 14 and 15 hereof.

Santa Barbara County Comprehensive Plan Noise Element

The Noise Element of the Comprehensive Plan establishes maximum long-term exterior noise exposure levels for noise sensitive uses, and also identifies the land uses considered to be noise sensitive. The following Noise Element Policies are considered applicable to the Project.

1) In the planning of land use, 65 dB Day-Night Average Sound Level should be regarded as the maximum exterior noise exposure compatible with noise-sensitive uses unless noise mitigation features are included in project designs.
2) Noise-sensitive land uses should be considered to include:
   a) Residential, including single and multifamily dwellings, mobile home parks, dormitories, and similar uses.
   b) Transient lodging, including hotels, motels, and similar uses.
   c) Hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care.
   d) Public or private educational facilities, libraries, churches, and places of public assembly.
6) Residential uses proposed in areas where the Day-Night Average Sound Level is 65 dB or more should be designed so that noise levels in exterior living spaces will be less than 65 dB LDN. An analysis of

proposed projects should be required, indicating the feasibility of noise barriers, site design, building orientation, etc., to meet the prescribed exterior noise standard.

3.10.3 Thresholds of Significance

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

a) 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.
b) Result in 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, expose people residing or working in the project area to excessive noise levels.
d) Result in cumulatively considerable noise impacts.

3.10.3.1 Local Significance Thresholds

The *Santa Barbara County Environmental Thresholds and Guidelines Manual* provides noise thresholds for assisting in the determination of significant noise impacts. The following excerpts from the guidelines manual are applicable to the project:

a) A proposed development that would generate noise levels in excess of 65 dB(A) CNEL and could affect sensitive receptors would generally be presumed to have a significant impact.
b) A project will generally have a significant effect on the environment if it will increase substantially the ambient noise levels for noise-sensitive receptors adjoining areas. Per item a., this may generally be presumed when ambient noise levels affecting sensitive receptors are increased to 65 dB(A) CNEL or more. However, a significant effect may also occur when ambient noise levels affecting sensitive receptors increase substantially but remain less than 65 dB(A) CNEL, as determined on a case-by-case level.
c) Noise from grading and construction activity proposed within 1,600 feet of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, would generally result in a potentially significant impact. According to EPA guidelines, average construction noise is 95 dB(A) at a 50' distance from the source. A 6 dB drop occurs with a doubling of the distance from the source. Therefore, locations within 1,600 feet of the construction site would be affected by noise levels over 65 dB(A). To mitigate this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 AM to 5 PM only. Noise attenuation barriers and muffling of grading equipment may also be required. Construction equipment generating noise levels above 95 dB(A) may require additional mitigation.

3.10.4 Impact Analysis

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 Construction Noise (Temporary)

Construction of the proposed project would generate noise that could expose nearby receptors (i.e., residences and commercial uses) to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Noise from construction equipment generally exhibits point source acoustical characteristics. A point source sound is attenuated (or reduced) at a rate of 6 decibels per doubling of distance from the source for "hard site" conditions and at 7.5 decibels per doubling of distance for "soft site" conditions. These rules apply to the propagation of sound waves with no obstacles between source and receivers, such as topography (ridges or berms) or structures. The range of maximum noise levels for various types of construction equipment is provided in Table 3.9-2. Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower levels.

Table 3.9-2. Construction Equipment Noise Emission Levels

Equipment	Typical Maximum Sound Level - 50 feet from Source(L_{max} dB)
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Loader	85
Paver	89
Roller	74
Saw	76
Scraper	89
Truck	88

Source: FTA 2018

The nearest point of construction activities to the closest noise-sensitive receivers would be approximately 775 feet south of the project site, at the Rincon Point residential neighborhood.. Although construction of the trail elements would largely occur at greater distances from this closest residence, this distance was used as the worst-case scenario to conservatively model construction noise impacts at the nearest residential receptors at Rincon Point.

Noise-sensitive receivers proximate to the project, but north of US Highway 101 (i.e., commercial and residential), will not experience significant noise impacts from construction activities as these residences

and commercial businesses are located within the 70 dBA noise contour, as indicated in the City of Carpinteria General Plan/Coastal Land Use Plan Noise Contour Maps and County of Santa Barbara Noise Element Contour Map. Potential project-generated construction noise would not be audible over US Highway 101 traffic noise. Nonetheless, construction-related noise levels were modeled at these closest residential and commercial receivers to the north of the project; construction activity noise levels are summarized in Table 3.9-3, with the modeling input and results contained in Appendix H of this EIR.

The Federal Highway Administration's Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at these noise-sensitive land uses. Although the model was developed by the FHWA, RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are also used to construct other project types. Input variables for RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of each hour the equipment typically works per day), and the distance between the construction activity and noise-sensitive receivers. No topographical or structural shielding was assumed in the modeling of construction noise (i.e., the receivers are modelled with no obstacles to the travel of sound between the construction activity and receiver location, a worst-case assumption). The noise levels from the proposed construction activities are summarized in Table 3.9-3. The complete set of RCNM input and output data for construction noise is provided in Appendix H of this EIR.

As shown, at the nearest residences at Rincon Point, noise levels would range from approximately 54 dBA Leq to 60 dBA Leq when construction is taking place at or near the project site boundary (i.e., easternmost part of proposed trail). At the nearest residences to the north of the project, noise levels would range from approximately 56 dBA Leq to 62 dBA Leq when construction is taking place at or near the northern project site boundary; these levels would range from approximately 56 dBA Leq to 62 dBA Leq at the commercial properties to the north of the project. These heavy construction equipment noise levels are based on surveys, conducted by the U.S. Environmental Protection Agency in 1971. Mostly because of more stringent recent air quality emissions standards, newer, cleaner, and quieter equipment is used on most construction projects in California. Thus, construction phase noise levels indicated in Table 3.9-3 represent "worst-case" conditions. As the table shows, the highest noise levels are expected to occur during the site prep, grading, and paving phases of construction.

Table 3.9-3. Outdoor Construction Noise Levels by Phase at Nearest Receptors

Construction Phase	Residences South (dB L_{eq})	Residences North (dB L_{eq})	Commercial North (dB L_{eq})
Site Prep	60	62	61
Grading	60	62	61
Trail Construction	57	59	58
Bridge Construction	54	56	56
Paving	57	60	59

Source: Appendix H.

The County of Santa Barbara exempts construction activity noise from standard exterior noise exposure limits, if conducted during specific limited daytime hours. The guideline requires noise generating construction activities (including site prep, grading, and construction), be restricted to the weekday hours between 8:00 a.m. and 5:00 p.m. (County of Santa Barbara 2008); construction is prohibited on weekends and State Holidays.. This ensures that sensitive receptors are not disturbed by early morning or late night activities, or by activities

on the weekends or during State holidays. The noise from construction activities incident upon Rincon Point residences is subject to these thresholds as the residences are located in Santa Barbara County.

As discussed, ambient and future noise levels affecting noise-sensitive land uses adjacent to the project are characterized by a 70 dBA roadway noise contour. Based on the noise level values at the nearest sensitive receptor, which represent "worst-case" scenario noise exposure over the construction cycle, daytime construction noise levels would average approximately 12 dBA lower than ambient noise levels. However, construction noise levels in the evening or overnight period could be plainly audible above background levels and could also result in sleep disturbance for residential occupants. Therefore, temporary construction noise impacts are potentially significant. **Mitigation Measure (MM) NOI-1** and **MM-NOI-2** are required in order to reduce construction noise impacts. Impacts would be **less than significant with implementation of mitigation**.

Off-Site Construction Traffic Noise (Temporary)

Construction of the proposed project would generate haul truck trips and construction employee vehicle trips to and from the project site. Fill would be accomplished with on-site cut material. Haul trucks with an approximately 16 cubic yard capacity would export excess cut to the closest disposal site. Heavy truck traffic is anticipated to be approximately 20 heavy truck trips (10 truckloads, each with a round-trip to/from the site) a day during the grading and excavation phase of the project. This averages to 2.5 trips per hour over an 8-hour workday, with 3 trips per hour a reasonable worst-case scenario. Within the northern half of the project, north of the UPRR alignment, haul trucks would access the site via the SR150 interchange from US Highway 101 northbound or southbound. The closest residence to the SR150 northbound off-ramp from US Highway 101 is located at approximately 180 feet (off Camino Carreta). For the southern half of the project, haul trucks would navigate through the Rincon Beach County Park parking lot and use the Bates Road interchange with US Highway 101. Haul trucks traveling through Rincon Beach County Park would pass within 125 feet of the closest Rincon Point residences.

From data presented in Table 3.9.2, a heavy dump truck generates a maximum sound level of 88 dBA at 50 feet. This maximum would be reduced to 80 dBA at 125 feet and 77 dBA at 180 feet. Assuming a truck is at the minimum identified distance from the Rincon Point neighborhood home for approximately 1 minute while driving by, and three trucks pass during the busiest hour, the average noise at this home from haul truck operations would be 67 dBA Leq. Assuming a truck is at the minimum identified distance from the Camino Carreta home for approximately 1 minute while driving by, and three trucks pass during the busiest hour, the average noise at this home from haul truck operations would be 64 dBA Leq. These noise levels are very similar, and slightly below, the daytime noise levels at these residences associated with traffic along US Highway 101. Thus, daytime operations of heavy haul trucks to export material from the site would not be anticipated to result in substantial temporary noise increases at the closest sensitive receptors to the local portions of the haul route. However, haul trucks operating in the evening or overnight period could be plainly audible above background levels and could also result in sleep disturbance for residential occupants. Therefore, temporary off-site construction traffic noise impacts related to haul truck operations are potentially significant. **MM-NOI-1** is required in order to reduce construction traffic noise impacts from haul truck operations that could potentially occur in the evening or overnight periods. Impacts would be **less than significant with implementation of mitigation**.

Permanent Noise Increases – Landform Modification and Trail Operations

Members of the public have expressed concerns in responses to the Notice of Preparation (NOP) that noise levels associated with US Highway 101 and UPRR operations could increase in the Rincon Point neighborhood

as a result of the proposed project grading. The effectiveness of a noise barrier, including a solid ridge, depends upon the height of the top of the barrier, relative to the elevation of the noise source (on one side of the barrier) and the noise receiver (on the other side of the barrier). The proposed grading for the trail project would alter the angle of the slope face along the trail alignment, but it would not decrease the elevation of the top of the ridge along the trail. The proposal would also have no effect upon the elevation of the US Highway 101 travel lanes, the elevation of the UPRR tracks, or the elevation of the homes within the Rincon Point residential neighborhood. Consequently, the proposed project grading would have **no impact** on the transportation-related ambient noise levels in the Rincon Point residential neighborhood or along Rincon Beach County Park.

Operation of the project would involve pedestrian and cyclist use of the trail and related amenities; neither hiking nor cycling generate substantial noise, and the closest noise-sensitive receivers (residents within Rincon Point) already experience similar noise sources from use of Rincon Beach County Park. Consequently, trail users are expected to generate an incremental increase in the noise levels adjacent to proximate residences, resulting in permanent noise level increases that are **less than significant.**

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

Construction (Short-Term) Vibration

For construction vibration, this analysis used the FTA threshold for structural damage (vibration-peak-particle velocities greater than 0.2 inches per second for residences, which equates to the Caltrans standard for sensitive structures) and FTA's threshold for human annoyance within residences (80 vibration velocity level in decibels (VdB) at residences where people normally sleep).

During grading, construction, and paving activities for the proposed project ground-borne vibration would be produced by heavy-duty construction equipment. The most important equipment relative to generation of vibration, and the vibration levels produced by such equipment, are illustrated in Table 3.9-4.

Table 3.9-4. Vibration Velocities for Typical Construction Equipment

Equipment	PPV at 25 Feet (Inches Per Second)	Approximate Ground Vibration Level 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Drill Rig / Auger	0.089	58
Jackhammer	0.035	87
Small Bulldozer	0.003	79

Source: FTA 2018; Caltrans 2020.

As shown in Table 3.9-4, use of heavy equipment (e.g., a large bulldozer) generates vibration levels of 0.089 inches per second PPV at a distance of 25 feet. The nearest residences to construction activity for the eastern trail portion would be at Rincon Point, approximately 775 feet south. Additionally, haul trucks traveling through Rincon Beach County Park would pass within 125 feet of the closest Rincon Point residences. The nearest residences to the trail construction activity could experience vibration levels of 0.0004 inches per second PPV during bulldozer operations. The closest residence to the haul route for loaded trucks traveling through Rincon Beach County Park could experience vibration levels of 0.007 inches per second PPV during loaded truck pass-by. Vibration levels at these receptors would not begin to approach the FTA or Caltrans building damage threshold of 0.2 inches per second PPV (the FTA uses this value for standard construction residences, Caltrans uses it for fragile or sensitive structures).

At 125 feet (the closest residences to the truck haul route), vibration levels from a loaded truck would be reduced to approximately 66 VdB; as such the vibration levels would also be well below the level considered barely perceptible to persons (80 VdB), and therefore should generally not be discernible to area residents. While some persons particularly sensitive to vibration may perceive some vibration episodes during certain construction activities, vibration levels would not be anticipated to reach annoyance levels for residents along the project alignment. Ground-borne vibration would not be associated with the proposed project following construction activities. Therefore, impacts related to ground-borne vibration would be **less than significant**.

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

The proposed project would not expose people residing or visiting in the project area to excessive noise levels from aircraft. The nearest public airport is Santa Barbara Airport, located approximately 30 miles northwest of the project site. There are no private airports in the vicinity of the project site. As such, **no impacts** from airport/aircraft noise would occur.

d) Would the project result in cumulatively considerable noise impacts?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to noise impacts. However, noise analysis for the project indicates that future noise conditions will not exceed the City's or County's established parameters with the identified mitigation. In addition, the measures identified to reduce short term construction noise impacts would reduce the project's contribution to cumulative noise impacts on nearby sensitive receptors. Therefore, the project would not have considerable contributions toward any cumulative noise impacts.

3.10.5 Mitigation

To reduce potential noise impacts, the following mitigation measures shall be implemented:

MM-NOI-1 **Construction Hours.** Construction activity for site preparation and for future development shall be limited to the hours between 8:00 a.m. and 5:00 p.m., Monday through Friday. No construction shall occur on state holidays (e.g., Thanksgiving, Labor Day) or weekends. Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities are not subject to these restrictions.

Plan Requirements*:** Two signs stating these restrictions shall be posted on site at each end of the proposed trail. ***Timing: Signs shall be in place prior to the beginning of and throughout all grading and construction activities. ***Monitoring***: City and County Grading Inspectors shall spot check and respond to complaints.

MM-NOI-2 **Construction Equipment**. All construction equipment with engines must have original manufacturer's approved muffling devices. All stationary equipment shall be physically buffered from nearby sensitive receptors.

Plan Requirements: Plans shall indicate the requirement of OEM muffled equipment. ***Timing***: This condition applies when any engine driven equipment is in use at the project site during construction. ***Monitoring***: City and County Grading Inspectors shall spot check and respond to complaints.

3.10.6 Level of Significance After Mitigation

After implementation of **MM-NOI-1** and **MM-NOI-2**, impacts to nearby noise- sensitive receptors during construction activity would be less than significant.

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3.11 Recreation

This section describes the recreational conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

3.11.1 Existing Conditions

The City of Carpinteria Parks and Recreation Department's recent history of park and trail development dates back to 1985. In 2009, the City completed a Project Study Report (PSR) on a Rincon Trail project (City of Carpinteria 2009a). In January 2010, the Carpinteria City Council approved the 2010 Parks Department Work Plan, which includes plans to complete the Rincon segment of the Carpinteria Coastal Vista Trail. As of December 2017, five miles of the Carpinteria Coastal Vista Trail have been constructed (California Coastal Conservancy 2017). The proposed trail would link the City's trail and an existing Rincon Beach County Park.. The Rincon Beach County Park's parking lot can be very crowded on summer weekends when beach use is high, or during the winter when surfing conditions are favorable. The proposed trail would provide a safe route for alternative transportation between the City and the Rincon Beach County Park; a current unsanctioned trail between these two points is interrupted by the Union Pacific Railroad (UPRR) rail corridor that bisects the central portion of the trail alignment, and which poses a significant safety hazard for pedestrians that trespass across the UPRR tracks. Establishment of the proposed trail would remove the attractive nuisance of illicit crossing of the tracks by pedestrians.

There are several types of recreation-oriented open space in the project vicinity, including areas that are located in and maintained by the City, private entities, and state or county agencies.

- Public parks: state, county and local
- Natural areas publicly owned or privately owned with public access easements
- Undeveloped vacant lots, privately owned
- Privately owned recreational facilities
- School playgrounds and ball fields
- Trails: equestrian, bicycle, jogging and walking, and
- Coastal access and beaches.

Carpinteria is a city of approximately 13,000 people, with close to two million visitors a year due to the popularity of the area's beaches, parks, and campground. Carpinteria has approximately 97.96 acres of City parks within the City boundary. Carpinteria State Beach is also within the City boundary. Carpinteria offers a variety of opportunities for coastal recreation. Downtown shops and restaurants draw visitors, as well as opportunities for surfing, fishing, bird watching, wildlife viewing, and walking on nearby beaches. A number of special events take place in Carpinteria each year, including the California Avocado Festival and the Rincon Classic Surf Competition. The State Beach facilities are primarily used by out-of-town campers and local residents share the beachfront picnicking, restrooms, and beach day use area (City of Carpinteria 2003). Additional nearby recreational facilities outside of the City and within the County of Santa Barbara (County) include Rincon Beach County Park, located to the south of the project site and within the County of Santa Barbara, and Rincon Point State Beach, located 0.4 miles southeast of the project site.

The City of Carpinteria has a total of 6.75 bikeway miles, including 6.25 miles of formal street bikeway facilities and 0.5 miles of off-street bikeway facilities. Cycling and walking to recreational sites promotes direct interface with the physical environment and benefits the community ecologically. Class I bikeways are trails or paths that have entirely separate rights of way from automobile roadways for the use of bicycles and pedestrians. The paths minimize crossflow with vehicle traffic and can be located in parks, recreational areas, or road rights-of-way if such width permits (City of Carpinteria 2003). The proposed shared use path would be designed as a Class I bikeway for use by cyclists and pedestrians.

In 2009, the City completed a Coastal Access Feasibility Study to analyze the feasibility of new sanctioned access points to connect Carpinteria's beaches and coastal resources with the rest of the community, determine potential railroad crossing alternatives, refine and prioritize alternatives based on public input, and create an implementation plan (City of Carpinteria 2009b). The study was needed because of the "barrier effect" of the rail corridor on the City, the increased public use of the coast, the level of current and predicted passenger and freight train traffic with increased potential risk of conflict at uncontrolled crossings, the limited number of sanctioned crossings, and the hazardous practice of trespassing over railroad tracks to reach coastal destinations. The study has resulted in a number of specific recommendations and preliminary designs for crossings, including the proposed crossing in the Coastal Vista Trail Rincon segment.

In 2010, the City completed an Open Space Management Plan for the City-owned Carpinteria Bluffs Nature Preserve and Tar Pits Park properties (California Coastal Conservancy 2010). The Open Space Management Plan includes a public access element and lays out the City's vision for completion of the larger Carpinteria Coastal Vista Trail. In the meantime, the City has pursued completion of other segments of the Carpinteria Coastal Vista Trail, all of which have undergone extensive public hearings to receive Coastal Development Permits. Notable recent accomplishments with respect to regional bike circulation include the completion of the Class I bike path from Rincon Beach County Park to Mobil Pier in Ventura County and the extension of a new all-weather bike path from the Casitas Pass Road/Via Real intersection to Carpinteria Avenue along Carpinteria Creek (as part of the Linden Avenue and Casitas Pass Road Interchanges and Via Real Extension project). Both of these bike paths would connect to the proposed Rincon Trail project. In conjunction with the US 101 South Coast High Occupancy Vehicle project, the Santa Claus Lane bike path connecting Santa Claus Lane to the west end of Carpinteria Avenue will be constructed. A trail easement also has been acquired by the City along the S&S Seeds property (6155 Carpinteria Avenue) and anticipates acquiring an easement across the adjacent vacant commercial property (6175 Carpinteria Avenue) as part of a currently proposed development project, and the Land Trust for Santa Barbara County has acquired the former Carpinteria Bluffs III 21.65-acre parcel at the eastern Carpinteria Avenue terminus, which has been transferred to the City of Carpinteria as permanent public open space to be known as Rincon Bluffs Preserve.

The proposed Carpinteria Rincon trail segment of the Carpinteria Coastal Vista Trail will ultimately connect with the Carpinteria Bluffs Nature Preserve (Preserve) portion of the trail constructed in 2004. This segment was constructed as a condition of the Coastal Development Permit for the Preserve allowing development of a parking area, baseball fields, and restroom building (California Coastal Conservancy 2010). The Carpinteria Bluffs Nature Preserve trail segment was planned and built to connect to the subject Carpinteria Rincon Trail segment, which provides a dedicated bridge across UPRR and a contiguous trail to Rincon Beach County Park.

The portion of the project site within the City has a General Plan/Coastal Land Use Plan land use designation of Visitor-Serving Commercial (City of Carpinteria 2003) and has been zoned for Resort Zone District use (City of Carpinteria 2016). A public multi-use trail would be an allowed use under the visitor serving land use designation. The portion of the project within the County of Santa Barbara is designated as Other Recreation/Open Space and is zoned Transportation Corridor and Recreation (County of Santa Barbara 2009). The County transportation

corridor zoning reflects the presence of current and former transportation facilities within the project site, while open space and recreation land use designations reflect the desire to accommodate coastal oriented recreation on the project site and vicinity.

A number of comments were submitted by members of the paragliding and hang-gliding community (or more simply the soaring community) indicating that wind uplift conditions associated with the ocean bluffs along the project trail alignment provide opportunities above the proposed trail properties for paragliding and hang gliding. Comment letters assert that such soaring activities have been carried out in the air space over the trail alignment property for several decades, and that the air space is one of a limited number of opportunities for soaring within the coastal environment in Santa Barbara County. While paragliders and hang-gliders have capitalized on bluff-related uplift during favorable wind conditions to launch from private properties along the bluff faces above the proposed bicycle and pedestrian path alignment, the proposed trail corridor has been dedicated to transportation uses since its construction in the late 1800s (railroad then state highway). Therefore, while the soaring community has taken advantage of favorable wind and uplift phenomena associated with the existing topography within the trail corridor, neither launching nor landing areas within the trail corridor have been contemplated or formalized in recreation plans adopted by the City of Carpinteria or County of Santa Barbara. It should be noted that the steep slopes in the southern trail alignment are the result of former landform modification carried out for the railroad alignment and former state highway, and do not represent natural conditions resulting from natural weathering of the involved earth materials and geologic formation. Please refer to Section 3.5 (Geology & Soils) for a detailed description of landform modification that has occurred within the trail alignment. One reason for not proposing formal launching or landing areas for soaring activities is the presence of U.S. Highway 101 and the UPRR alignment in close proximity to the wind uplift zone associated with the bluff face. Paragliders and hang-gliders launching from an elevation not much greater than these transportation facilities have little time to react if wind conditions are not as expected or change, representing possible safety hazards for paragliders and hang-gliders that find themselves forced to land within the freeway or railroad corridors. With respect to the presence of these major transportation corridors, the area is not ideal for ensuring the safety of low altitude paragliders and hang-gliders taking advantage of the bluff-related wind uplift conditions.

It should be noted that Rincon County Beach Park prohibits the take-off or landing of any type of gliders. In addition, UPRR prohibits pedestrian access across their alignment (precluding direct access to the bluff area that generates the best uplift). Thus, the typical launch area for paragliding and hang gliding to gain access to the air space over the trail alignment is currently from private property adjacent to the trail alignment, not from a sanctioned use public property. The private property owner also retains the option of prohibiting paragliders and hang gliders from using the property as a launch area at any time.

Fundamentals of Paragliding or Hang-Gliding

Because members of the soaring community have indicated the air space above the trail alignment has been used extensively for paragliding and hang-gliding, the following fundamental discussion is provided to assist the general public in understanding this issue.

Many people not involved in soaring tend to make the assumption that a lot of wind is needed in order for successful paragliding or hang-gliding to occur. Wind is not essential for this type of soaring but can extend the length of time aloft for an individual flight (BHPA 2021). The presence of wind also can facilitate launch, much the same as for kite flying. With less or no wind present, a paraglider or hang-glider will have to run in order to establish enough relative air speed over the “wing” of the glider to produce lift (BHPA 2021). Launch areas for paragliders and hang-gliders often incorporate a long unobstructed slope that both allows the pilot to build up the needed air speed above

the wing, but also increases the elevation of the craft above the ground elevation as the pilot advances. At the top of ridges, cliffs, or bluffs, when the wind direction is against these features, launch can often be accomplished from a stationary position, if the wind speed is already sufficient over the wing to create lift (BHPA 2021).

After takeoff, a glider maintains its airspeed by flying on a descending path through the air, using gravity to propel it. The glide ratio is a measure of a glider's performance. It expresses the relationship between the distance that a glider can travel horizontally (in still air) and the height loss involved. For instance, a glider that has a glide ratio of 10:1 will travel 100 feet horizontally for every ten feet of elevation (height above the ground) lost in still air (BHPA 2021). Wind that has a vertical component in the upward direction, which can be caused when wind strikes a landform, such as a ridge or cliff, can carry a glider to a greater elevation; following the ridge back and forth where a vertical wind component exists a glider can remain in the air longer than under still air conditions.

According to a number of comments received on the notice of preparation by members of the soaring community, the presence of the existing steep ocean bluffs within the trail alignment result in the creation of a favorable vertical wind component above the bluff face. This vertical wind component, or updraft, facilitates the launching of gliders and supports extended flight times by gliders.

3.11.2 Relevant Plans, Policies, and Ordinances

3.11.2.1 Federal

Federal Aviation Regulation Part 103

Hang gliding, paragliding, and mini-wing flights in the United States are governed by the Federal Aviation Regulation (FAR) Part 103, Federal Aviation Regulation, Ultralight Vehicles. FAR Part 103 was adopted July 30, 1982, and formally establishes what is recreational flight. FAR Part 103 does not apply to flights by Federal Aviation Administration (FAA) licensed pilots in FAA registered aircraft, which are governed by FAR Part 61 and FAR Part 91 and may be governed in addition by other civil laws and regulations. Persons participating in hang gliding, paragliding, and mini-wing operations under FAR Part 103 are required by law to fly in accordance with FAR Part 103, and in accordance with any other applicable civil laws. FAR Part 103 outlines inspection requirements, certification and registration, and operating rules for recreational flight. The following sub-sections of Part 103 are pertinent to soaring activities above the project site.

§ 103.9 Hazardous operations.

(a) No person may operate any ultralight vehicle in a manner that creates a hazard to other persons or property.

(b) No person may allow an object to be dropped from an ultralight vehicle if such action creates a hazard to other persons or property.

§ 103.15 Operations over congested areas.

No person may operate an ultralight vehicle over any congested area of a city, town, or settlement, or over any open air assembly of persons.

3.11.2.2 State

State Water Resources Control Board California Ocean Plan

The State Water Resources Control Board (SWRCB) has the responsibility for regulating and enforcing standard related to surface waters throughout California, including ocean waters within the 3-mile state limit. SWRCB adopted the most recent California Ocean Plan, the state's water quality control plan for California ocean waters, in October 2012. The purpose of the California Ocean Plan is to protect the quality of the ocean water for use and enjoyment by the people of the state by requiring control of the discharge of waste to ocean waters. The California Ocean Plan identifies both water contact and non-contact recreation as a beneficial use for all ocean waters of the state. As a result, it established water quality objectives for bacteria for contact recreation areas, including coastal waters adjacent to public beaches such as Carpinteria State Beach and Rincon Beach County Park. Bacterial standards for water contact apply to a zone that extends 1,000 feet from the shoreline or the 30-foot depth contour.

3.11.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The Open Space, Recreation, and Conservation Element of the City of Carpinteria General Plan/Local Coastal Land Use Plan provides objectives and policies related to parks and recreation needs of the community, including the following (City of Carpinteria 2003):

Objective OSC-14 Provide for adequate park and recreation facilities to meet the needs of the community and visitors.

OSC-14a Increase coastal and recreational access for all segments of the population, including the disabled and elderly, while protecting natural resources, particularly environmentally sensitive habitat areas.

OSC-14b Provide for passive recreation uses of natural open space areas, such as along creeks and the Bluffs 1 areas, where such uses would not damage the resources being protected.

OSC-14c Increase opportunities for ocean recreation programs including: kayaking, sailing, snorkeling, and scuba diving through the city Parks and Recreation Department, and by encouraging private development of these activities.

OSC-14d In a zone extending approximately 250 feet inland from the mean high tide line, priority shall be given to coastal dependent and related recreational activities and support facilities. However, camping facilities should be set back from the beach and bluffs and near-shore areas reserved for day use activities. Recreational activities that are not coastal dependent may be located within this 250-foot zone if the less desirable coastal dependent support facilities (parking, restrooms, etc.) are located inland. In no case shall facilities, except for required structures (i.e. lifeguard towers, volleyball nets, etc.) be located directly on the sandy beach.

OSC-14e Recreational uses on ocean front land, both public and private, that do not require extensive alteration of the natural environment shall have priority over uses requiring substantial alteration.

OSC-14f No unrelated development shall be permitted in publicly owned recreational areas except pipelines to serve coastal dependent industrial uses when no alternative route is feasible.

OSC-14g In implementing all proposals made in the General Plan/Land Use Plan for expanding opportunities for coastal access and recreation, utilize purchase in fee (simple) only after all other less costly alternatives have been studied and rejected as infeasible. Other alternatives may include: purchase of easements, recreation preserve contracts, and mandatory dedication in connection with development.

OSC-14h Support habitat preservation by establishing habitat preserves and open space for passive and active recreation by developing programs including, but not limited to: transfer of development rights; conservation easements; land acquisition grants; partnership agreements between private developers, the City, school districts, State Park, and the National Forest; overlay performance zoning; development impact fees for recreational resources and services; and use fees and fines.

Santa Barbara County Comprehensive Plan Coastal Land Use Plan

The County of Santa Barbara's Coastal Land Use Plan, which addresses land use in the coastal zone (including the project site and surrounding properties), emphasizes access to the County's beaches, among other planning and land use policies. Section 3.7, Coastal Access and Recreation, of the Coastal Land Use Plan includes policies aimed at protecting the public's right to access the beach and enjoy recreational opportunities at and along the shoreline. Policies specifically applicable to the project area are listed below (County of Santa Barbara 2019):

Policy 7-5: For areas controlled by Federal, State, County, or District agencies, in a zone extending approximately 250 feet inland from the mean high tide line, priority shall be given to coastal dependent and related recreational activities and support facilities. However, camping facilities should be set back from the beach and bluffs and nearshore areas reserved for day use activities. Recreational activities that are not coastal dependent may be located within this 250-foot zone if the less desirable coastal dependent support facilities (parking, restrooms, etc.) are located inland. In no case shall facilities, except for required structures (i.e., lifeguard towers, volleyball nets, etc.), be located directly on the dry sandy beach.

Policy 7-6 Recreational uses on oceanfront lands, both public and private, that do not require extensive alteration of the natural environment (i.e., tent campgrounds) shall have priority over uses requiring substantial alteration (i.e., recreational vehicle campgrounds).

Policy 7-8 Increased opportunities for beach access shall be provided in the Carpinteria planning area.

Policy 7-25 Easements for trails shall be required as a condition of project approval for that portion of the trail crossing the parcel upon which the project is proposed.

Policy 7-26 All proposed trails for the coastal zone shall be incorporated into the County's Master Plans for hiking, biking, and equestrian trails.

Policy 7-32 When reviewing a Coastal Development Permit(s) associated with the Highway 101: Carpinteria to Santa Barbara project and other highway improvement projects to the South Coast Highway 101, the County of Santa Barbara shall require coastal access improvements in addition to those required by Policy 7-31 within the corridor with the goals of providing alternative transportation

modes and establishing connectivity of the California Coastal Trail. Projects shall be designed to eliminate gaps for non-motorized travel and enhance coastal access, and shall be completed and open to the public no later than the completion of the adjacent phase of construction for the Highway 101: Carpinteria to Santa Barbara project.

Policy 7-33: To encourage walking and biking as alternatives to travel by automobile, the County shall strongly encourage development of new pedestrian and/or bicycle-friendly paths along the highway corridor. Improvements to Highway 101 shall not remove existing bikeways or pedestrian paths or preclude the development of proposed bikeways or pedestrian paths that are identified in the County's Comprehensive Plan, Coastal Land Use Plan and community plans, without providing comparable or better replacement facilities

Santa Barbara County Comprehensive Plan Open Space Element

The Open Space Element (Santa Barbara County 2009) is intended to manage and preserve land area in the County that is not suitable for urban development. Broadly there are four criteria or classifications that are employed in designating land that should remain as open or undeveloped. One of the criteria is Open Space for Outdoor Recreation. The Open Space Element indicates that the importance of open spaces for parks and recreation and recreation trails can hardly be overstated. The portion of the trail in Santa Barbara County has been designated as open space – recreation.

3.11.3 Thresholds of Significance

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

a) 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) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
c) Result in cumulatively considerable recreation impacts.

3.11.4 Impact Analysis

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?

The proposed project includes a shared-use path for walking and biking. The proposed trail would fill in an existing segment of the California Coastal Trail between the Carpinteria Bluffs Nature Preserve, which includes several miles of interconnected coastal bluff open space trails, and Rincon Beach County Park with 1 mile of the trail along the bluff. As the Rincon segment will expand the Carpinteria Coastal Trail System and would connect the City of Carpinteria with Rincon Beach County Park and points east and west along the Pacific Coast Bikeway and California Coastal Trail, it would provide additional recreation and access opportunities along the

Santa Barbara County and Ventura County coastline. The proposed trail also would serve to fill in missing segments in the California Missions Trail and the Juan Bautista de Anza National Historic Trail. The project would provide a safe, direct and scenic coastal pedestrian and bike trail link to Ventura County paralleling U.S. Highway 101 and would formalize one railroad overcrossing along this segment, providing for safe access to the coast.

Although the air space above the proposed trail is not a public recreational facility for the purposes of the CEQA Guidelines, the proposed trail also is not expected to significantly impair the ability of paragliders and hang-gliders. Members of the paragliding and hang-gliding community have expressed concern that the proposed regrading of slopes along the trail alignment could adversely impact wind uplift conditions, such that paragliding and hang-gliding opportunities in the air space above the property could be eliminated, or substantially reduced.

The portion of the bluff face that would be regraded for the proposed trail was previously altered to create a bench for the UPRR alignment, and this steep manufactured slope is not considered to be stable in the long term with or without the project (the railroad was previously re-aligned away from this slope). Reducing the steepness of the slope face (making it less vertical) is necessary to avoid it collapsing over time and ensuring the longevity of the proposed new trail. Comments from the soaring community indicate a belief the proposed lessening of the bluff face slope angle could reduce or eliminate wind uplift patterns along the re-graded bluff slope area.

In order to evaluate the change in wind uplift patterns above the bluff face from the proposed regrading for the project, Dudek commissioned an Airflow Analysis for the Proposed Regrading of the Rincon Bluffs study (Airflow Study) by an expert in fluid dynamics; the Airflow Study is included as Appendix I of this Environmental Impact Report. Several different approaches were used, based upon published literature including wind tunnel experiments and direct field measurements of the amplification effects of a slope or vertical face on horizontal wind vectors perpendicular to the slope face. In the published literature reviewed for this Airflow Study, certain investigators compared the average slope angle of the entire slope or bluff face to determine the wind amplification effect, while others compared the angle of just the upper portion of the slope. The analysis of the effects of the proposed regrading of the bluff face for the project concluded that the proposed regrading could reduce the vertical airflow velocity by 10% to 30% relative to current conditions; for altitudes relevant to soaring activities, the reduction is expected to be closer to 30% (Appendix I). Based on available experimental results, the introduction of an upper bench above the trail is expected to provide a small increase in turbulence (on the order of 5%) at an altitude of 30 feet above the front of the bluffs, becoming negligible by an altitude of approximately 75 feet (Appendix I).

Published records of wind speeds favorable to paragliding and hang-gliding above the bluffs along the trail alignment do not exist. However, the Torrey Pines Gliderport is a dedicated soaring facility adjacent to the ocean bluffs in San Diego County, that exhibit similar characteristics to the bluffs along the Rincon Trail alignment. At Torrey Pines, about 7-15 mph of wind coming from the west (perpendicular to the bluffs) is generally needed for paragliding tandems; hang gliding tandems generally need 10-18 mph, also from the west (Torrey Pines Gliderport 2021). This evidences a wind regime that is successful in supporting soaring operations with an approximately 50% range of wind speeds (lowest viable wind speed representing 50% of the top speed). Consequently, the maximum predicted reduction in vertical wind velocity (30%) caused by the proposed regrading of bluffs along the trail segment south of the UPRR alignment should not eliminate favorable wind uplift patterns above the bluff face for soaring activities. The existing 20% of the upper portion of wind speeds successful for soaring should continue to provide acceptable uplift conditions; thus the proposed trail alignment would not cause paragliders and hang-gliders to use other air space, such that substantial physical deterioration of those facilities would occur or be accelerated. The upper end of the wind speed regime considered acceptable for soaring activities also may be extended somewhat by reduced updraft

velocities, which may create additional opportunities for soaring activities during conditions with high wind velocities. In addition, the bluff west of where the proposed trail would cross the UPRR alignment would not be altered in any way by the proposed trail. Therefore, while the proposed regrading of the ocean bluffs will cause some modification of vertical wind velocities supporting soaring activities, it is unknown what the net effect will be on the number of days annually in which the wind conditions within the project alignment are favorable for soaring. Given the uncertainty above and the Airflow Study analysis that the maximum predicted reduction in vertical wind velocity will be 30%, the proposed project would have a **less than significant impact on recreational resources**.

Also, it must be noted that CEQA does not require analyses of "social and economic changes" alone. (See Cal. Code Regs., tit 23, § 15131, subd. (a).) Social and economic impacts, such as a decrease in usability of air space for hang gliders and paragliders, are analyzed as an indirect impact only if it leads to a significant direct physical impact to the environment, such as heavy traffic in another area that would cause an environmental impact. The Airflow Study demonstrates that any potential adverse impacts on the usability of air space above the proposed trail alignment are unlikely to cause significant physical impacts on other recreation facilities from redirected paragliding and parasailing recreation. (See, e.g. *Chico Advocates for a Responsible Economy v. City of Chico* (2019) 40 Cal.App.5th 839 (reasoning that loss of convenience is merely an example of a social problem, and without an accompanying physical change to the environment, CEQA does not require its analysis).

The use of air space above the trail alignment by paragliders and hang gliders has not been formalized in recreation plans adopted by the City of Carpinteria or County of Santa Barbara, whereas a multi-use trail through this area has been proposed for decades to connect to the coastal trail system in both Santa Barbara and Ventura counties. While adverse impacts on the usability of airspace above the proposed trail alignment as a result of the proposed regrading to construct the trail may occur and cause paragliders and hang-gliders to soar at other locations, the benefits delivered recreationally by a multi-use trail accessible for the entire population of the Central Coast would more than balance out a reduction in the frequency of recreational opportunities associated with soaring activities above the bluffs within the project alignment. Therefore, overall and in balance, the proposed project would have **less than significant impacts upon recreation resources**.

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

The project consists of a recreational facility: a multi-use trail to accommodate pedestrians and cyclists, and which would close an important gap in the regional coastal trail system. As proposed, construction of the proposed trail would involve regrading of existing terrain within the trail alignment. The proposed project addresses potential adverse physical effects on the environment associated with this "*construction or expansion of recreational facilities*" through appropriate mitigation measures in the areas of aesthetics, biological resources, cultural resources, geology and soils, hazardous materials, hydrology, noise, and tribal cultural resources, such that the project would not create a residually significant adverse physical effect on the environment for the purposes of CEQA. Further, the Airflow Study identifies a reduction of 10-30% of vertical airflow velocities, which is not anticipated to generate an adverse physical effect on the environment or on local recreational soaring opportunities. Therefore, the proposed trail would have **less than a significant impact.**

c) Would the project result in cumulatively considerable recreation impacts?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to recreation impacts. However, the proposed project would result in a beneficial impact to recreational resources and therefore, would not have a considerable contribution to cumulative impacts on recreation resources.

3.11.5 Mitigation

As discussed above, the proposed project would result in less than significant impacts on recreation resources, and therefore mitigation would be neither required nor recommended.

3.11.6 Level of Significance After Mitigation

As discussed above, the proposed project would result in less than significant impacts on recreation resources without mitigation.

3.12 Transportation

This section describes the transportation conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.12.1 Existing Conditions

The proposed Carpinteria Rincon Trail would extend from the eastern end of Carpinteria Avenue to Rincon Beach County Park along abandoned roadways or old terraced road and rail cuts. A small unsanctioned trail exists in some areas of the proposed trail, including the portion of the proposed trail from the railroad crossing to the Rincon Beach County Park parking lot. At both ends of the trail are pre-existing parking areas; Rincon Beach County Park has a paved lot and at Carpinteria Avenue there is an existing dirt lot used as an informal parking area. Neither of these parking areas are proposed to be modified under the Rincon Trail project.

The City of Carpinteria is situated along the California coast where the Santa Ynez Mountains meet the Pacific Ocean; Highway 150, US Highway 101 and Union Pacific Railroad (UPRR) all intersect in the southeastern entrance to the Carpinteria Valley near the Ventura County/Santa Barbara County line. The intensive transportation infrastructure improvements in this location included planning a bicycle route along the highway shoulder south of Bates Road, but there is no other alternative access route between the City of Carpinteria and the Ventura County line for pedestrians and cyclists. The proposed Carpinteria Rincon Trail will provide an important connection in this area and will link the two regions of Ventura County and Santa Barbara County, particularly now that the Class I Bikeway along the southbound US Highway 101 shoulder is completed between Rincon State Beach Park and Mussel Shoals in Ventura County.

Access between the City of Carpinteria and Rincon Beach County Park has primarily been provided by US Highway 101, though the distance between the two destinations is less than two miles. US Highway 101 was designed, and operates, primarily to accommodate passenger vehicles, trucks, and busses; bicycle traffic is restricted to the highway shoulder that provides no safety elements such as a barrier to separate cyclists from the adjacent vehicle travel lane. Many bicyclists and pedestrians use the railroad corridor as an alternative route, as evidenced by the well-worn, unsanctioned trail that is currently present along the railroad tracks connecting Carpinteria residents and Carpinteria State Beach visitors with Rincon Beach County Park. The railroad corridor, however, presents a public access and safety concern equal to or greater than travel along the highway shoulder, and involves unsanctioned trespass on UPRR property.

With regard to vehicular access available to either end of the proposed trail segment, Carpinteria Avenue connects to the location of the western trail terminus. The US Highway 101 interchange at State Route 150 (that also connects to Carpinteria Avenue) is within 500 feet of the western trail terminus; construction workers and haul trucks would use this interchange for access to the western or northern segment of the trail. According to Caltrans (2014), all legs of the SR 150 / US Highway interchange intersections currently operate at level of service (LOS) B during the morning peak hour; all legs except the Carpinteria Avenue/SR 150 leg also operate at LOS B during the evening peak; the Carpinteria Avenue/SR 150 leg currently operates at LOS E in the evening peak hour. Bates Road provides vehicular access to the Rincon Beach County Park, the eastern end of the proposed trail terminus. Bates Road is also developed as a full interchange for US Highway 101 construction workers and haul trucks would use this interchange for access to the eastern or southern segment of the trail. According to Caltrans (2014), all legs of the Bates Road US Highway interchange intersections currently operate at level of service (LOS) A during the morning and evening peak hours.

3.12.2 Relevant Plans, Policies, and Ordinances

3.12.2.1 Federal

There are no federal regulations associated with transportation that are relevant to the proposed project.

3.12.2.2 State

There are no state regulations associated with transportation that are relevant to the proposed project.

3.12.2.3 Local

Regional Transportation Plan (RTP)

Regional transportation planning encompassing incorporated and unincorporated communities across Santa Barbara County is the responsibility of the Santa Barbara County Association of Governments (SBCAG). The most recent regional transportation plan adopted by SBCAG is *Fast Forward 2040: Regional Transportation Plan and Sustainable Communities Strategy,* or simply the RTP (SBCAG 2017). The RTP is a long-range planning document that defines the investment and implementation program in regional transportation systems over a 20-year period based on regional goals, multimodal transportation needs for people and goods, and estimates of available funding to provide a balanced approach to addressing long-term regional needs. The RTP includes a Sustainable Communities Strategy, as required by SB 375, which sets forth a forecasted development pattern for the region and is integrated with the transportation network and other transportation measures and policies to reduce GHG emissions from passenger vehicles and light trucks to achieve the GHG reduction targets set by the California Air Resources Board (CARB). The goals and objectives of the RTP include:

- Environment: Foster patterns of growth, development, and transportation that protect natural resources and lead to a healthy environment.
  - Reduce GHG emissions in compliance with CARB Regional Targets
  - Reduce criteria pollutant emissions
- Mobility and System Reliability: Optimize the transportation system to improve accessibility to jobs, schools, and services, allow the unimpeded movement of people and goods, and ensure the reliability of travel by all modes.
  - Reduce travel times for all modes
  - Reduce congestion — Work cooperatively with schools and school districts to reduce congestion surrounding schools
- Equity: Ensure that the transportation and housing needs of all socio-economic groups are adequately served.
- Health and Safety: Improve public health and ensure the safety of the regional transportation system.
  - Reduce the frequency and severity of collisions on the transportation network
  - Increase public outreach and education
- A Prosperous Economy: Achieve economically efficient transportation patterns and promote regional prosperity and economic growth.
  - Reduce congestion
  - Optimize network performance to reduce time lost to commuting

Carpinteria General Plan/Local Coastal Land Use Plan

The Circulation Element of the General Plan/Local Coastal Land Use Plan includes goals, objectives, and policies related to providing efficient and comprehensive means for the delivery of goods, and the movement of people throughout the community, including provisions to accommodate modes of transportation beyond simply passenger vehicles and freight trucks. Objectives and policies regarding alternative modes of transportation and facilities to support pedestrian and cyclist activities are particularly relevant to the proposed project and include (City of Carpinteria 2003):

Objective C-6 Provide adequate safe railroad crossings and to effectuate community design of buffers that will attenuate rail-related noise.

- **C-6a** Seek funding sources for grade-separated crossings of the rail line to resolve conflicts with urban linkages, where such structures are considered feasible.
- **C-6c** Encourage development of available railroad rights-of-way for alternative transportation, bicycle, recreation, trail, parking related, and other appropriate uses.
- **C-6d** Put programs for developing crossing improvements with the State Public Utilities Commission and railroad operators into effect.

Objective C-7 Build demand for alternative transportation use by increasing ease, effectiveness, and social acceptability, and through foresighted planning.

- **C-7c** Provide safe mobility for the physically handicapped through the design of street improvements and public facilities.

Objective C-8 Support and develop safe, direct and well-maintained bicycle and pedestrian systems and recreational boating facilities that serve all segments of the public

- **C-8a** Integrate the development of bicycle routes and pedestrian pathways in additional areas of the city, and encourage the utilization of such routes for commuting as well as recreational purposes.
- **C-8c** Provide or require safe and adequate bicycle parking at transportation centers, public parks, recreation areas and other nonresidential locations.
- **C-8d** Encourage integration of the city's bicycle routes with state and countywide programs.
- **C-8e** Encourage educational programs on bicycle safety, and complement such programs through bicycle law enforcement.
- **C-8f** Encourage pedestrian movement by providing pedestrian facilities that are direct and convenient, particularly in the beach and downtown areas.
- **C-8g** Consider rerouting the Pacific Coast Bikeway to another location parallel to the coastline, such as adjacent to the railroad right of way throughout the city. [5-year]
- **C-8h** Encourage a bike trail link from Carpinteria to Summerland along the railroad right of way and a coastal link to Ventura paralleling U.S. 101.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019) includes goals, objectives, and policies related to ensuring adequate access to the beach for all members of the public. Policies specifically related to the proposed project include:

Policy 7-8 Increased opportunities for beach access shall be provided in the Carpinteria planning area.

b. Dedication of a vertical access easement and construction of a trail to the beach shall be required of any development on the easterly end of the Carpinteria bluffs.

Santa Barbara County Comprehensive Plan – Circulation Element

The Circulation Element identifies key roadway links throughout the unincorporated areas of the County, and along with the other elements, guides decisions regarding new development and provides clear traffic capacity guidelines that are intended to maintain acceptable levels of service on the County's roadways and intersections, while allowing reasonable growth within the communities of the unincorporated area (County of Santa Barbara 2009). Consistency with the County's Circulation Element requires that projects do not contribute ADTs where estimated future volume exceeds the policy capacity. If estimated future volume exceeds policy capacity, but the project contributes ADTs less than or equal to 2% of remaining capacity or 40 ADTs, whichever is greater, the project would be consistent with the *Comprehensive Plan*.

3.12.3 Thresholds of Significance

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

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 uses (e.g., farm equipment).
d) Result in inadequate emergency access.
e) Result in cumulatively considerable transportation impacts.

Recently Adopted Vehicle Miles Travelled Threshold for CEQA Transportation Impacts

On December 28, 2018, the California Natural Resources Agency certified and adopted proposed revisions to CEQA Guidelines Section 15064.3 and Appendix G: Environmental Checklist Form, Section XVII, Transportation. Section 15064.3 includes new criteria for determining the significance of a project's transportation impacts. Specifically, Section 15064.3(a) states "vehicle miles traveled is the most appropriate measure of transportation impacts." The revisions to Appendix G Section XVII removed references to circulation, traffic levels, and LOS. The revisions also added a new threshold question (i.e., "b") that considers whether a project would conflict or be inconsistent with the VMT criteria for analyzing transportation impacts in CEQA Guidelines Section 15064.3(b).

3.12.3.1 Local Significance Thresholds

Consistent with CEQA Guidelines Section 15064.7, the County of Santa Barbara developed and adopted the following thresholds for determining the significance of a project's transportation impacts, included in the September 2020 revision to the *Environmental Thresholds and Guidelines* (Santa Barbara County 2020).

Threshold "a" – Potential Conflict with a Program, Plan, Ordinance, or Policy

The SBCAG's 2040 Regional Transportation Plan and Sustainable Communities Strategy (SBCAG, 2013) and the County's Comprehensive Plan, zoning ordinances, capital improvement programs, and other planning documents contain transportation and circulation programs, plans, ordinances, and policies. Threshold question "a" considers a project in relation to those programs, plans, ordinances, and policies that specifically address multimodal transportation, complete streets, transportation demand management (TDM), and other VMT-related topics. The County and CEQA Guidelines Section 15064.3(a) no longer consider automobile delay or congestion an environmental impact. Therefore, threshold question "a" does not apply to provisions that address LOS or similar measures of vehicular capacity or traffic congestion. A transportation impact occurs if a project conflicts with the overall purpose of an applicable transportation and circulation program, plan, ordinance, or policy, including impacts to existing transit systems and bicycle and pedestrian networks pursuant to Public Resources Code Section 21099(b)(1).

Threshold "b" – Potential Impact to VMT Threshold question

Threshold "b" establishes VMT as the metric to determine transportation impacts. The Governor's Office of Planning and Research's (OPR) "Technical Advisory on Evaluating Transportation Impacts in CEQA" (OPR Technical Advisory) (OPR, 2018) contains principals, guidelines, recommendations and mandatory criteria for analyzing a project's transportation impacts, as an implementation guide for CEQA Guidelines Section 15064.3 (Determining the Significance of Transportation Impacts). The OPR Technical advisory identifies certain types or classes of projects that are deemed to have **less than significant VMT impacts**, including the following example:

- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve nonmotorized travel.

Threshold "c" – Design Features and Hazards

Threshold "c" considers whether a project would increase roadway hazards. An increase could result from existing or proposed uses or geometric design features. In part, the analysis should review these and other relevant factors and identify results that conflict with the County's Engineering Design Standards or other applicable roadway standards. For example, the analysis may consider the following criteria:

- Project requires a driveway that would not meet site distance requirements, including vehicle queueing and visibility of pedestrians and bicyclists.
- Project adds a new traffic signal or results in a major revision to an existing intersection that would not meet the County's Engineering Design Standards.
- Project adds substantial traffic to a roadway with poor design features (e.g., narrow width, roadside ditches, sharp curves, poor sight distance, inadequate pavement structure).
- Project introduces a new use and substantial traffic that would create potential safety problems on an existing road network (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use).

Threshold "d" – Emergency Access

Threshold "d" considers any changes to emergency access resulting from a project. To identify potential impacts, the analysis must review any proposed roadway design changes and determine if they would potentially impede emergency access vehicles.

3.12.4 Impact Analysis

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

The Rincon Trail segment would reduce vehicle trips and encourage bicycle and pedestrian modes of transportation to access popular coastal destinations. The project would provide a safe, direct and well-maintained coastal pedestrian and bike trail link from the existing eastern terminus of Carpinteria Avenue to the Rincon Beach County Park parking lot, and would formalize one railroad crossing along this segment, providing for safe access to the coast. The northern terminus of the Class I bikeway paralleling US Highway 101 is a short distance from the Rincon Beach County Park, connected by Rincon Point Road/Bates Road. Positive benefits would include a reduction in vehicle trips from Carpinteria residents and visitors who travel between the City of Carpinteria and Rincon Beach County Park. Since no dedicated pedestrian or bicycle amenities exist currently between these two destinations, many residents employ vehicles even for short trips. The proposed project would encourage non-vehicle travel between these two locations, thus reducing vehicle trips and minimizing the impacts of vehicles in the community and parking at Rincon Beach County Park. Impacts would be **less than significant.**

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

The proposed Carpinteria Rincon Trail meets the definition of "*multi-use paths, or other off-road facilities that serve nonmotorized travel*" as identified in OPR's "Technical Advisory on Evaluating Transportation Impacts in CEQA"(OPR 2018). According to the OPR advisory, this type of multi-use trail for non-motorized use is deemed to have **less than significant VMT impacts.**

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

The proposed shared-use path is intended to provide a safe connection for cyclists and pedestrians between the existing terminus of the east end of Carpinteria Avenue and the upper Rincon Beach County Park parking lot.. In this gap area, pedestrians and cyclists currently unsanctioned use trails along the UPRR alignment, or the shoulder of US Highway 101, both of which present safety hazards. Further, the unsanctioned trails through and across the UPRR alignment require trespass on UPRR-owned property. The proposed trail would therefore reduce existing hazards for pedestrians and cyclists and provide a legal public access path across the UPRR alignment.

As currently designed, the eastern end of the Rincon Trail would terminate at the western end of the Rincon Beach County Park parking lot. At this point, cyclists and pedestrians would need to traverse through the parking lot to reach the connection with the Class I bikeway along US Highway 101 that continues toward Ventura and vice versa for those heading west from Ventura. Pedestrians and cyclists within the Rincon Point residential neighborhood and those traveling from Ventura along the Class I bikeway also would need to traverse the parking lot (in the opposite direction) to gain access to the southern end of the Rincon Trail. Cyclists making this parking lot traverse in either direction will increase pedestrian and cyclist traffic in the parking lot. Several respondents

to the NOP indicated a concern that terminating the Carpinteria Rincon Trail at the western end of the Rincon Beach County Park parking lot could create a hazard between cyclists or pedestrians and vehicles executing parking maneuvers. The City of Carpinteria requested their consulting traffic engineers to evaluate this potential for new hazards in the parking lot area. The traffic engineer concluded there would not be a conflict between cyclists and pedestrians, as this is a slow speed mixed vehicle environment currently, and cyclists, pedestrians, and parking vehicles should continue to mix safely with the new Carpinteria Rincon Trail connection (Interwest Consulting Group, 2021). Refer to Appendix J for a copy of the Interwest memorandum. Hazards associated with cyclist, pedestrian, and vehicle interactions in the Rincon Beach County Park parking lot would be a **less than significant impact.**

The County Parks Department and SBCAG have held several meetings to discuss the issue of a more direct connection between the proposed Carpinteria Rincon Trail and the Class I bikeway along US Highway 101. Because the proposed project results in a less than significant impact, such a connector trail is not required as a mitigation measure for the proposed project. However, the County Parks Department and SBCAG have planned a study to evaluate a connector trail, as a future and separate project, that would route cyclists and pedestrians to the perimeter of the Parking Lot to make connections with the adjacent bikeway and trail systems (Appendix K).

Slow moving over-size haul trucks associated with construction activity can present a hazard where lengthy portions of the haul route would involve narrow roads with sharp curves, thereby introducing a risk for motorists deciding to attempt a passing maneuver. With regard to haul truck operations during construction, fill would be accomplished with on-site cut material. Excess earth material would be exported from the site using haul trucks with an approximately 16 cubic yard capacity, transporting such earth material to the closest disposal sites. Heavy truck traffic is anticipated to be approximately 20 heavy truck trips (10 truckloads, each with a round-trip to/from the site) a day during the grading and excavation phase of the project, which has an anticipated duration of 11 – 13 months.. This averages to 2.5 trips per hour over an 8-hour workday, with 3 trips per hour a reasonable worst-case scenario. Within the northern half of the project, north of the UPRR alignment, haul trucks would access the site via the SR150 interchange from US Highway 101 northbound or southbound. For the southern half of the project, haul trucks would navigate through the Rincon Beach County Park parking lot and use the Bates Road interchange with US Highway 101. Haul truck travel on local roadways would be minimal since freeway interchanges exist within 500 feet of the construction access at either end of the trail alignment. Given the low frequency of daily haul truck trips, and the proximity of freeway interchanges for regional access, traffic hazard impacts associated with haul truck activities during construction would result in a **less than significant impact.**

It should be noted that project effects upon parking supply/resources are not considered an environmental impact under CEQA, as supported by recent case law (*Covina Residents for Responsible Development v. City of Covina* (2018) 21 Cal.App.5th 712, 724-727.). As such, if the parking demands of a project would exceed the locally available supply of parking spaces, and/or if existing parking spaces would be removed as a direct result of the project, such effects relative to parking supplies could represent an inconvenience for community members, but would not be an environmental impact. For informational purposes, the following discussion is provided regarding construction-related parking demands. Construction of the proposed project would generate construction employee vehicle trips to and from the project site. The majority of the work would involve grading, accomplished with a few pieces of heavy equipment working at a time; typically, a bull-dozer would be used for creating the new slopes, with a front-end loader and tractor moving the material to stockpiles and loading haul trucks. The typical number of construction workers on site for grading operations would be approximately five (5). The southerly shoulder of Carpinteria Avenue from the SR 150 intersection to the eastern terminus is wide enough to accommodate vehicle parking without blocking the travel lanes. The shoulder available for parking is approximately 600 feet in length, which would accommodate approximately 24 vehicles parked parallel to the road.

This parking area would easily accommodate construction worker parking during the project construction, avoiding any inconvenience that could be associated with construction-worker parking on residential streets or in the Rincon Beach County Park parking lot. Impacts would be **less than significant.**

d) Would the project result in inadequate emergency access?

The project would connect to the existing eastern terminus of Carpinteria Avenue, providing emergency vehicle access throughout the 16-foot wide concrete trail located on the north/west side of the UPRR alignment. The project would also connect to the Rincon Beach County Park, providing emergency vehicle access throughout the 16-foot wide concrete trail located on the south/east side of the UPRR alignment. The UPRR bridge may not be rated for heavy emergency response vehicles, but the ability for emergency response vehicles to reach up to either end of the bridge would functionally provide emergency access coverage for the entire trail alignment. Development of the proposed project would therefore increase emergency access to the project area. Consequently, project impacts regarding emergency access would be **less than significant.**

e) Would the project result in cumulatively considerable transportation impacts?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to traffic impacts. However, the proposed project would reduce vehicle trips and encourage safe bicycle and pedestrian modes of transportation to access popular coastal destinations. Accordingly, the proposed project would not degrade the nearby intersections' levels of service by any significant level or affect roadway capacity. Therefore, the project's contribution to cumulative transportation and traffic impacts would not be considerable.

3.12.5 Mitigation

The proposed project would result in less than significant impacts to transportation. No mitigation would be required.

3.12.5 Level of Significance Prior to Mitigation

As discussed above, no significant direct or indirect impacts related to transportation would result from the proposed project.

3.13 Tribal Cultural Resources

This section describes the existing tribal cultural resources conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.13.1 Existing Conditions

A Phase 1 cultural resources investigation for the original Carpinteria Rincon Trail design was prepared by Dudek in March 2008; this study included an archaeological site records and literature search at the Central Coast Information Center and an intensive surface reconnaissance of the proposed project area. For the currently proposed trail design, Dudek performed a new Phase 1 Cultural Resources Survey of the entire alignment to document existing conditions and in order to assess impacts of the updated trail alignment on cultural resources. The updated Phase 1 Survey included an archaeological record search and walk-over survey of the trail alignment and area within earthwork limits and temporary impact areas delineated for the transportation and storage of construction equipment. As is customary for Phase 1 Cultural Resource Surveys, the document is not circulated with the associated CEQA document. The updated Dudek Phase 1 survey is on-file with the City of Carpinteria, Community Development Department, and with the County of Santa Barbara Planning & Development Department

3.3.1.1 Ethnohistoric Context

Immediately prior to the arrival of the Spanish in A.D. 1542, the people living in the Santa Barbara region collectively known today as the Chumash, consisted of a set of related ethnolinguistic groups occupying a territory that spanned from Morro Bay in the north, south to Malibu on the coast, and inland to encompass the interior South Coast Range and the northwest Transverse Range, including the Santa Ynez River Valley, the Carrizo Plain, the Cuyama Valley, and the San Emigdio Hills. The language these people spoke is considered an isolate (Goddard 1996), distinct from the languages spoken by their neighbors, the Salinan, Yokuts, Kitanemuk, Tataviam, and Tongva (Gabrielino-Fernandeño). Internally there was considerable diversity, such that not all of the regional dialects were mutually intelligible. Today, the names for these different ethnolinguistic groups come mainly from their associations with different Mission territories: the Obispeño in the north were notably distinct from a group called the Central Chumash, which consisted of the Purisimeño, Ynezeño, Barbareño, and Ventureño. Both of these groups (Obispeño and Central Chumash) spoke languages that were in turn distinct from those spoken on the northern Channel Islands, typically grouped together under the heading of Island Chumash. Even this linguistic taxonomy masks some of the historically documented internal diversity that would include regional dialectic differences such as the Emigdiano, Castec, Matilija, Mugu, and Malibu of the Central Chumash, and the Cruzeño, Roseño, and Migueleño of the Island Chumash (see Kroeber 1925; Grant 1978a, 1978b; Golla 2011). The current project area and the broader vicinity of the city of Carpinteria was occupied historically by speakers of both Barbareño and Ventureño Central Chumash, today represented by the Barbareño/Ventureño Band of Mission Indians, headquartered in Ojai.

What we know of these people comes, in part, from the rich written accounts of a variety of sources, the earliest of which are those of the Spanish explorers to the Santa Barbara Channel and mainland, namely Cabrillo in 1542 and Vizcaíno in 1602 (Wagner 1929; Brown 1967). These observations were expanded by the accounts written during early efforts to establish evangelical Missions (and therefore Royal territory) in Alta California, namely by Portolá in 1769, de Anza in 1776, and to a lesser degree, Garcés in 1776 (Coues 1900; Bolton 1927; Gamble 2008; Priestley 1937). These accounts were further expanded by the observations and managerial records of the Mission

administrators for a period of about 60 years (Geiger 1969; Geiger and Meighan 1976; Johnson 1988, 1982). After that, Euroamerican interest in Native American life made it possible for the Native views of their own history and culture to enter into the written record, primarily in this case through ethno-historic documentation of Chumash beliefs, folk tales, music, customs, and lifeways (e.g., Blackburn 1975; Hudson et al. 1981; Harrington 1942). This forms perhaps the richest body of information that we have about the Chumash; further development of this understanding continues today, incorporating contemporary Chumash identity, concerns, interpretations, research, and politics.

The written records and accounts of Chumash life reveal a variety of things that have been of paramount importance to archaeologists for many decades. This includes accounts of what people ate and how they acquired it, how they made various elements of material culture, and how they used it (e.g., Hudson and Blackburn 1983, 1979, 1985, 1986). It also includes ideas about the landscape, knowledge of the plants and animals that live in it, and of how to manage that landscape, as well as accounts of how social life was structured, and how hierarchy and power were perceived, imagined and negotiated by individuals. The ethnohistories also contain a rich account of the structure of hierarchy within Chumash life, including ideas about how money, exchange, and territory, along with the management and manipulation of those elements, fed into the structures of social power.

It is this body of knowledge that commands the lion's-share of archaeological attention, certainly since the 1980s. Of particular importance to archaeologists of the Santa Barbara Channel has been the effort to explain the evolution of the kinds of social and political complexity revealed in the rich ethno-historic records of the Chumash (C.D. King 1976; L.B. King 1969). Attention paid to how people acquired and controlled resources, and how resources from different environments (namely the Islands, the mainland coast, and the interior) were moved across different boundaries and networks, has been extremely important. This involves a detailed understanding of how goods and services were transported not only between different aspects of the Chumash cultural sphere, but also between the Chumash and the people of the Central Valley, the Sierra Nevada, the South Coast, and the Desert Interior. Considerable ethnographic detail exists about the nature of market-based exchange, the use of shell-bead money, conscious control of inflation, the role of intermediaries in between-group exchange, trading parties from distant lands, and the kinds of goods transported from different areas, all of which play a significant role in both the interpretation of the archaeological record, and the design of archaeological research. Indeed, synthetic accounts of the ethnographic record occasionally offer insights about the archaeological patterns one might expect of the Chumash interaction sphere (Gamble 2008; C.D. King 1976; Johnson 1988, 1982).

Interests in the evolution of complex society in the Chumash world have therefore played a disproportionate role in the collective efforts of archaeologists over the past many decades. Therefore, it is not surprising that the majority of archaeological research has been focused mainly on the late prehistoric record and on understanding the evolution of the many things the Europeans were able to observe or record of Chumash life. However, as with any interpretation of the past informed by ethnohistoric observation, interpreters of the Chumash and their ancestors must be cautious about the ethnographer's interpretive agency, and the historical context of it (Haley and Wilcoxon 1997, 1999; Gill, Fauvelle, and Erlandson 2019). Contemporary re-analysis of historic observations may stimulate novel insights that engender novel directions in archaeological research.

3.3.1.2 Central Coast Information Center Records Search and Survey Results

The records search indicates that five previously recorded cultural resources exist within 0.5 mile of the proposed project site. Multiple loci of CA-SBA-1, the ethnohistoric/historic Chumash village of S*huku*, surround the proposed project site with the nearest locus (A) located immediately southeast of the proposed Project area, near the mouth

of Rincon Creek. Although limited weathered shell was observed in disturbed contexts, no cultural resources were observed in situ, or within intact soils, during the intensive field survey under generally good to excellent ground surface visibility. However, the project site is not only located partially within an archaeological site (CA-SBA-1168), it is also surrounded, in every direction, by archaeological sites with the closest loci of CA-SBA-1/CA-VEN-62 located immediately adjacent to the southeastern extent of the proposed project site. Based on the presence of a portion of the proposed project site overlapping a small portion of the archaeological site CA-SBA-1168, the close proximity of multiple archaeological sites to the proposed project site, as well as the general archaeological sensitivity of the area surrounding the proposed project site, there is substantial evidence for potential unknown significant prehistoric and historic archaeological resources to exist within the project site. Technical Reports and supporting documentation are available in Confidential Cultural Appendix D. These confidential appendices are archived at the City and are only accessible to eligible individuals as defined under applicable regulations governing cultural resources confidentiality.

3.3.1.3 Native American Coordination

Sacred Lands File Search and Tribal Outreach

A search of the Native American Heritage Commission's (NAHC's) Sacred Land File was requested on May 1, 2018, and was conducted on May 23, 2018 (received on May 25, 2018) (Frank Lienert, Associate Government Program Analyst) to determine the presence of any Native American cultural resources within the proposed project site (see Confidential Appendix L). The NAHC indicated that no known Native American heritage resources are identified within the proposed project site. The NAHC identified six Native American individuals who would potentially have specific knowledge as to whether or not other cultural resources are identified within the project site that could be at-risk. Informal outreach letters (not formal AB-52 notification) were sent via email and certified mail on May 25, 2018 to six Native Americans representatives identified by the NAHC who might have knowledge of previously undocumented cultural resources within the APE. Dudek made follow-up phone calls on June 4 and 11, 2018. Three responses were received on June 4, 2018, one response was received on June 11, 2018. As of September 28, 2018, two of the Native American representatives have not responded to Dudek's multiple and varied communication efforts.

The three responses to Dudek's outreach efforts included the following individuals all belonging to the Barbareño/Ventureño Band of Mission Indians: Julie Lynn Tumamait-Stenslie, Chair (June 11, 2018 phone call initiated by Dudek); Patrick Tumamait, Chair (June 4, 2018 phone call initiated by Dudek); and Eleanor Arrellanes (June 4, 2018 phone call initiated by Dudek). Each representative expressed concern about proposed disturbances, a desire to be contacted regarding any aspect of the proposed project, as well as the need for archaeological and Native American monitoring.

Assembly Bill (AB) 52

A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is a project that may have a significant effect on the environment (PRC Section 21084.2). Under AB 52, a TCR must have tangible, geographically defined properties that can be impacted by project implementation. The proposed project is subject to compliance with AB 52.

On October 25, 2019, the City of Carpinteria sent AB-52 notification letters certified mail (letters provided via email to contacts that provided their email address), to each Native American contact provided by the NAHC on May 25, 2018 and to those tribal entities that have formally requested notification from the City. The NAHC provided an

updated contact list to the City on October 29, 2019, which included five new contacts; the City sent AB-52 notification letters to the five newly identified contacts on October 28 and 29, 2019. On November 16, 2020, the City sent out email reminders for the proposed project's EIR virtual scoping meeting, and one of the recipients of that email included some tribal representatives that the City typically communicates with on overall projects within City limits. As a result of that forwarded scoping email, Patrick Tumamait of the Barbareno/Ventureno Band of Mission Indians, responded on November 17, 2020. In his response, Mr. Tumamait stated that the proposed project site is sensitive, that he has been told of a recorded site nearby and that he recommends Native American monitoring and would like to take on that role for the project. It should be noted that Mr. Tumamait is not on the City's AB 52 contact list and this correspondence between the City and Mr. Tumamait is not part of the formal AB 52 consultation process. To date, no California Native American tribes have requested consultation with the City. Therefore, government-to-government consultation initiated by the City has not resulted, to date, in the identification of a TCR within or near the Project Site. Table 3.13-1 summarizes the results of the AB 52 process for the proposed project.

Table 3.13-1. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification/ Date of Delivery	Response to City Notification Letters
Gino Altamirano, Chairperson Coastal Band of the Chumash Nation	Certified Mail: October 29, 2019	None to date
Fred Collins, Spokesperson Northern Chumash Tribal Council	Certified Mail and email: October 29, 2019	Response received via email on October 30, 2019. Spokesperson Collins stated that the Tribe is engaged with San Luis Obispo County only and that the Tribe supports local tribal recommendations. The City responded to Spokesperson Collins' email on that same day stating that the City notified the Tribe at the recommendation of the NAHC and inquired as to whether the Tribe would like to be removed from the City's AB 52 contact list. Spokesperson Collins responded via email on November 11, 2019 stating that the Tribe will respond to any project that the City does not get a comment for and if help is needed, they would like to serve as a backup Tribe.
Kenneth Kahn, Chairperson Santa Ynez Band of Chumash Indians	Certified Mail: October 29, 2019	None to date
Julio Quair, Chairperson Chumash Council of Bakersfield	Certified Mail: October 29, 2019	None to date
Mona Tucker, Chairperson yak tityu tityu yak tilhini- Northern Chumash Tribe	Certified Mail and email: October 29, 2019	Response received via email on October 29, 2019. Chairperson Mona stated that the proposed project is not within the Tribe's territory and recommended that other tribes and families ancestrally affiliated to the proposed project site location be contacted.

Table 3.13-1. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification/ Date of Delivery	Response to City Notification Letters
Julie Lynn Tumamait-Stenslie, Chair Barbareno/Ventureno Band of Mission Indians	Certified Mail: October 25; Email October 28, 2019; Second Certified Mail: October 29, 2019	Response to City's notification email sent October 28, 2019 was received from Ms. Tumamait-Stenslie via email that same day acknowledging receipt of notification. The City has not received any additional information/responses from Ms. Tumamait-Stenslie as a result of the AB 52 notification letters or email.
Mark Vigil, Chief San Luis Obispo County Chumash Council	Certified Mail: October 29, 2019; no email address provided.	None to date

3.13.2 Relevant Plans, Policies, and Ordinances

3.13.2.1 State

The California Register of Historical Resources (CRHR) (Public Resources Code Section 5020 et seq.)

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following Nation Register of Historic Places (NRHP) criteria (PRC Section 5024.1(c)):

- Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Associated with the lives of persons important in our past.
- 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.
- Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR, Section 4852(d)(2)).

> The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing on the NRHP are automatically listed

on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

California Environmental Quality Act

The following California Environmental Quality Act (CEQA) statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources (TCRs):

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5(b)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project does any of the following (14 CCR 15064.5(b)(2)):

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)).

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

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); 14 CCR 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as a TCR (PRC Sections 21074(c) and 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

Assembly Bill 52

Assembly Bill (AB) 52 formalizes the consultation process between lead agencies and tribal representatives, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project area. This includes tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Tribal Cultural Resources (TCRs)

Section 4 of AB 52 adds Sections 21074 (a) and (b) to the PRC, addressing TCRs and cultural landscapes. Section 21074 (a) defines a "tribal cultural resource" as one of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
   b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
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 Section 5024.1.

> In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (PRC Section 5097, et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Health and Safety Code

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5b requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County Coroner has examined the remains. PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5c). The NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

3.13.2.2 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City's General Plan/Local Coastal Land Use Plan includes the following objectives and policies relevant to the proposed project and cultural resources:

- OSC-16 Preserve Carpinteria's Cultural Resources

Implementation Policies

74. Explore all available measures, including purchase, tax relief, purchase of development rights, etc. to avoid development on important archaeological sites. Where these measures are not feasible and development will adversely affect identified archaeological or paleontological resources, require adequate mitigation.

75. Prohibit activities, other than development, which could damage or destroy archaeological sites, including off-road vehicle use and unauthorized collecting of artifacts.

76. Review all proposals for development in or adjacent to cultural resource areas for their potential to impact the resource. Give special consideration to development of facilities that enhance the cooperation, enjoyment or maintenance of these areas.

77. Prior to the city granting a development permit, all archaeological sites (or areas near known archeological sites that have been determined though Phase 1 investigation to potentially include cultural or paleontological resources) must undergo a subsurface test to determine the integrity and significance of the site. Through the project environmental review process, the disposition and/or preservation of any archaeological sites deemed to have significance as a result of the subsurface testing shall be determined. Preservation of cultural/paleontological resource sites through avoidance shall be preferred, however, other methods of disposition may be approved through the environmental review process as identified in the city's Guidelines for the Implementation of CEQA.

78. A qualified archaeologist and Native American observer (acceptable to the city) shall be retained to monitor grading activities on identified archeological sites and in the vicinity of identified archaeological resources. If cultural artifacts or similar material of potential cultural or paleontological importance, are uncovered during grading or other excavation the following shall occur:

    a. The monitor or archaeologist shall halt the grading or excavation and notify the City.
    b. A qualified archaeologist shall prepare a report assessing the significance of the find and recommending any actions to be taken by the applicant(s) prior to the city granting permission for grading to resume.
    c. The removal of cultural artifacts or other materials shall only occur after preparation of the report and in conformance with the recommendations of the report as approved by the City.

Santa Barbara County Article II Coastal Zoning Ordinance

Pursuant to PRC Section 30500 of the California Coastal Act of 1976, Santa Barbara County was required to prepare a Local Coastal Plan (LCP) for portions of the unincorporated areas of Santa Barbara County within the coastal zone. Sections of the Santa Barbara County Article II Zoning Ordinance that may be relevant to the proposed project include standards for archaeological resources (Section 35-65).

Section 35-65. Archaeology

1. When developments are proposed for lots where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.
2. When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.
3. Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan was partially certified by the Coastal Commission on March 17, 1981 and is the Local Coastal Program for unincorporated Santa Barbara County. It details the rules and regulations of land use within Santa Barbara County's coastal areas. The following policies would apply to the proposed project.

- Policy 10-1: All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.
- Policy 10-2: When developments are proposed for parcels where archaeological or other cultural sites are located, Project design shall be required which avoids impacts to such cultural sites if possible.
- Policy 10-3: When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

3.13.3 Thresholds of Significance

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

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
   i. 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

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

b) Result in cumulatively considerable impacts to tribal cultural resources.

3.13.4 Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. 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)?

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Based on the CHRIS and NAHC SLF records searches, including background research as summarized above, no previously recorded archaeological resources of Native American origin or TCRs listed in the CRHR or a local register or in any other of the records reviewed were identified within the Project Site. Further, no TCRs have been identified by California Native American tribes as part of the City's AB 52 notification process, and no California Native American tribes requested consultation with the City. However, there is still a potential for unknown subsurface TCRs to be impacted by the project, which could result in a potentially significant impact. Therefore, protocols for the inadvertent discovery of TCRs is included as **MM-TCR-1**. In coordination with the implementation of **MM-CR-1** through **MM-CR-4**, **MM-TCR-1** will reduce the potentially significant impact to unknown TCRs to a **less than significant level**.

b) Would the project result in cumulatively considerable impacts to tribal cultural resources?

Potentially significant project-specific impacts to tribal cultural resources would be reduced to less than significant with implementation of **MM-CR-1** through **MM-CR-4** and **MM-TCR-1**, avoiding the potential for the proposed project to contribute to cumulative impacts to cultural resources. The project would, therefore, result in a less than cumulatively considerable impact to cultural resources.

3.13.5 Mitigation

The potential exists for significant tribal cultural resources impacts. The project would require the implementation of **MM-CUL-1** through **MM-CUL-4** and **MM-TCR-1** to reduce such impacts.

MM-CR-1 through **MM-CR-4** (see Section 3.4, Cultural Resources)

MM-TCR-1 **Initial ground disturbing activities shall be monitored by a Native American observer in accordance with the following specifications:**

Temporary Impact Areas (equipment staging and materials storage outside trail alignment) - a Native American observer, ancestrally affiliated with the area, shall monitor transport and placement activities until such time that it is reasonable to ascertain that no additional prehistoric archaeological/cultural resources are located within areas of temporary disturbance of the proposed project site.

Permanent Impact Areas not including bridge piling installation (all areas of the trail alignment excepting the bridge approach areas on both sides of the UPRR alignment) – a Native American observer, ancestrally affiliated with the area, shall monitor project implementation during the initial grading and excavation activities until such time as sufficient subsurface soil has been uncovered/excavated to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area.

Bridge piling installation – a Native American observer, ancestrally affiliated with the area, shall monitor the installation of bridge pilings within intact soils and/or any soils deeper than 10 feet below current ground surface to ascertain that no additional prehistoric archaeological/cultural resources are located on the proposed project improvement area.

The monitor/observer shall immediately inform equipment operators in the event archaeological resources are encountered, and shall be empowered to immediately halt construction activity in the area of the discovery until assessment can be completed, and materials recovered as appropriate (refer to CR-2 for additional detail). Monitor reports shall be provided to the City of Carpinteria/County of Santa Barbara on a monthly basis during construction, with a final monitoring report produced at the conclusion of construction activities and provided to the City and County.

Plan Requirements and Timing: Prior to issuance of a grading permit, the City of Carpinteria shall contract with a Native American observer, ancestrally affiliated with the area, to monitor initial ground disturbance activities in accordance with the above criteria. ***Monitoring***: City of Carpinteria/County of Santa Barbara staff shall ensure the Native American observer, ancestrally affiliated with the area, provide monitoring of initial ground disturbance activities in accordance with the above criteria through receipt of field documentation describing each day of monitoring, construction activity occurring during the monitoring, and observed soil profile conditions related to the potential for presence of archaeological resources.

3.13.6 Level of Significance After Mitigation

Potential impacts to tribal cultural resources would be reduced to less than significant with implementation of **MM-CR-1** through **MM-CR-4** and **MM-TCR-1**.

3.14 Utilities and Services Systems

This section describes the existing utilities and service systems of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

3.14.1 Existing Conditions

Water Service

Water is supplied by the Carpinteria Valley Water District (CVWD) through distribution line and storage facilities controlled by CVWD. CVWD connected to state water in November 1997 (City of Carpinteria 2003). There are no water lines adjacent to or underlying the project area. Domestic (potable) water service is currently provided at Rincon Beach County Park by CVWD.

Wastewater Service

Wastewater collection and treatment services in the Carpinteria Valley are managed by the Carpinteria Sanitary District (CSD). This community-wide service agency has the obligation of operating and maintaining this system for the transmission, treatment and disposal of sewage generated within this area. The CSD is also responsible for providing treatment to the level necessary to meet various discharge requirements set by the Regional Water Quality Control Board and other state and federal agencies. Currently, service is provided to areas both within and outside the limits of the City of Carpinteria. Sewage generated in this area is conveyed through district lines to the treatment facility located between Olive and Oak Avenues, south of 6th Street and adjacent to the UPRR (City of Carpinteria 2003). Wastewater collection service via CSD is currently provided at Rincon Beach County Park.

Solid Waste Collection and Disposal

Solid waste produced in the City of Carpinteria is collected by E.J. Harrison and Sons Inc., located in Ventura. E.J. Harrison and Sons Inc. provides solid waste collection and disposal for all residential, commercial, and industrial areas in the City. Once collected, the solid waste is transported to the Gold Coast Material Recovery Facility and the residual is ultimately deposited in the Toland landfill (City of Carpinteria 2003). Waste in the south coast of the County of Santa Barbara, which includes Rincon Beach County Park, is collected and hauled by MarBorg Industries (Santa Barbara County Resource Recovery & Waste Management Division 2021).

3.14.2 Relevant Plans, Policies, and Ordinances

3.14.2.1 Federal

Integrated Waste Management Act of 1989 (AB 341)

The Integrated Waste Management Act of 1989 requires each city, county, and regional agency to develop a source reduction and recycling element of an integrated waste management plan that includes source reduction, recycling, and composting components. A minimum of a 50% diversion rate of all solid waste from landfill disposal or transformation by January 1, 2000 was required and met. The current policy goal of the state is no less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020 to divert as much waste as possible from entering landfills.

3.14.2.2 State

Water Services

Urban Water Management Planning Act

In 1983, the Legislature enacted the Urban Water Management Planning Act (UWMP Act; California Water Code, Sections 10610–10656), which requires specified urban water suppliers within the state to prepare an Urban Water Management Plan (UWMP) and update it every 5 years. State and local agencies and the public frequently use UWMPs to determine if agencies are planning adequately to reliably meet water demands in various service areas. As such, UWMPs serve as an important element in documenting water supply availability and reliability for purposes of compliance with state laws, Senate Bills 610 and 221, which link water supply sufficiency to large land-use development project approvals. Urban water suppliers also must prepare UWMPs, pursuant to the UWMP Act, to be eligible for state funding and drought assistance.

The UWMP provides information on water usage, water supply sources, and water reliability planning within a specified water agency service area. It also may provide implementation schedules to meet projected demands over the planning horizon; a description of opportunities for new development of desalinated water; groundwater information (where groundwater is identified as an existing or planned water source); description of water quality over the planning horizon; and identification of water management tools that maximize local resources and minimize imported water supplies. Additionally, the UWMP evaluates the reliability of water supplies within the specified service area. This includes a water supply reliability assessment, water shortage contingency plan, and development of a plan in case of an interruption of water supplies.

Senate Bills 610 and 221

On January 1, 2002, Senate Bill 610 took effect. Senate Bill 610, which was codified in the Water Code beginning with Section 10910, requires the preparation of a water supply assessment for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. Senate Bill 610 stipulates that when environmental review of certain development projects is required, the water agency that is to serve the development must complete the water supply assessment to evaluate water supplies that are or will be available during normal, single-dry, and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with a proposed project.

Senate Bill 221, enacted in 2001 and codified in the Water Code, requires a city, county, or local agency to include a condition to any tentative subdivision map that a sufficient water supply shall be available to serve the subdivision. The term “sufficient water supply” is defined as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the proposed subdivision project’s projected water demand, in addition to existing and planned future water uses, including agricultural and industrial uses, within the specified service area. Senate Bill 221 further requires any verification of “projected” water supplies to be based on entitlement contracts, capital outlay programs and regulatory permits and approvals.

Executive Order B-29-15

In response to the ongoing drought in California, Executive Order (EO) B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency

standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Solid Waste

Title 14: Natural Resources – Division 7

Title 24 of the California Code of Regulations regarding Natural Resources sets minimum standards for solid waste handling and disposal, including specific regulations regarding waste tire storage and disposal, hazardous waste disposal facilities, construction and demolition and inert debris transfer/processing, construction and demolition waste and inert debris disposal, transfer/processing operations and facilities, siting and design, operation standards, record keeping, and additional operating requirements for facilities. Additional guidance and requirements for compostable materials handling operations and facilities, asbestos handling and disposal, resource conservation programs, farm and ranch solid waste cleanup and abatement, used oil recycling program, electronic waste recovery and recycling, solid waste cleanup among others are also addressed in Title 14.

Title 27: Environmental Protection – Division 2, Solid Waste

Title 27 of the California Code of Regulations regarding Environmental Protection and Solid Waste set the criteria for all waste management units, facilities, and disposal sites including regulations of the CIWMB and SWRCB. Waste classification, siting, construction standards, water quality monitoring and response programs, operating criteria, daily and immediate cover, handling and equipment, controls, gas monitoring and control, closure and post-closure standards, and financial assurances are all aspects covered in Title 27.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000, and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (Cal Recycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, making a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020. AB 341 requires that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020. This bill requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place.

AB 1826 - Mandatory Commercial Organics Recycling

In 2014, the State of California adopted AB 1826, a mandatory commercial organics recycling law that took effect in 2016. "Organic waste" means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper that is mixed in with food waste. As of January 1, 2017, businesses (including public entities) and multifamily residential dwellings of five units or more units that generate 4 cubic yards of organic waste per week are mandated to recycle their organic waste.

3.14.2.3 Local

City of Carpinteria General Plan/Local Land Use Plan

Sanitary Sewer Services. Per the City's general plan, wastewater collection and treatment services are managed by the CSD. CSD has the obligation of operating and maintaining this system for the transmission, treatment, and disposal of sewage generated within their service area. The general plan states that the District is responsible for providing treatment to the level necessary to meet requirements set by the Regional Water Quality Control Board and other state and federal agencies (City of Carpinteria 2003).

Domestic Water Service. Per the City's general plan, domestic water service in Carpinteria is subordinate to two components: supply and distribution system. Water is supplied by CVWD through distribution line and storage facilities controlled by CVWD. CVWD connected to state water in November 1997 (City of Carpinteria 2003).

The City of Carpinteria General Plan/Local Land Use Plan Public Facilities & Services Element includes various goals, objectives, and policies related to ensuring the provision of adequate essential utilities and infrastructure systems for proposed development. Policies specifically related to the proposed project include:

Objective PF-1 To ensure the provision of adequate water supplies by minimizing consumption and investigating new sources either in existing supply or outside existing sources.

Policy PF-1d The City shall reevaluate existing water facility regulations and amend said codes to require new development to utilize water-efficient devices responsive to our water source area.

Objective PF-2 Ensure adequate service systems for the transmission, treatment and disposal of sewage and wastewater generated within this area as well as the disposal of trash, green waste and recyclable material.

Objective PF-6 To ensure that new development is adequately served by utilities and does not impact existing service areas in the community.

Policy PF-6a The ultimate responsibility to ensure that the facilities (including systemwide improvements) needed to support the project are available at the time that they are needed shall be that of the sponsor or development projects.

Policy PF-6c Development projects within Carpinteria shall be required to: 1. construct and/or pay for the new on-site capital improvements that are required to support the project; 2. ensure that all new off-site capital improvements that are required by the project are available prior to certificate of occupancy; 3. be phased so as to ensure that the capital facilities that will be used by the new development are available prior to certificates of occupancy; 4. ensure that, in

the event that public services or off-site capital facilities are impacted prior to development, the level of service provided to existing development will not be further impacted by the new development; and 5. provide for the provision of public services, and shall not increase the cost of public services provided to existing development.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019) includes goals, objectives, and policies related to ensuring the provision of adequate essential utilities and infrastructure systems for proposed development, implementing regulations in the interest of the public health and safety, and providing for the general welfare of the community. Policies specifically related to the proposed project include:

Policy 2-4 Within designated urban areas, new development other than that for agricultural purposes shall be serviced by the appropriate public sewer and water district or an existing mutual water company, if such service is available.

Policy 2-5 Water-conserving devices shall be used in all new development.

Policy 2-6 Prior to issuance of a development permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and the applicant, that adequate public or private services and resources (i.e., water, sewer ads, etc.) are available to serve the proposed development. The applicant shall assume full responsibility for costs incurred in service extensions or improvements that are required as a result of the proposed project. Lack of available public or private services or resources shall be grounds for denial of the project or reduction in the density otherwise indicated in the land use plan. Where an affordable housing project is proposed pursuant to the Affordable Housing Overlay regulations, special needs housing or other affordable housing projects which include at least 50% of the total number of units for affordable housing or 30% of the total number of units affordable at the very low income level are to be served by entities that require can-and-will-serve letters, such projects shall be presumed to be consistent with the water and sewer service requirements of this policy if the project has, or is conditioned to obtain all necessary can-and-will-serve letters at the time of final map recordation, or if no map prior to issuance of land use permits.

Policy 2-3 In the furtherance of better water management, the County may require applicants to install meters on private wells and to maintain records of well extractions for use by the appropriate water district.

Policy 2-4 Within designated urban areas, new development other than that for agricultural purposes shall be serviced by the appropriate public sewer and water district or an existing mutual water company, if such service is available.

Policy 2-5 Water-conserving devices shall be used in all new development.

Policy 2-9 The existing water supply of the Carpinteria County Water District (67,541 AFY) shall be divided between the County and the City of Carpinteria on the basis of historical use; 30 percent (2,262 AFY) shall be allocated for use with the City and

70 percent shall be allocated for use within the County. The uncommitted water surplus in the Carpinteria County Water District may be increased proportionate to the amount of additional documented water such as that provided by reinjection programs and/or water reclamation and reservoir facilities which are designed to collect and reclaim wastewater and runoff from swales, creeks, or waterways which the district has the legal right to so utilize. The total uncommitted water surplus within the district shall be reevaluated on an annual basis.

Action:

The County's portion of the uncommitted water surplus shall be allocated for priority uses, including but not limited to the following:

1) Agriculture: Water shall be distributed between open field crops and greenhouses, nurseries, and cover crops on the basis of established water usage, i.e., approximately 56 percent of the agricultural water supply shall be used for open field crops and 44 percent for greenhouses, nurseries, and other cover crop production.
2) Residential development: New development shall be based on the 10 to 1 ratio (between urban development in the City of Carpinteria and residential development in the unincorporated area of the County) established by the State Coastal Commission. (For example, since 30 percent of the water surplus is currently being allocated to the City of Carpinteria for urban uses, 3 percent shall be allocated to the County for residential development within the rural neighborhoods delineated on the land use plan maps.)
3) Public recreation
4) Visitor-serving commercial: Two areas allow for this use on the land use plan map;-the eastern end of the Carpinteria bluffs and-the Carpinteria Camper Park on North Via Real west of the City.

Policy 2-10 Annexation of a rural area(s) to a sanitary district or extensions of sewer lines into rural area(s) as defined on the land use plan maps shall not be permitted unless required to prevent adverse impacts on an environmentally sensitive habitat, to protect public health, or as a logical extension of services.

3.14.3 Thresholds of Significance

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

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
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.
f) Result in cumulatively considerable impacts relating to utilities and service systems.

3.14.4 Impact Analysis

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

The proposed project is a shared-use path that would be used primarily for bicycle and pedestrian travel. The project would therefore not create additional demands in the areas of natural gas, electricity or telecommunications facilities. The project would moderately alter the existing drainage patterns of the site, via regrading of project slopes and short-term removal of vegetation, as well as through introduction of the impervious trail surface (approximately 1 acre of new impervious surface), resulting in a potentially significant impact. Increased stormwater run-off during construction and until new vegetation is established are addressed under Section 3.8, Hydrology and Water Quality, as **Mitigation Measure (MM) WAT-1, MM-WAT-2, MM-WAT-3,** and **MM-WAT-4**. Stormwater run-off from the trail surface would be collected by a concrete v-ditch adjacent to the trail and released through a series of short storm drains with discharge along the adjacent beach. The storm drains would be installed by the project and would be the responsibility of the project sponsors to maintain. **MM-WAT-5** requires maintenance of the storm drains in perpetuity to prevent failure of such systems. Potential impacts related to stormwater system facilities would be **less than significant with mitigation.**

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 proposed project would not require new water supply to serve the trail and its supporting facilities; minimal water would be required for landscape irrigation and maintenance purposes. Recycled water would be used for irrigation if locally available. Following restoration and during the plant establishment period, native plants would require regular irrigation during the dry season until they are established; approximately one to two years. The Carpinteria Valley Water District releases an annual report which assesses its water supply and indicates the District has excess water to meet the demands of all lands within the District's jurisdiction into the foreseeable future (CVWD 2017). A minimal amount of water would be required during construction of the proposed trail for fugitive dust control during earthwork activities. Furthermore, project construction is not anticipated to adversely affect or disrupt water service. The total amount of water required during construction and operation of the project would not impact the availability of water to the District's service area. Impacts would be **less than significant.**

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 proposed project is a shared-use path that would be used primarily for bicycle and pedestrian travel. The project would not include the use of septic systems or alternative wastewater disposal systems; therefore, the proposed project is not anticipated to generate a need for new or altered sewer system facilities. Wastewater generated by users of the proposed trail would be serviced by existing facilities at the Rincon Beach County Park. The proposed project would not adversely affect the wastewater treatment provider's ability to serve existing commitments. Potential impacts related to sewer system facilities would be **less than significant.**

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?

The proposed project consists of a shared-use path that would not generate a substantial amount of solid waste that would adversely affect landfill capacity or would breach national, state or local standards. Solid waste

generated by using the trail would be limited to trash and recycling materials deposited in the waste receptacles provided at the existing dirt parking lot at the west end of the trail or in Rincon Beach County Park; both waste and recycling receptacles are currently provided at Rincon Beach County Park. Construction waste generated by the project, including concrete, steel rebar, exported soils and wood for concrete forms, would be taken to an appropriate construction waste recycling facility in Santa Barbara or Ventura County, to avoid such waste from entering a landfill facility. Impacts would be **less than significant.**

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

As mentioned in criteria d), the project will not generate a substantial amount of solid waste that would affect landfill capacity or breach national, state, or local standards. Potential impacts would be **less than significant.**

f) Would the project result in cumulatively considerable impacts relating to utilities and service systems?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to utility and service impacts, resulting in a potentially significant impact. However, with implementation of required mitigation measures (**MM-WAT-1** through **MM-WAT-5),** utility and service system impacts of the project would be reduced to less than significant or no impacts; the project would therefore have a less than considerable contribution to potential cumulative impacts in the region.

3.14.5 Mitigation

The proposed project could have potentially significant impacts upon stormwater systems and cumulative impacts to stormwater systems, for which mitigation has been required (**MM-WAT-1** through **MM-WAT-5**). **MM-WAT-1** through **MM-WAT-5**, outlined in Section 3.8, would be implemented to reduce potential project impacts to stormwater runoff during construction and until new vegetation is established. The proposed project would result in less than significant or no impacts to utilities and service systems other than stormwater systems. All potential impacts upon utilities and services systems would be reduced to less than significant with incorporation of required mitigation measures.

3.14.6 Level of Significance After Mitigation

As discussed above, the project could have potentially significant impacts on stormwater systems. With implementation of mitigation **MM-WAT-1** through **MM-WAT-5**, impacts would be reduced to less than significant.

4 Effects Found Not to be Significant

Section 15128 of the California Environmental Quality Act (CEQA) guidelines requires that an Environmental Impact Report (EIR) briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant for the proposed Carpinteria Rincon Trail Project (project) and the reasons for these less-than-significant impact or no impact determinations are discussed herein.

The environmental issues addressed in this chapter include the following:

- Agricultural and Forestry Resources
- Energy
- Mineral Resource
- Population and Housing
- Public Services
- Wildfire

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4.1 Agriculture and Forestry Resources

This section describes the existing agriculture and forestry resources conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

4.1.1 Existing Conditions

Agricultural soil is defined as soil that is utilized or suitable for agricultural crop production. The project site and immediately adjacent lands are designated on California Department of Conservation Important Farmland Maps as "Urban and Built-Up Land" and "Other Land" (DOC 2020). In addition, as shown in Figure 4.1-1, Williamson Act Land Contracts in Project Vicinity, the project site is not designated under a Williamson Act Contract. However, several nearby properties are under a Williamson Act Contract. Soils within the project site have been classified as Xerorthents, cut and fill areas (USDA 2011). Xerorthents can be rock, concrete, asphalt or other debris or earthy fill and typically consist of mechanically removed and mixed soil material in cut and fill areas used primarily for highways and urban development. Soils in the project area are rated as "Not Prime Farmland" (USDA NRCS 2011).

No agricultural resources or forest land are present within the project site nor have any been thought to exist in modern times.

4.1.2 Relevant Plans, Policies, and Ordinances

4.1.2.1 Federal

Farmland Protection Policy Act

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. Further, the FPPA directs federal programs to be compatible with state and local policies for the protection of farmlands. The FPPA does not authorize the federal government to regulate the use of private or non-federal land or in any way affect the property rights of owners of such land. Because the proposed project does not have federal involvement, the FPPA is not applicable in this situation.

4.1.2.2 State

California Department of Conservation

The California Department of Conservation (DOC) is the state agency that administers both the State Farmland Mapping and Monitoring Program (FMMP) and the California Land Conservation Act, more commonly known as "The Williamson Act." The Important Farmland Mapping Program compiles information of the state's important farmlands, including tracking farmland proposed for development, and provides this information to state and local government agencies for use in planning and for decision makers and decision-making bodies.

Farmland Mapping and Monitoring Program

The FMMP Important Farmland Maps are based on a classification system that combines technical soil ratings and current land use. Important Farmland Categories include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-up Land, and Other Land. FMMP's Important Farmland Maps require that Prime Farmland, meet the following criteria: (1) Prime Farmland must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date, which equates to four years (DOC 2020); and (2) The soil must meet the physical and chemical criteria for Prime Farmland or Farmland of Statewide Importance as determined by the USDA NRCS. NRCS compiles lists of which soils in each survey area meet the quality criteria. Factors considered in qualification of a soil by NRCS (DOC 2020) include the following:

- Water moisture regimes, available water capacity, and developed irrigation water supply
- Soil temperature range
- Acid-alkali balance
- Water table
- Soil sodium content
- Flooding (uncontrolled runoff from natural precipitation)
- Erodibility
- Permeability rate
- Rock fragment content
- Soil rooting depth

The soils information presented in this analysis is derived from statewide soils maps that have been prepared by both state and federal government entities. The California DOC, Division of Land Resource Protection, and the USDA NRCS both conduct regular and ongoing assessments of soil types and then prepare detailed soil maps. Once soils are mapped, they are grouped into the following categories that have specific definitions. The categories and definitions are as follows:

Prime Farmland. In California, the FMMP maps all statewide farmlands. The FMMP's soils study area is contiguous with modem soil surveys developed by the USDA. The FMMP requires that any land designated as Prime must meet the criteria related to land use and soils. As such, farmland with the optimal combination of physical and chemical features to sustain long-term agriculture is described as Prime. The land has been determined to have the soil quality, growing season, and moisture supply needed to produce sustained high crop yields (DOC 2020).

Farmland of Statewide Importance. As with Prime Farmland, Farmland of Statewide Importance must also meet both the criteria described above with respect to land use and soils and is similar to the Prime Farmland category. The difference is that Farmland of Statewide Importance tolerates greater shortcomings of the soil, such as greater slopes or less ability to store moisture (DOC 2020).

Unique Farmland. This category of farmland is categorized as having lesser quality soils but is still used for the production of leading agricultural crops. This farmland is typically irrigated but can also include non-irrigated orchards or vineyards found in some climatic zones in the state. These lands must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date (DOC 2020).

Farmland of Local Importance. Lands that have been determined by local jurisdictional authorities such as county boards of supervisors or local advisory committees to have a specific importance to the local agricultural economy are considered Farmland of Local Importance (DOC 2020).

The FMMP has three other categories of land that are generally more limited in terms of agriculture value:

Grazing Land. Land that is particularly suited to the grazing of livestock given existing vegetation. This particular designation was developed in concert with the California Cattlemen's Association, University of California Cooperative Extension, and a host of other groups with an interest in grazing and livestock (DOC 2020).

Urban and Built-Up Land. This category refers to land that is occupied by structures with a building density of at least one unit to 1.5 acres or six structures to a 10-acre parcel. This category includes land uses such as residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other developed purposes (DOC 2020).

Other Land. All other lands that do not fall into the categories above are subsumed into this category. Examples of these lands include low-density rural developments, brush, timber wetland, riparian areas not suitable for livestock grazing, confined livestock poultry or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. In addition, vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land (DOC 2020).

The California Land Conservation Act of 1965

The California Land Conservation Act of 1965, better known as the Williamson Act as mentioned above, provides for reduced property taxation on agricultural land in exchange for a 10-year continuously rolling agreement. The purpose of the Williamson Act is the long-term conservation of agricultural and open space lands. The act establishes a program to enroll land in Williamson Act whereby the land is restricted to agricultural, open space, or recreational uses or uses deemed to be "compatible" with the agricultural land uses or compatible recreational uses as outlined in the act in exchange for reduced property tax assessments. The Act requires that each participating local government has a set of uniform rules for administering Williamson Act and Farmland Security Zone contracts within its jurisdiction. None of the project site is under a Williamson Act contract. Several nearby properties are under a Williamson Act contract as shown on Figure 4.1-1.

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy (California Government Code Section 51296–51297.4). Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone contracts must be for an initial term of at least 20 years. As with Williamson Act contracts, each year an additional year is automatically added to the contract term unless a notice of nonrenewal is given. In return for a further 35% reduction in the property tax value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses during the term of the contract. Farmland Security Zone contracts may also be cancelled, but only upon finding that cancellation would both service the purposes of the Williamson Act, and that cancellation would be in the public interest (California Government Code, Section 51297). None of the project site is under a Farmland Security Zone contract.

California Public Resources Code

The California Public Resources Code defines "forest land" and "timberland" as follows (California Public Resources Code, Sections 12200[g] and 4526, respectively):

> 'Forest land' is land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.
>
> 'Timberland' means land, other than land owned by the federal government and land designated by the board [State Board of Forestry and Fire Protection] as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others.

4.1.2.3 Local

The Santa Barbara County Uniform Rules for Agricultural Preserves and Farmland Security Zones (referred to as "Uniform Rules") are the set of rules the County uses to implement the Agricultural Preserve program, established by the California Land Conservation Act of 1965, also known as the Williamson Act. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which may be lower than normal because they are based upon farming and open space uses as opposed to full market value (County of Santa Barbara 2018).

The Uniform Rules define eligibility requirements and qualifying uses that each participating landowner must follow in order to receive a reduced property tax assessment under the Williamson Act. Often the Uniform Rules are more restrictive than the underlying agricultural zoning requirements. The County of Santa Barbara's Agricultural Preserve program has a high level of participation, covering approximately 550,000 acres, representing approximately 75% of all privately held agricultural lands in the County.

4.1.3 Thresholds of Significance

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

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural 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.

f) Result in cumulatively considerable impacts to agriculture and forestry resources.

4.1.4 Impact Analysis

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

No Impact. As discussed under Sections 4.1.1 and 4.1.2, the California Department of Conservation State FMMP designates soils occurring within the project site as "Urban and Built-Up Land" and "Other Land" (DOC 2020). These categories are not considered suitable to support agriculture, but instead are suited to land uses such as residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other developed purposes (DOC 2020).

As such, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, there would be **no impact** and no mitigation measures are required.

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

No Impact. The portion of the project site within the City has been zoned for Resort Zone District use (City of Carpinteria 2016), while the portion within the County of Santa Barbara is zoned Transportation Corridor and Recreation (County of Santa Barbara 2020); consequently none of the project site carries agricultural zoning. As discussed above, the project site is not enrolled in a Williamson Act contract. Therefore, the proposed project would not conflict with existing zoning for agricultural use nor with a Williamson Act contract and as such, **no impact** would occur and no mitigation measures are required.

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))?

No Impact. As discussed above and in Sections 4.1.2.2 and 4.1.2.3, the project site does not contain any forest or timberland, and is not zoned for forest land, timberland, or timberland production, as defined in the California Public Resources Code and Government Code. California Public Resources Code, Section 12220(g), defines "forest land" for the purposes of CEQA as land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

California Government Code Section 51104(g) defines "Timber," "Timberland," and "Timberland Production Zone" for the purposes of CEQA as either trees of any species maintained for eventual harvest for forest production purposes ("Timber"); privately owned land, or land acquired for state forest purposes, used for growing and harvesting timber ("Timberland"); or "Timberland Production Zone" which means an area zoned and used for growing and harvesting timber.

As such, the proposed project would not 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)). Therefore, **no impact** would occur, and no mitigation measures are required.

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

As discussed under Sections 4.1.1 and 4.1.2, there are no existing forest lands located on the project site or in the vicinity of the site as defined in the California Public Resources Code or Government Code 51104(g)). The proposed project would construct a 16-foot wide (10-foot wide path with 3-foot wide paved shoulder along both sides) and approximately 2,800-foot long shared-use trail that would provide safe access for bicyclists and pedestrians traveling from Carpinteria Avenue in the City of Carpinteria to Rincon Beach County Park in Santa Barbara County at the Ventura County line; this use would not prevent adjacent areas from supporting forest uses in the future. The proposed project would also not result in loss of any existing forest land. **No impact** would occur, and no mitigation measures are required.

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 or conversion of forest land to non-forest use?

No Impact. As discussed under Sections 4.1.1 and 4.1.2, the project site has no agricultural resources or forest land within the area of project effect, nor have any been thought to exist in modern times. The proposed project would construct a 16-foot wide (10-foot wide path with 3-foot wide paved shoulder along both sides) and approximately 2,800-foot long shared-use trail that would connect existing bike and pedestrian facilities on Carpinteria Avenue in the City of Carpinteria to Rincon Beach County Park in Santa Barbara County. Because the project would close a gap in existing trail systems, and in that use of the trail by pedestrians and cyclists would not affect the productivity of existing agriculture and forest lands in the region, the proposed project would not cause other changes that would result in conversion of Farmland to non-agricultural use or forest land to non-forest use. Therefore, **no impact** would occur, and no mitigation measures are required.

f) Would the project result in cumulatively considerable impacts to agriculture and forestry resources?

No Impact. As discussed under Sections 4.1.1 and 4.1.2, the project site has no agricultural resources or forest land within the project site nor have any been thought to exist in modern times. The proposed project would not convert agricultural land to non-agricultural uses nor convert forest land to non-forest use. Therefore, the proposed project would not contribute to a cumulative impact. As such, **no impact** would occur, and no mitigation measures are required.

4.1.5 Level of Significance Prior to Mitigation

As discussed above, no significant direct or indirect impacts related to agriculture and forestry resources would result from the proposed project.

4.1.6 Conclusion

As described above, the project site has no agricultural resources or forest land within the project site nor have any been thought to exist in modern times. The proposed project would not conflict with agriculturally zoned land and would not convert any agricultural, farmland or forest land to other uses. The proposed project would also not conflict with any regulatory federal, state, and local policies. Therefore, there would be no impact.

AERIAL SOURCE: CIRGIS 2017
California Department of Conservation

FIGURE 4.1-1

Williamson Act Land Contracts in Project Vicinity

Carpinteria Rincon Trail EIR

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4.2 Energy

This section describes the existing energy conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

4.2.1 Existing Conditions

4.2.1.1 Electricity

According to the U.S. Energy Information Administration (EIA), California used approximately 250,379 gigawatt hours of electricity in 2017 (EIA 2019a). By sector in 2017, commercial uses utilized 46% of the state's electricity, followed by 35% for residential uses, and 19% for industrial uses (EIA 2019a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the commercial sector is lower than any other state except Hawaii (EIA 2018).

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

SCE receives electric power from a variety of sources. According to the 2018 SCE Power Content Label, SCE has renewable energy at 36% of its overall energy resources, with geothermal resources at 8%, wind power at 13%, large hydroelectric sources at 1%, and solar energy is at 13% (SCE 2019). The California Renewables Portfolio Standard (RPS) Program establishes a goal for California to increase the amount of electricity generated from renewable energy resources to 20% by 2010, and to 33% by 2020. Recent legislation revised the current RPS target for California to obtain 50% of total retail electricity sales from renewable sources by 2030, with interim targets of 40% by 2024, and 45% by 2027 (CPUC 2016).

4.2.1.2 Natural Gas

According to the California Energy Commission (CEC), California used approximately 2,154,030 cubic feet of natural gas in 2019 (EIA 2019b). In 2017 (the most recent year for which data is available), by sector, industrial uses utilized 37% of the state's natural gas, followed by 32% from electric power, 19% from residential, 11% from commercial, and 1% from transportation uses (CEC 2018a). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (EIA 2019b).

The Southern California Gas Company (SoCalGas) provides the project with natural gas service. The territory serviced by SoCalGas encompasses approximately 20,000 square miles and more than 500 communities. In the California Energy Demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas's service territory. As of 2017, approximately 7.2 billion therms were used in SoCalGas's

service area per year. Around the time of project construction in 2022, natural gas demand is anticipated to be approximately 7.7 billion therms per year in SoCalGas's service area (CEC 2018c). In 2020, the total capacity available is also estimated to be 3.9 billion cubic feet per day[1] (California Gas and Electric Utilities 2020). This amount is approximately equivalent to 3.98 billion thousand British thermal units (kBTU) per day or 39.8 million therms per day. Over the course of a year, the available capacity would therefore be 14.5 billion therms per year, which is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas.

4.2.1.3 Petroleum

According to the CEC, California used approximately 24.5 billion gallons of petroleum in 2018 (EIA 2019c). This equates to a daily use of approximately 51 million gallons of petroleum. By sector, transportation uses utilize approximately 85.5% of the state's petroleum, followed by 11.1% from industrial, 2.5% from commercial, 0.9% from residential, and 0.01% from electric power uses (EIA 2018). In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. Production of petroleum in the United States was 9.7 million barrels per day during April 2015, which was the highest output since April 1971 (CEC 2016).

4.2.2 Relevant Plans, Policies, and Ordinances

4.2.2.1 Federal

Federal Energy Policy and Conservation Act

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

Energy Independence and Security Act of 2007

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

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

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2013). The U.S. Environmental Protection Agency is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

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

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

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

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

4.2.2.2 State

Warren-Alquist Act

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

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

Integrated Energy Policy Report (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (California Public Resources Code, Section 25301a). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 IEPR was adopted January 31, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on

Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast (CEC 2019). The 2020 IEPR Update is currently in progress but is not anticipated to be adopted until February 2021.

State of California Energy Action Plan

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

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

Senate Bill 1078 (2002)

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

Senate Bills 107 (2006), X1-2 (2001), 350 (2015), and 100 (2018)

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

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

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

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

Assembly Bill 1007 (2005)

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

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

In 2006, the state legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 4.6.2 in Section 4.6, Greenhouse Gas Emissions, of this EIR.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards would further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards would use approximately 53% less energy than those under the 2016 standards (CEC 2018b). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018b).

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emissions standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be those whose primary use is noncommercial

personal transportation in the state. The bill required that CARB set GHG emissions standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009 through 2012 standards resulted in a reduction in approximately 22% of GHG emissions compared to emissions from the 2002 fleet, and the 2013 through 2016 standards resulted in a reduction of approximately 30%.

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

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

Sustainable Communities Strategy

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

4.2.2.3 Local

Santa Barbara County Comprehensive Plan

Goals and policies pertaining to Energy are addressed in the Energy Element of the comprehensive plan (County of Santa Barbara 2015a). The following goals and policies from the Energy Element are applicable to the project:

Goal 3 Transportation and Land Use

Provide a composition of land-uses and transportation programs that reduces dependency on automobiles.

Policy 3.1 Alternative Transportation and Support Facilities

Enhance opportunities for alternative transportation

Research 3.1.1 The County, in coordination with the Santa Barbara County Association of Governments and cities within the County, shall prepare a report for the Board of Supervisors which provides details on enhancing alternative transportation (e.g., mass transit, vanpools, bikeways, etc.). The report shall include the following tasks:

a) Identify steps that would increase transportation, considering factors of attractiveness, and cost-savings;

b) Ridership of alternative security, convenience,

c) Estimate expected increase in ridership affected by each step;

d) Estimate the financial investment necessary to implement each step

e) Recommend those steps that appear to present the most return on investment;

f) Evaluate all existing, projected and potential funding sources for the purpose of enhancing investment in alternative transportation; and

g) Recommend steps to realize needed funding.

Public Service 3.1.1 The County shall continue to develop programs that encourage the use of alternative modes of transportation, including bike-and-ride and park-and-ride facilities.

Public Service 3.1.2 The County shall work with the Santa Barbara County Association of Governments and adjacent jurisdictions to pursue a commuter rail system as a potential mass transit option for the County.

Public Service 3.1.3 The County shall work with the Santa Barbara County Association of Governments, appropriate organizations, local mass transit agencies, educational institutions, driver education, Department of Motor Vehicle, etc., to inform the public about available transportational choices, and to inform the transit agencies about ways to make alternative transportation more attractive, etc.

Policy 3.4 Recreation Near Homes

Encourage coordination of scheduling recreational events (e.g., organized sports, arts and handicrafts for minors) at locations that would reduce recreation-related transportation by automobile.

Public Service 3.4.1 The County should work with local recreational organizations and schools to encourage neighborhood-based recreational practices and events to reduce vehicular trips.

Regulatory Incentive 3.4.1: The County should seek to designate and establish neighborhood parks when preparing Community Plans.

Policy 3.5 Bikeways and Support Facilities

The County shall consider the completion of an integrated bikeway system, linking residences with commercial centers, work locations, schools, parks and mass transit facilities to be a high priority for promoting the use of the bicycle as an alternative mode of transportation.

Research 3.5.1 See Research 3.1.1; bikeways shall be included in this study.

Public Service 3.5.1: The County shall continue to work with Santa Barbara County Association of Governments, local jurisdictions, bicycle organizations, educational institutions, driver education, Department of Motor Vehicles, and Caltrans to develop outreach programs designed to inform the public of available transportational choices. Outreach programs shall include:

a) Information on existing and proposed bikeways;
b) Information on cycling safety, commuting and recreational issues; and
c) Information on how much money a person can save by bicycling to work or using mass transit

Public Service 3.5.2 The County shall encourage the Santa Barbara County Association of Government (SBCAG) to continue to encourage bicycling. Pro-active efforts shall continue to help jurisdictions with fund-raising, coordination between jurisdictions, focusing on intermodal links, dissemination of information, etc. If and when this effort requires dedication of additional staff time, the County should encourage SBCAG to so dedicate this time.

Public Service 3.5.3 The County shall continue to commit staff to facilitate bicycle planning, design, construction, and maintenance of bikeways and supporting facilities, updating the Bicycle Element, including efforts to fund these activities from outside grants.

Public Service 3.5.4 To the extent feasible, the County shall accommodate bicycle lanes in all new roadway improvements consistent with adopted bikeway plans.

Public Service 3.5.5 The County should encourage all of the cities within the county to provide safe bicycle access to all major county facilities through construction of bicycle paths, lighting, signage, etc.

Public Service 3.5.6 The County shall survey bike use (count bicycles) during traffic counts to measure the effectiveness of these programs.

Public Service 3.5.7 The County shall encourage and work with the local transit agencies to equip buses with bicycle racks and coordinate location of transit facilities with bicycle access.

Policy 3.6 Pedestrian-Oriented Designs

The County shall improve the convenience, comfort and safety for pedestrians.

Public Service 3.6.1 The County shall develop a list of recommendations for designing pedestrian-oriented facilities; the recommendations shall include details on widths of sidewalks, providing direct paths, lighting requirements, promoting signage, locating parking lots behind buildings, pedestrian-scale access, visual interest, etc.

Encouragement 3.6.1 New development should include direct, safe and pleasant pedestrian routes connecting new and existing origins and destinations.

Goal 4 Water Use and Solid Waste

Increase the efficiency of water and resource use to reduce energy consumption associated with various phases of using resources (pumping, distribution, treatments, heating, etc.).

Policy 4.1 Construction

Encourage recycling and reuse of construction waste to reduce energy consumption associated with extracting and manufacturing virgin materials.

Public Service 4.1.1 The County will serve as a source of information regarding current markets and collection services for recycling and reuse of construction-generated waste.

Public Service 4.1.2 The County, in coordination with Ventura and San Luis Obispo counties, and cities within these counties, should develop a local guide to recycled construction products.

Public Service 4.1.3 To encourage recycling and use of recycled materials in construction and demolition, copies of *A Resource Guide to Recycled Construction Products and Energy Efficiency* published by the Public Works Department, Integrated Solid Waste Management Office, City of Los Angeles, and *California Materials Exchange (CALMAX)* published by California Integrated Waste Management Board, and any local version that is developed, shall be distributed by the County with issuance of a building or demolition permit.

Encouragement 4.1.1 The County should require an initial assessment of construction-generated waste and require recycling bins at those construction sites where it would be feasible for the contractor to recycle the material. County should consider this encouragement to be feasible when added cost for recycling, if any, is minimal compared to the overall benefits of recycling, and when recyclers are regionally accessible.

Encouragement 4.1.2 The County shall develop guidelines for managing construction-generated wastes. These guidelines must be economically feasible for the contractor, considering the constraints of a highly competitive industry. Once guidelines have been developed, new developments would be recommended to recycle construction waste.

Policy 4.2 Recycled Materials

The County shall require adequate areas for collecting and loading recyclable materials in development projects, and shall further address recycling logistics in its zoning ordinance.

Encouragement 4.2.1 The County shall amend the zoning ordinances to include a recycling access ordinance by following the Model Ordinance developed by the California Integrated Waste Management Board. [The Solid Waste Reuse and Recycling Act requires the adoption of a recycling access ordinance, or adoption of the state's model ordinance.]

Regulatory Incentive 4.2.1 The County shall revise its zoning ordinances as appropriate to alleviate or reduce unnecessary impediments that may inhibit recycling.

Policy 4.3 Reuse of Asphalt

Promote reuse of asphalt removed from roads and paved structures within the county and use of recycled materials in roadway and paved surface construction.

Internal Action 4.3.1 The County shall increase applications of reusing existing road materials and use of recycled materials (e.g., asphalt-rubber, recycled base material, crush rock material, recycled toilets, and the cold in-place method of re-paving), when feasible.

Policy 4.8 Water Efficient Landscaping

The County shall require (per Government Code, Section 65590, Article 10.8) water-efficient landscape design and irrigation systems in new and renovated developments and at public parks and facilities. [Energy-savings are accrued through reduced water pumping and treatment, and reduced disposal and maintenance.]

Encouragement 4.8.1 To encourage energy conservation and as required by Groundwater Policy 3.6 of the Conservation Element, water-conserving landscaping and irrigation shall be incorporated into all new developments, where appropriate, effective, and consistent with applicable law.

Internal Action 4.8.1 The County shall continue to give priority to native and drought-tolerant plants and to install water-efficient irrigation at County parks and facilities.

Energy and Climate Action Plan

The County's Energy and Climate Action Plan (ECAP) as discussed in Section 3.6.2.3 also addresses energy use within the County (County of Santa Barbara 2015b). Although the ECAP established greenhouse gas reduction goals for the County, the measures with which the County would reduce greenhouse gas emissions to meet those goals included those to reduce energy consumption. Measures to reduce energy consumption within the ECAP include implementation of Community Choice Energy, renewable energy, and industrial energy efficiency.

City of Carpinteria

The City has adopted measures within its Open Space, Recreation & Conservation Element of its General Plan to reduce energy consumption (City of Carpinteria 2003). Measures identified within Section 3.6.2.3 for reducing GHG emissions would also help to reduce energy consumption.

The City also adopted the Energy Action Plan in August 2016 (City of Carpinteria 2016) to identify the City of Carpinteria's long term vision and goals on achieving energy efficiency in local government facilities. This document specifically addresses energy consumption by the City's facilities and operations. The City of Carpinteria aims to increase the energy efficiency in their own facilities in order minimize energy costs and protect the environment, with the understanding that energy generation is directly related to greenhouse gas emissions. This document is intended to reduce greenhouse gas emissions and lower municipal energy costs by identifying projects and priorities for energy efficiency work throughout the City's facilities and operations.

The Energy Action Plan will outline a strategy for increased energy efficiency, based on available funding and energy reduction goals. The following sections include: an outline of the City's current work in the field of energy efficiency; energy usage data across municipal buildings and operations; and goals for energy reduction from 2015 baseline levels. Specifically, this EAP outlines a goal of a 15% reduction in electricity consumption from the 2015 baseline level by the year 2020. The function of the EAP is to serve as a working document that allows the City of Carpinteria flexibility if new regulations are adopted, new facilities are brought online, or new funding sources become available.

4.2.3 Thresholds of Significance

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

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.

4.2.4 Impact Analysis

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?

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment, such as computers, may be needed inside temporary construction trailers. However, the electricity used for such activities would be temporary and would have a negligible contribution to the project's overall energy consumption.

Operational Use

The project does not include any components that would require the use of electricity during operation. Therefore, the project would have no impact on electricity during operation.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would have a negligible contribution to the project's overall energy consumption.

Operational Use

Similar to electricity, the project does not include any components that would require the use of natural gas during operation. Therefore, the project would have no impact on natural gas during operation.

Petroleum

Construction Use

Petroleum would be consumed throughout construction of the project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities, and haul trucks involved in relocating dirt around the project site would rely on diesel fuel. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed that construction workers would travel to and from the project site in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during construction. CalEEMod was used to estimate construction equipment usage; results are included in Appendix B. Based on that analysis, diesel-fueled construction equipment would operate for an estimated 95,616 hours.

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2020). The estimated diesel fuel use from construction equipment is shown in Table 4.2-1.

Table 4.2-1. Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Site Preparation	3	24.18	10.21	2,368.70
Grading	3	143.12	10.21	14,017.49
Trail Construction	2	38.74	10.21	3,794.38
Bridge Construction	5	6.38	10.21	625.27

Table 4.2-1. Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Paving	2	16.73	10.21	1,638.79
Architectural Coating	1	2.55	10.21	250.08
			Total	**22,694.70**

Sources:
[a] Appendix B.
[b] The Climate Registry 2020.
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled. Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 4.2-2, Table 4.2-3, and Table 4.2-4.

Table 4.2-2. Construction Worker Vehicle Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Site Preparation	256	0.6015	8.78	68.51
Grading	1792	4.1846	8.78	476.61
Trail Construction	2688	6.0798	8.78	692.46
Bridge Construction	280	0.6333	8.78	72.13
Paving	192	0.4343	8.78	49.46
Architectural Coating	120	0.2714	8.78	30.91
			Total	**1,390.08**

Sources:
[a] Appendix B.
[b] The Climate Registry 2020.
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Table 4.2-3. Construction Vendor Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	0	0.00	10.21	0.00
Trail Construction	1,152	12.98	10.21	1,270.94
Bridge Construction	120	1.35	10.21	132.39
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
			Total	**1,403.33**

Sources:
[a] Appendix B.
[b] The Climate Registry 2020.
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Table 4.2-4. Construction Haul Truck Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)[a]	kg CO_2/Gallon[b]	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	11,764	446.88	10.21	43,768.44
Trail Construction	0	0.00	10.21	0.00
Bridge Construction	0	0.00	10.21	0.00
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
			Total	43,768.44

Sources:
[a] Appendix B.
[b] The Climate Registry 2020.
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

As shown in Tables 4.2-1 through 4.2-4, the project is estimated to consume approximately 69,257 gallons of petroleum during the construction phase. By comparison, approximately 27.9 billion gallons of petroleum would be consumed in California over the course of the project's construction phase, based on the California daily petroleum consumption estimate of approximately 52.9 million gallons per day (CEC 2019). In 2022, the total mobile source petroleum consumption within the County of Santa Barbara is estimated to be 164 million gallons (CARB 2020). In 2022, the total construction equipment petroleum consumption within the County of Santa Barbara is estimated to be 2.9 million gallons (CARB 2020). The project would also be required to comply with CARB's Airborne Toxics Control Measures, which restrict heavy-duty diesel vehicle idling time to five minutes. The project would be subject to the In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) which applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). This includes vehicles that are rented or leased (rental or leased fleets). The Off-Road Regulation also requires off-road equipment fleets to become more efficient over-time through equipment retrofits, replacements, or retirements. The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology (BACT) requirements.

Operational Use

The project would result in petroleum consumption during operation due to periodic maintenance of the trail. As discussed in Section 3.2.4, it was assumed that one employee vehicle would travel to the site per week. Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2020). The project is estimated to consume 17 gallons of gasoline and 1 gallon of diesel per year, for a total of 18 gallons of petroleum per year. By comparison, California as a whole consumes approximately 19.3 billion gallons of petroleum per year (CEC 2019). It is forecasted that in 2024, approximately 156 million gallons of petroleum in Santa Barbara County will be consumed (CARB 2020).

Over the lifetime of the project, the fuel efficiency of the vehicles being used by the residents is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, as mentioned previously, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single,

coordinated package of standards. The approach also includes efforts to support and accelerate the number of plug-in hybrids and zero-emissions vehicles in California (CARB 2013). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by 2020, and 18% by 2035 for light-duty passenger vehicles in the planning area for SBCAG. As such, operation of the project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

Significance of Impact

Electricity

The electricity used for construction activities would be temporary and would have a negligible contribution to the project's overall energy consumption. The project would not consume electricity during operation. Therefore, the electricity consumption of the project would not be inefficient or wasteful, and impacts would be **less than significant**.

Natural Gas

The natural gas used for construction activities would be temporary and would have a negligible contribution to the project's overall energy consumption. The project would not consume natural gas during operation. Therefore, the natural gas consumption of the project would not be inefficient or wasteful, and impacts would be **less than significant**.

Petroleum

In summary, because petroleum use during construction would be temporary and relatively minimal, consumption associated with the project would not be wasteful or inefficient during construction. Additionally, although the project would increase petroleum use during operation as a result of periodic maintenance, the use would be a small fraction of the statewide and countywide use and, due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the project would not be inefficient or wasteful and impacts would be **less than significant**.

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

Title 24 of the California Code of Regulations contains energy efficiency standards for residential and non-residential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.

Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and consumption. The project would be required to comply with Title 24, Part 6, per state regulations. In addition, Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the project under the CALGreen Code. As discussed under the previous threshold, the project would result in a nominal increased demand for electricity, natural gas, and petroleum.

The City's Energy Action Plan outlines a goal of a 15% reduction in electricity consumption from the 2015 baseline level by the year 2020. The project would not result in an increase in long-term consumption of electricity or natural gas during operation. Similarly, the project would not interfere with the goals within the

County's ECAP to reduce energy use. Therefore, the project would not interfere with the City and County's goal to reduce energy consumption.

Because the project would comply with Title 24, Part 6 and Part 11, would be consistent with the City's Energy Action Plan and the County's ECAP, no conflict with existing energy standards and regulations would occur. Therefore, impacts would be **less than significant**.

4.2.5 Level of Significance Prior to Mitigation

As discussed above, no significant direct or indirect impacts related to energy would result from the proposed project.

4.2.6 Conclusion

Impacts would be less than significant.

4.3 Mineral Resources

This section describes the existing mineral resources of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

4.3.1 Existing Conditions

4.3.1.1 Minerals

Mineral resource mapping from the California Department of Conservation (DOC) Geologic Survey classifies the project site and surrounding lands as Mineral Resource Zone 3 (MRZ-3) (DOC 1989). MRZ-3 designates areas containing mineral deposits whose significance cannot be evaluated from available data. The City's General Plan/Local Coastal Land Use Plan states that there are no non-oil mineral resources of substantial quantities within the City's planning area (City of Carpinteria 2003). The County's Comprehensive Plan identifies mineral resources within the County and does not indicate the presence of mineral resources in the portion of the project site in unincorporated Santa Barbara County (County of Santa Barbara 2010).

4.3.1.2 Oil and Gas

Oil is the only substantial mineral resource known to be present within the general vicinity of the project site. Oil-related activities in the Carpinteria region consist of offshore drilling and extraction platforms, onshore oil storage facilities, a product transportation terminal, and a natural gas processing plant (City of Carpinteria 2003). There are ten oil platforms currently off the coast of Carpinteria, only three (Platforms Grace, Gail, and Habitat) pipe extracted oil and natural resources to facilities within the City of Carpinteria (City of Carpinteria 2003). Platform Grace ceased production in 1998. The Carpinteria Processing Facility is located approximately 1.2 miles west of the western end of the proposed project. The facility includes a crude oil storage tank, pipeline shipping pumps, metering skids, a gas compression plant, a natural gas liquids recovery plant, offices, tanks, maintenance shops and various equipment and facilities. The Carpinteria Processing Facility is in the initial stages of decommissioning,, as are one or more of the platforms that pipe oil and gas to the Carpinteria Processing Facility.

According to the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, there are no active or abandoned oil wells within the project site (DOGGR 2021). An abandoned oil well does exist within the Rincon Beach County Park property, outside of the project limits.

4.3.2 Relevant Plans, Policies, and Ordinances

4.3.2.1 Federal

There are no federal regulations related to mineral resources that apply to the proposed project.

4.3.2.2 State

Department of Conservation, Division of Oil, Gas, and Geothermal Resources

Division of Oil, Gas, and Geothermal Resources (DOGGR) is responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. DOGGR's regulatory program promotes the sensitive development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards.

All oil and gas wells drilled and constructed in California must adhere to strict requirements. These requirements include general laws and regulations regarding the protection of underground and surface water, and specific regulations regarding the integrity of the well casing, the cement used to secure the well casing inside the bore hole, and the cement and equipment used to seal off the well from underground zones bearing fresh water and other hydrocarbon resources. (See California Public Resources (CPR) Code sections 3106, 3203, 3211, 3220, 3222, 3224, 3255; Title 14 of the California Code of Regulations, sections 1722.2, 1722.3, 1722.4, etc.). In addition, the DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards. DOGGR also has the authority under the CCR to adopt field rules for oil and gas pools or zones in a field when sufficient geologic and engineering data is available from previous drilling operations. The administrative boundaries of each pool or zone for which field rules have been adopted and geologic and engineering information is available to accurately describe subsurface conditions are designated through a ministerial process by DOGGR. Applicable field rules identify down hole conditions and well construction information that oil and gas operators should consider when drilling and completing onshore oil and gas wells. In addition to DOGGR facilities regulations, operators that have facilities in designated areas must have Spill Prevention, Control and Countermeasure Plans per U.S. Environmental Protection Agency (EPA) requirements.

Surface Mining and Reclamation Act of 1975

The mineral resources addressed in this report pertain to those resources that are classified under the State Mining and Reclamation Act of 1975 (SMARA). SMARA mandated the initiation of mineral land classification by the State Geologist in order to help identify and protect mineral resources in areas within the State subject to urban expansion and other irreversible land uses that would preclude mineral extraction. SMARA also allowed the designation of lands containing mineral deposits of regional or statewide significance. SMARA was amended (1980) to provide for the classification of nonurban areas subject to land-use threats incompatible with mining. The classification of land within California takes place according to a priority list that was established by the State Mining and Geology Board (SMGB) in 1982, or when SMGB is petitioned to classify a specific area. The State Geologist's SMARA classification activities are carried out under a single program for urban and nonurban areas of the state.

Mineral lands are mapped using the California Mineral Land Classification System according to jurisdictional boundaries, mapping all mineral commodities at one time in the area, including aggregate, common clay, and dimensions stone. Priority is given to areas where future mineral resource extraction could be precluded by incompatible land use or to mineral resources likely to be mined during the 50-year period following their classification.

SMGB established MRZs to designate lands that contain mineral deposits. Accordingly, the MRZ classification system is used to evaluate an area's mineral resources pursuant to SMARA. A "resource" is a concentration of naturally occurring solid, liquid, or gaseous material in such form and amount that economic extraction of a

commodity from the concentrations is currently potentially feasible. A "reserve" is that part of the resource base that could be economically extracted or produced within the foreseeable future. For any given mineral resource, an area may be classified as MRZ-1, MRZ-2, MRZ-3, or MRZ-4, as follows:

MRZ-1: Areas where the available geologic information indicates that no significant mineral deposits are present, or where it is judged that no significant likelihood exists for their presence.

MRZ-2: Areas where the available geologic information indicates that significant mineral deposits are present, or that there is likelihood for the presence of significant mineral deposits.

MRZ-3: Areas where the available geologic information indicates that mineral deposits are likely to exist, the significance of which cannot be determined from available data ·

MRZ-4: Areas where available geologic information is inadequate for assignment into any other MRZ, or where there is not enough information available to determine the presence or absence of mineral deposits.

The MRZ classifications are applied based on available geologic information and on geologic appraisal of the mineral resource potential of the land, including geologic mapping and other information on surface exposures, drilling records, and mine data; and on socioeconomic factors such as market conditions and urban development patterns.

Special Publication 51

Special Publication 51 prepared by SMGB in cooperation with the Office of Mine Reclamation and the California Geological Survey, contains California Surface Mining and Reclamation Policies and Procedures.

California Geological Survey (Formerly California Division of Mines and Geology)

The California Geological Survey (CGS, formerly the California Division of Mines and Geology within the State Department of Conservation) has responsibility for identifying and assisting in the utilization of mineral deposits, and identifying geological hazards, including fault locations.

4.3.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The Open Space, Recreation and Conservation Element of the General Plan/Local Coastal Land Use Plan identifies oil as the only known mineral resource in the City and also notes: "On-shore oil and gas facilities in Carpinteria are largely defunct and are now incompatible with residential neighborhoods that are established" (City of Carpinteria 2003). General Plan/Local Coastal Land Use Plan objectives and policies which could be considered relevant to the proposed project include the following.

Objective OSC-12: Maintain an understanding of the oil industry and its exploration objectives.

OSC-12a. Remain informed of activities in the oil industry, both plans and regulations.

OSC-12b. Work with the oil and gas plant operator(s) to remove obsolete equipment, to upgrade all facilities to current safety standards, and to consolidate activities in order to eliminate redundancy.

County of Santa Barbara Coastal Land Use Plan

The County's Coastal Land Use Plan (County of Santa Barbara 2019*)* applies to coastal areas of the County, including the portions of the project site located within the County. There are no policies in the County's Coastal Land Use Plan related to mineral resources that would be relevant to the proposed project.

4.3.3 Thresholds of Significance

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

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.
c) Result in cumulatively considerable impacts relating to mineral resources.

4.3.4 Impact Analysis

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?

While California DOC designated the vicinity surrounding and including the project site as MRZ-3, indicating that the significance of mineral resources could not be evaluated from available data (DOC 1989), there is no evidence of mineral extraction activities having occurred within the project site. Also, within the project site, there are no active or abandoned oil wells (DOGGR 2021). In addition, no mineral resources are identified to exist in the project site or vicinity (although offshore oil platforms are present) in local planning documents, including the Carpinteria General Plan/Local Coastal Land Use Plan and County of Santa Barbara Comprehensive Plan. Hence, construction and operation of the proposed project would not result in the loss of availability of mineral or oil resources that have been identified as valuable at the regional or state level. **No impacts** would occur, and no mitigations are required.

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 California DOC designated the vicinity surrounding and including the project site as MRZ-3 (DOC 1989); however, the proposed trail occurs within a corridor that has supported transportation facilities (i.e., highway and railroad) spanning more than a century, in which substantial topographic modification has occurred to accommodate existing and previous transportation alignments. As a result, mineral extraction (including oil) has not been compatible with transportation activities within the project corridor and has not occurred to date. The project site is also designated for open space and recreational uses (City of Carpinteria 2003; County of Santa Barbara 2010), with which future mineral extraction activities would be incompatible. Oil wells exist on offshore platforms in the region, but there are no facilities associated with the platforms that are located within the project site. Finally, no mineral resources are identified to exist in the project site or vicinity in local planning documents, including the Carpinteria General Plan/Local Coastal Land Use Plan and County of Santa Barbara

Comprehensive Plan. The proposed project would therefore not result in the loss of availability of known mineral resources as delineated on a local land use plan. **No impacts** would occur, and no mitigations are required.

c) Would the project result in cumulatively considerable impacts relating to mineral resources?

Cumulative development throughout the Carpinteria Valley could incrementally contribute to the loss of availability of mineral resources, through conversion of undeveloped land and limitations on areas available for mineral extraction and via consumption of mineral resources during the construction process. However, the proposed project would have no impacts on the availability of mineral resources. As such, the proposed project would not contribute to any potentially significant cumulative impacts upon mineral resources.

4.3.5 Level of Significance Prior to Mitigation

As discussed above, no impacts related to mineral resources would result from the proposed project.

4.3.6 Conclusion

Mineral resources including oil have not been identified to be present within the project site. Therefore, no impacts on mineral resources would occur from the proposed project.

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4.4 Population and Housing

This section describes the existing population and housing of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

4.4.1 Existing Conditions

The proposed project would be located within the City of Carpinteria (City), and within the County of Santa Barbara (County). The U.S. Census Bureau estimates that the City had a population of 13,385 residents in 2019 (U.S. Census Bureau 2020). Projected residential buildout within the City is 6,321 residential units, with the majority of growth in attached single-family homes and multifamily developments of varying size. Per the City's General Plan/Local Coastal Land Use Plan, the City is near buildout due to land use constraints (City of Carpinteria 2003). Santa Barbara County Association of Governments (SBCAG) projects the City's population will reach its maximum of 14,700 people by 2045, with 5-year population growth slowing to 1% or less by 2030. SBCAG also projects a smaller growth in households for the City, with households projected to number 5,700 units by 2050 (SBCAG 2019).

The portion of the project site within the City has a General Plan/Coastal Land Use Plan land use designation of Visitor-Serving Commercial (City of Carpinteria 2003) and has been zoned for Resort Zone District use (City of Carpinteria 2016). The portion of the project within the County of Santa Barbara is designated as Other Recreation/Open Space and is zoned Transportation Corridor and Recreation (County of Santa Barbara 2020). No housing is currently present on the project site, nor is the site designated for residential uses.

4.4.2 Relevant Plans, Policies, and Ordinances

4.4.2.1 Federal

There are no federal regulations associated with population and housing that are relevant to the proposed project.

4.4.2.2 State

There are no state regulations associated with population and housing that are relevant to the proposed project.

4.4.2.3 Local

Regional Housing Needs Assessment

The state requires communities develop a Regional Housing Needs Allocation (RHNA) Plan to be incorporated into General Plan Housing Elements by cities and counties in the region. Within Santa Barbara County, the RHNA Plan is developed by SBCAG. The RHNA Plan evaluates projected population growth and jobs, affordability of housing, and other factors that affect housing problems to identify housing needs and allocate a share of the region's housing need to jurisdictions within the RHNA Plan. Housing needs are subdivided into household income levels to help jurisdictions plan for the appropriate number and mix of housing affordable to various income levels. Jurisdictions use the RHNA Plan when updating their General Plan Housing Elements to assure zoning and land is available to accommodate their projected housing needs. The RHNA projections for Carpinteria have been incorporated into the 2015-2023 Housing Element of the City's General Plan/Local Coastal Land Use Plan (City of Carpinteria 2014).

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City of Carpinteria's General Plan/Local Coastal Land Use Plan Housing Element is updated every 8 years and plans for existing and future housing needs in the community in compliance with the RHNA Plan. The 2015-2023 Housing Element includes the following goals and policies relevant to the proposed project organized by program category:

Program Category 1 Make Sites Available to Accommodate the RHNA

Goal Attain additions to the housing supply that meet the housing needs of all economic segments

Goal Maintain a jobs-housing balance or ratio within the 0.75 to 1.25 range suggested by SBCAG

Policy Adequate Sites: Provide sufficient sites to the General Plan/Coastal Plan and zoning map to meet the housing needs allocated to the City by the RHNA Plan

Policy Public Services and Facilities: Ensure that public services and facilities have the capacity to support the need for the new residential development allocated to the City by the RHNA Plan.

The City is currently updating their General Plan/Local Coastal Land Use Plan. All elements of the General Plan/Local Coastal Land Use Plan, aside from the Housing Element, which was updated in 2011, will be revised during the General Plan/Local Coastal Land Use Plan update. The updated plan is expected to become available in 2021.

County of Santa Barbara Comprehensive Plan

The County of Santa Barbara's Comprehensive Plan Housing Element includes goals and policies to address housing development and needs in the unincorporated County. The portion of the County within the project site is not zoned for residential use; therefore, Housing Element policies are not relevant to the proposed project.

County of Santa Barbara Coastal Land Use Plan

The County of Santa Barbara's Coastal Land Use Plan includes policies to address housing development in the coastal zone in the County. The portion of the County within the project site is not zoned for housing; therefore, housing policies in the Coastal Land Use Plan are not relevant to the proposed project.

4.4.3 Thresholds of Significance

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

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
c) Result in cumulatively considerable impacts relating to population and housing.

4.4.4 Impact Analysis

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)?

The proposed project is not anticipated to result in an increase in population. The proposed project would generate short-term employment opportunities during construction of the proposed trail. Given the temporary duration of project construction of approximately 24 months and availability of construction workers within Santa Barbara and Ventura Counties, project construction is unlikely to generate a significant increase in population and/or new development that could result in a significant impact to the environment. The proposed trail maintenance would be performed by existing City or County parks and recreation/public works maintenance staff. There would be no increase in part or full-time staff equivalents. Therefore, the project would not induce substantial unplanned population growth in an area, either directly or indirectly, and **no impacts** would occur.

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

As discussed in Section 4.5.2, no housing is currently present on the project site, nor is the site designated for residential uses. Therefore, the proposed project would not include the demolition of existing housing, construction of new housing, or displacement of people, and **no impacts** would occur.

c) Would the project result in cumulatively considerable impacts relating to population and housing?

As discussed above, construction of the project is not anticipated to result in the creation of permanent employment opportunities in the community or the attraction of new residents. In addition, the trail construction would not remove any existing residences and is not located on land zoned for residential uses. Consequently, the project would not contribute to cumulatively considerable impacts relating to population and housing, resulting in **no impacts.**

4.4.5 Level of Significance Prior to Mitigation

As discussed above, no significant impacts related to population and housing would result from the proposed project.

4.4.6 Conclusion

No impact to population or housing would occur.

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4.5 Public Services

This section describes the existing public services of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

4.5.1 Existing Conditions

Fire Protection

Carpinteria is serviced by the Carpinteria-Summerland Fire Protection District (CSFPD). The CSFPD covers 40 square miles along the Pacific Ocean including land area within the City of Carpinteria and the County of Santa Barbara. The CSFPD is bordered on the east by the Santa Barbara/Ventura County line and to the west by the community of Montecito. The CSFPD provides the Carpinteria Valley with adequate staff and facilities to serve the area in the event of a fire or emergency. There are currently two fire stations that serve the area: one in the City (Walnut Avenue) and one in Summerland. Current response times range from 3 minutes to 5 minutes. All fire fighters (full-time and reserves) have EMT-1 training (City of Carpinteria 2003).

Wildland or brush fires are defined as those fires occurring in undeveloped areas commonly covered by heavy vegetation, typically in the hills and canyons. The Santa Barbara County Fire Department generally responds to wildland fires outside the urban limit zone defined by the CSFPD (City of Carpinteria 2003).

Police Protection

Law enforcement services within the incorporated City of Carpinteria are provided by the Santa Barbara County Sheriff's Department.

Schools

Schools within the Carpinteria Planning Area are administered by the Carpinteria Unified School District, which includes Aliso Elementary School, Canalino Elementary School and Canalino Preschool, Carpinteria High School, Carpinteria Middle School, Carpinteria Family School, Carpinteria Children's Project at Main, Rincon High School and Summerland Elementary School (CUSD 2019).

Parks

Carpinteria has approximately 97.96 acres of City parks within the City boundary, administered and maintained by the Carpinteria Parks & Recreation Department. Carpinteria State Beach is also within the City boundary, which is operated and maintained by the California Department of Parks and Recreation. Various County parks in the area include Rincon Beach County Park and Toro Canyon Park. Rincon State Beach Park is located just east of Rincon Beach County Park.

4.5.2 Relevant Plans, Policies, and Ordinances

4.5.2.1 Federal

There are no federal regulations that pertain to the local delivery of public services including fire and police protection, public education, or parks and recreation.

4.5.2.2 State

California Penal Code

All law enforcement agencies within the State of California are organized and operated in accordance with the applicable provisions of the California Penal Code. This code sets forth the authority, rules of conduct, and training for peace officers. Under state law, all sworn municipal and county officers are State Peace Officers.

California Department of Forestry and Fire Protection: State Responsibility Areas

Open space and undeveloped areas identified as having a fire hazard and not falling under federal jurisdiction, are referred to as State Responsibility Areas (SRAs) because the state has the primary financial responsibility of preventing and suppressing fires within such areas. The agency responsible for suppressing fires in SRAs is CAL FIRE. Local fire agencies are responsible for suppressing fires in private property within City limits. Legislative mandates passed in 1981 (SB 81) and 1982 (SB 1916) that became effective on July 1, 1986, required CAL FIRE to develop and implement a system to rank the fire hazards in California. Areas were rated as moderate, high or very high based primarily on fuel types. Thirteen different fuel types were considered using the 7.5-minute quadrangle maps by the US Geological Survey as base maps. SRAs include all lands regardless of ownership, except for cities and federal lands. The project site is within the City of Carpinteria and County of Santa Barbara, and no part of the project site is included in the CalFire SRA maps.

California Code of Regulations Title 24, Part 2, and Part 9

The 2016 California Building Standards Code was published July 1, 2016, with an effective date of January 1, 2017. Part 2 of Title 24 of the California Code of Regulations (CCR) refers to the California Building Code, which contains regulations and general construction building standards of state agencies, including administrative, fire, and life safety, and field inspection provisions. Part 2 was updated in 2017 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains fire-safety-related building standards referenced in other parts of Title 24. This code is preassembled with the 2000 Uniform Fire Code of the Western Fire Chiefs Association. This code was revised in January 2017 with a change in the base model/consensus code from the Uniform Fire Code series to the International Fire Code.

California Fire Code

The California Fire Code and Office of the State Fire Marshal provides regulations and guidance for local agencies in the development and enforcement of fire safety standards. The California Fire Code also establishes minimum requirements that would provide a reasonable degree of safety from fire, panic, and explosion (24 CCR 9).

Senate Bill 50 School Financing and Mitigation Requirements

Currently, school financing and developer mitigation obligations are governed by SB 50 (Government Code Section 65995 et seq.), which was passed in 1998 and has been amended several times since then. SB 50 was enacted to provide comprehensive school facility finance and mitigation reform, which assists in providing school facilities to serve students generated by new development projects. SB 50 allows school districts to collect school facilities fees from developers of new residential and commercial/industrial building space.

SB 50 substantially revamped prior statutory and regulatory methods of providing state monies for school construction by eliminating the apportionment of state funds method used by the State Allocation Board (SAB) under the old system originally enacted as part of the Leroy F. Greene State School Building Lease Purchase - Law of 1976 and replacing it with the Leroy F. Greene School Facilities Act of 1998. SB 50, among other things, established a new state program by which the SAB provides state per-pupil grant funding for new school facilities construction and reconstruction, as well as modernization of existing facilities. An important objective of SB 50 was to provide, on a one-time basis, a baseline analysis of unhoused students and existing capacity in a local school district's school facilities to determine eligibility for new state school construction funding. In addition to providing 50% of the state funding and construction costs, which include construction cost containment mechanisms through limitations on the state per-pupil grant amounts (grant amounts are adjusted annually by the SAB to reflect construction cost changes), the state also provides funding for 50% of the site acquisition and site development costs for a school site.

SB 50 specifically provides that it is the exclusive method for financing school facilities, and provides the methods for mitigating environmental effects related to the adequacy of school facilities. Nevertheless, school districts and developers may enter into separate mitigation agreements to provide enhanced mitigation measures beyond the requirements of SB 50. SB 50 establishes three levels of developer fees that can be imposed upon new development that are deemed to be "full and complete facilities mitigation." The school fees that are charged towards new residential development are state mandated and beyond the City's control.

Comprehensive School Safety Plan

It is the intent of the Comprehensive School Safety Plan that all California public schools that offer kindergarten and/or grades 1 through 12 are inclusive and are operated by school districts, and develop a comprehensive school safety plan that addresses the safety concerns identified through a systematic planning process. The schools must work in cooperation with local law enforcement agencies, community leaders, parents, pupils, teachers, administrators, and other persons who may be interested in the prevention of campus crime and violence (California Education Code, Title 1, Section 32280).

Quimby Act

Cities and counties have been authorized since the passage of the 1975 Quimby Act (California Government Code, Section 66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services communitywide. Cities and counties with a high ratio of park space to inhabitants

can set a standard of up to five acres per 1,000 people for new development. Cities and counties with a lower ratio can only require the provision of up to three aces of park space per 1,000 people. The calculation of a city or county's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of city/county-owned parkland.

4.5.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The Public Facilities and Services Element of the General Plan/Local Coastal Land Use Plan includes goals, objectives, and policies related to providing essential public services, implementing regulations in the interest of the public health and safety, and providing for the general welfare of the community. Objectives and policies specifically related to the proposed project include (City of Carpinteria 2003):

Objective PF-3: The City shall strive to maintain the best possible police and fire safety services for the community.

- **PF-3a.** The City shall endeavor to monitor relevant statistics and enforcement criteria to assure adequate police service.
- **PF-3b.** The City shall begin evaluation of potential programs that can resolve seasonal tourist-related police service demands.
- **PF-3c.** The City shall cooperate with the fire district for the purpose of determining district needs and to provide development mitigations as indicated by the study.
- **PF-3d.** The City shall strive to increase district/City communication by initiating development review procedures that incorporate district interaction at the earliest times possible.

Objective PF-4 To assist the school district in continued provision of high-quality educational opportunities for all of the community's youth.

- **PF4a** To continue efforts to cooperatively resolve service demands for educational facilities.
- **PF4b** To encourage school district input to new development proposals by improved review procedures.
- **PF4c** The City will cooperate with the Carpinteria Unified School District to ensure sufficient capacity for increases in student population caused by future development projects.

Objective PF-5 To provide a high quality and broad range of public services, facilities and utilities to meet the needs of all present and future residents of the Carpinteria Planning Area.

- **PF-5b.** The City will require proposed new developments to pay a fair share of the cost of needed public facilities and services. Further, in areas of the city designated for nonresidential use but where residential use may be permitted, the City shall monitor total residential development and report annually to the School, Fire, Water and Sanitary districts to permit proper facilities planning by these special districts.
- **PF-5c.** The City will ensure that new development will not adversely impact services and facilities provided to existing development.
- **PF-5d.** Detailed master plans will be prepared for major facilities and service systems.

PF-5e. The City will improve and extend services and facilities to the extent possible, within the limits of available funding.

PF-5f. Carpinteria will focus City funds on service and facilities improvements to meet existing needs prior to committing funds to the extension of services and facilities to new areas.

PF-5g. The City will coordinate with the appropriate agencies/districts and plan for public facilities to be located and sized to discourage expansion of urban development beyond the transition area of the urban/rural boundary. New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses allowed consistent with the provisions of the City's Local Coastal Program.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019) includes goals, objectives, and policies related to ensuring the provision of adequate essential public services for proposed development, implementing regulations in the interest of the public health and safety, and providing for the general welfare of the community. Policies specifically related to the proposed project include:

Policy 2-6: Prior to issuance of a development permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and the applicant, that adequate public or private services and resources (i.e., water, sewer ads, etc.) are available to serve the proposed development. The applicant shall assume full responsibility for costs incurred in service extensions or improvements that are required as a result of the proposed project. Lack of available public or private services or resources shall be grounds for denial of the project or reduction in the density otherwise indicated in the land use plan. Where an affordable housing project is proposed pursuant to the Affordable Housing Overlay regulations, special needs housing or other affordable housing projects which include at least 50% of the total number of units for affordable housing or 30% of the total number of units affordable at the very low income level are to be served by entities that require can-and-will-serve letters, such projects shall be presumed to be consistent with the water and sewer service requirements of this policy if the project has, or is conditioned to obtain all necessary can-and-will-serve letters at the time of final map recordation, or if no map prior to issuance of land use permits.

Santa Barbara County Office of Emergency Management and Emergency Management Plan

The Santa Barbara County Office of Emergency Management (SBCOEM) is responsible for planning and coordination of the Santa Barbara Operational Area, which includes the cities of Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, and Solvang. The SBCOEM acts as a liaison between these cities; special districts including the SBCAPCD, fire districts, sanitary districts, school districts, vector control districts, and water districts; and volunteer organizations such as the American Red Cross. The SBCOEM also coordinates with adjoining offices of emergency services in Ventura and San Luis Obispo counties through several annual meetings. The Santa Barbara County Emergency Management Plan was developed for use by the County and the cities within the Santa Barbara Operational Area (County of Santa Barbara 2013). The Emergency Management Plan addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies.

4.5.3 Thresholds of Significance

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

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
   i. Fire protection?
   ii. Police protection?
   iii. Schools?
   iv. Parks?
   v. Other public facilities?

b) Result in cumulatively considerable impacts relating to public services.

4.5.4 Impact Analysis

The following analysis of potential project impacts is based upon the above thresholds of significance.

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

Fire Protection

According to the City of Carpinteria's General Plan/Coastal Plan Fire Hazards Zones Map, the project site is located within a moderate fire hazard area (City of Carpinteria 2003). Carpinteria – Summerland Fire Protection District Fire Station #1, located at 911 Walnut Avenue, approximately 2 miles west of the project site, is the closest fire station to the project site that has the primary responsibility for responding to emergencies (CSFPD 2019). The proposed project would not involve the construction of buildings or introduce substantial numbers of people into the area. The proposed project would also not require the construction of new fire facilities to accommodate the proposed trail and amenities. Further, the project may help reduce the fire danger from the current setting as proposed native plantings, vegetation control, and fire-resistant project materials would be less prone to fire danger than the currently dry and unmaintained vegetation sources on-site, and the paved trail would accommodate light-duty firefighting equipment access to trail portions below the UPRR alignment from the Rincon Beach County Park and to portions above the UPRR alignment from the connection to the Carpinteria Avenue Eastern terminus, resulting in **less than significant impacts** to fire protection services.

Police Protection

The proposed project is not anticipated to require the construction of new police facilities. The Santa Barbara County Sheriff's Department, Carpinteria Station, is located at City Hall at 5775 Carpinteria Avenue,

approximately 1.3 miles west of the project site (Santa Barbara County Sheriff's Department 2019). The proposed project would not result in the construction of new buildings that could present unique challenges for police protection services on-site or result in an increase in population that would warrant the construction of new facilities to provide adequate police protection services. The trail would permit more convenient patrol of the project area by Park Rangers and County Sheriff personnel, resulting in a potential marginal benefit to police protection, and resulting in **less than significant impacts** to police protection services.

Schools

The proposed project is not anticipated to generate an increase in population that would have an adverse effect on existing schools or warrant the construction of new or expanded schools. Therefore, there would be **no impact** of the project related to the need for development of new school facilities.

Parks

The proposed project is not anticipated to generate an increase in population that would warrant the construction of additional new parks. The proposed project would provide a safe connection from Carpinteria Avenue to Rincon Beach County Park, thereby increasing the ease of pedestrian and bicycle access to the Rincon Beach County Park, which is an objective of the proposed project. As the project would facilitate safe access to the Rincon Beach County Park, it would be anticipated to increase recreational use of the Rincon Beach County Park and the Carpinteria Trail system. However, the increased use is not anticipated to result in the degradation of Rincon Beach County Park, other nearby parks, trails, or associated recreational facilities and amenities. Also, the Rincon Trail would enhance access between the existing Rincon Point residential community and the newly established Rincon Bluffs preserve, benefitting the Rincon Point population as well as other Ventura County residents that would be able to walk or bike to the Rincon Bluffs preserve area. Lastly, the Rincon Trail itself represents a recreation resource for biking and hiking, with opportunities including enjoyment of the natural scenery (refer also to Section 3.10, Recreation). The proposed project would require additional and occasional trail maintenance. Initially, the landscape areas would require weed management and irrigation during the dry months. Park design attributes such as the use of native plants would help to reduce costs associated with watering and plant care. Annual estimated maintenance costs are expected to be minimal. Therefore, the project would result in **less than significant impacts** to park resources.

Other Public Facilities

The proposed project is not anticipated to generate an increase in population that would increase the demand for any other public facilities. There would be **no impact.**

b) Would the project result in cumulatively considerable impacts relating to public services?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to public service impacts. However, current and future projects proposed in the City of Carpinteria and County of Santa Barbara will be required be consistent with applicable General Plan/Coastal Plan policies, and to pay pertinent Development Impact Fees (DIFs) and all special district fees. The proposed project would not result in significant impacts to any public services. As such, the proposed project would not result in a considerable contribution to any potentially significant cumulative impacts upon public services.

4.5.5 Level of Significance Prior to Mitigation

As discussed above, no significant impacts related to public services would result from the proposed project.

4.5.6 Conclusion

The proposed project would neither construct structures nor place combustible materials on the site, thereby avoiding any increases in the demand for police or fire protection services. The project would not lead to an increase in local population that could increase demands for school or parks resources. The construction and operation of the trail would also not place additional demands on other public facilities. As such the project would have no impacts on public services and no mitigation would be required or recommended.

4.6 Wildfire

This section describes the existing wildfire conditions of the proposed Carpinteria Rincon Trail Project (project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the project.

4.6.1 Existing Conditions

Wildland or brush fires are defined as those fires occurring in undeveloped areas commonly covered by heavy vegetation, typically in the hills and canyons. The project site may be characterized as a ridgeline and associated slopes, supporting areas of native vegetation as well as bare ground. While the native vegetation within the project area could become involved in a wildland fire, the project site is somewhat isolated from ignition sources by virtue of the presence of the U.S. Highway 101 corridor along the northern side and the Pacific Ocean along the southern side. These features would also act to limit the spread of a wildland fire originating within the project area or immediately adjacent urban areas to the west (City of Carpinteria) or east (Rincon Point).

With respect to fire protection resources, the Carpinteria Planning Area is serviced by the Carpinteria- Summerland Fire Protection District (CSFPD). The CSFPD covers 40 square miles along the Pacific Ocean including land area within the City and the County. The CSFPD is bordered on the east by the Santa Barbara/Ventura County line and to the west by the community of Montecito. There are currently two fire stations that serve the area: one in the City (Walnut Avenue) and one in Summerland. Current response times range from 3 minutes to 5 minutes. All fire fighters (full-time and reserves) have EMT-1 training (City of Carpinteria 2003). The Santa Barbara County Fire Department generally responds to wildland fires outside the urban limits associated with Cities within the County, and would therefore participate in responding to a wildfire incident involving portions of the trail within unincorporated County lands.

4.6.2 Relevant Plans, Policies, and Ordinances

4.6.2.1 Federal

Healthy Forests Restoration Act

The 2003 Healthy Forests Restoration Act gives incentives for communities to engage in comprehensive forest planning and prioritization. This legislation includes statutory incentives for the U.S. Forest Service and the Bureau of Land Management to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuel reduction priorities (USFS 2021).

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection but are not laws or codes unless adopted as such or referenced as such by the California Fire Code or the local fire agency.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995, updated in 2001, and again in 2009, by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions (USFS et al. 2009). An important component of the Federal Wildland Fire Management Policy is the acknowledgement of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles:

- Firefighter and public safety are the first priorities in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The plan continues to provide invaluable technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (USFS 2019).

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

International Wildland-Urban Interface Code

The International Wildland–Urban Interface Code is published by the International Fire Code and is a model code addressing wildfire issues.

4.6.2.2 State

California Code of Regulations

Title 14 Natural Resources

Title 14, Division 1.5, Chapter 7, Subchapter 3, Fire Hazard, sets forth requirements for defensible space if the distances specified above cannot be met. For example, options that have similar practical effects include noncombustible block walls or fences, 5 feet of noncombustible material horizontally around the structure, hardscape landscaping or reduced exposed windows on the side of the structure with a less-than-30-foot setback, or additional structure hardening such as those required in the California Building Code (CBC), California Code of Regulations Title 24, Part 2, Chapter 7A.

Title 24 California Building Standards Code

California Building Code

Part 2 of Title 24 contains the CBC. Chapter 7A of the CBC regulates to building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a WUI fire area. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone (FHSZ) within a State Responsibility Area or a WUI fire area to resist the intrusion of flames or burning embers projected by a vegetation fire and to contribute to a systematic reduction in conflagration losses. New buildings located in such areas must comply with the ignition-resistant construction standards outlined in CBC Chapter 7A.

California Fire Code

Chapter 9 of Title 24 contains the California Fire Code (CFC), which incorporates by adoption the International Fire Code with necessary California amendments. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the WUI and fire hazard areas. The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission.

California Public Resources Code

California Public Resources Code, Section 4290, requires minimum fire safety standards related to defensible space that are applicable to residential, commercial and industrial building construction in State Responsibility Area lands and lands classified and designated as Very High FHSZs (VHFHSZs). These regulations include road standards for fire apparatus access, standards for signs identifying roads and buildings, fuel breaks and green belts, and minimum water supply requirements. It should be noted that these regulations do not supersede local regulations that equal or exceed minimum regulations required by the state.

California Public Resources Code, Section 4291, requires a reduction of fire hazards around buildings located adjacent to a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is

covered in flammable material. It is required to maintain a minimum 100 feet of vegetation management around all buildings and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE jurisdiction. Further, California Public Resources Code, Section 4291, requires the removal of dead or dying vegetative materials from the roof of a structure, and trees and shrubs must be trimmed from within 10 feet of the outlet of a chimney or stovepipe. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

California Government Code

California Government Code Sections 51175 through 51189 provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria and makes the information available for public review. Further, local agencies must designate, by ordinance, VHFHSZs within their jurisdiction based on the recommendations of CAL FIRE.

Section 51182 sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuels management, building materials, and standards. Defensible space consists of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe; vegetation near buildings must be maintained; and roofs of structures must be cleared of vegetative materials. A local agency may exempt certain standards set forth in Section 51182 for buildings with an exterior constructed entirely of nonflammable materials and may vary the requirements associated with management of fuels surrounding the structures in such cases.

California Department of Forestry and Fire Protection

CAL FIRE is tasked with reducing wildfire-related impacts and enhancing California's resources. CAL FIRE responds to all types of emergencies including wildland fires and residential/commercial structure fires. In addition, CAL FIRE is responsible for the protection of approximately 31 million acres of private land within the state and, at the local level, is responsible for inspecting defensible space around private residences. CAL FIRE is responsible for enforcing State of California fire safety codes included in the California Code of Regulations and California Public Resources Code. California Public Resources Code 4291 states generally that any person operating any structure located on brush-covered lands or land covered with flammable material is required to maintain defensible space around the structure. California Code of Regulations Title 14 Section 1254 identifies minimum clearance requirements required around utility poles. In State Responsibility Areas within the jurisdiction of CAL FIRE, the Fire Safety Inspection Program is an important tool for community outreach and enforcement of state fire codes.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. Joint inspections of facilities by CAL FIRE and the utility owner are recommended by CAL FIRE so that each entity may assess the current state of the facility and successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during inspections are required to be brought into compliance with the established codes. If a CAL FIRE investigation reveals that a wildfire occurred as a result of a violation of a law or negligence, the responsible party could face criminal and/or misdemeanor charges. In cases where a violation of a law or negligence has occurred, CAL FIRE has established the Civil Cost Recovery Program, which requires parties liable for wildfires to pay for wildfire-related damages.

Fire Hazard Severity Zones

CAL FIRE mapped FHSZs in Santa Barbara County based on fuel loading, slope, fire history, weather, and other relevant factors as directed by California Public Resources Code, Sections 4201–4204, and Government Code Sections 51175–51189. FHSZs are ranked from Moderate to Very High (VHFHSZ) and are categorized for fire protection within a Federal Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

California Strategic Fire Plan

The 2019 Strategic Fire Plan for California reflects CAL FIRE's focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem service; and (2) natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2019). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

4.6.2.3 Local

City of Carpinteria General Plan/Local Coastal Land Use Plan

The Public Facilities and Services Element of the General Plan/Local Coastal Land Use Plan includes goals, objectives, and policies related to providing for the general welfare of the community. Objectives and policies specifically related to the proposed project include (City of Carpinteria 2003):

Objective PF-3 The City shall strive to maintain the best possible police and fire safety services for the community.

- **PF-3c** The City shall cooperate with the fire district for the purpose of determining district needs and to provide development mitigations as indicated by the study.
- **PF-3d** The City shall strive to increase district/City communication by initiating development review procedures that incorporate district interaction at the earliest times possible.

The Safety Element of the General Plan/Local Coastal Land Use Plan includes goals, objectives, and policies related to achieving and maintaining public health and safety. Objectives and policies specifically related to the proposed project include (City of Carpinteria 2003):

Objective S-5 Minimize the potential risks and reduce the loss of life, property and economic and social dislocation resulting from urban and wildland fires.

- **S-5a** All new structures must adhere to the Carpinteria-Summerland Fire Protection District Ordinance and the Santa Barbara County Fire Department Ordinances, where applicable
- **S-5b.** All new structures, whether within or outside the urban limit zone, must adhere to the city Fire Sprinkler Ordinance.
- **S-5c** Roads shall be installed or improved to the standards specified in the County of Santa Barbara Private Road and Driveway Standard, Section 8 of the County of Santa Barbara Municipal Code.
- **S-5d** The City will work in conjunction with the Carpinteria Summerland Fire Protection District to adhere to, and enforce, all fire codes.

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan (County of Santa Barbara 2019) indicates that areas of moderate fire hazard within urban areas of the coastal zone are restricted to hilly sections of the Carpinteria Valley and Summerland. Developments within any of the hazardous zones in rural areas will be very low density and subject

to stringent building, brush clearance, access, and water storage capacity restrictions (for fire suppression purposes) by the County Fire Department and/or the U.S. Forest Service.

4.6.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to wildfire are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, a significant impact related to wildfire would occur if the project would:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan.
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.
e) Result in cumulatively considerable impacts relating to wildfire.

4.6.4 Impact Analysis

The following analysis of potential project impacts is provided, based upon the above thresholds of significance.

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Rincon Trail property is currently undeveloped and spans an area roughly between the eastern terminus of Carpinteria Avenue and Rincon Beach County Park. There are no developed roads within the project site, and consequently there are no evacuation routes currently extending onto the property from adjacent areas. In addition, no official evacuation routes have been designated by the County Office of Emergency Services and the Santa Barbara Operational Area Emergency Management Plan (County of Santa Barbara 2013). The 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan (County of Santa Barbara 2017) also does not provide specific emergency management plans for the vicinity of the project. Consequently, the project would have **no impact** on an adopted emergency response plan or emergency evacuation plan.

b) 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?

The project involves the creation and maintenance of a concrete trail and steel frame bridge crossing over the UPRR alignment. These are non-combustible materials that would not increase fire risk. Slopes along the trail alignment would be regraded to achieve a shallower slope angle, which would marginally decrease the potential for wildfire spread and also facilitate access for firefighters to extinguish a potential wildland fire on the property. The trail would also allow lightweight fire-fighting equipment to access all points of the trail, facilitating firefighting activities. As such, the project would not exacerbate wildfire risks or the uncontrolled spread of wildfire, resulting in **no impact** related to wildland fire risks.

c) 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?

The project would not require the installation of associated infrastructure for fire protection purposes. No structures or other improvements subject to combustion or requiring protection from fire are included or proposed in the multi-use trail proposal. The trail itself would assist firefighting access to most of the project site, without the need for other roads. The project would therefore have **no impact** with respect to infrastructure or systems necessary for fire protection.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project would not include the development of any habitable structures. The concrete path and steel frame bridge structure would not be prone to damage by wildfire. Created slopes along the trail alignment would be less steep than the existing manufactured slopes, decreasing the potential for shallow soil movement down these slopes. Run off from the new trail would be accommodated by existing and proposed drainage facilities which would convey storm water short distances for release at the adjacent beach. No existing homes or structures are located adjacent to the trail alignment that could be affected by secondary effects from a wildland fire event which involves the project site. Therefore, the project would have **no impacts** on risks related to wildland fire.

e) Would the project result in cumulatively considerable impacts relating to wildfire?

Cumulative development throughout the Carpinteria Valley would incrementally contribute to wildland fire risks and related impacts. However, as the proposed project would result in less than significant or no impacts to wildland fire risks, it would have a less than cumulatively considerable contribution to cumulative impacts.

4.6.5 Level of Significance Prior to Mitigation

As discussed above, no significant impacts related to wildfire would result from the proposed project.

4.6.6 Conclusion

The proposed project would neither construct structures nor place combustible materials on the site. Proposed grading modifications would not increase wildland fire risk, and the project would not lead to an increase in local population that could be exposed to existing regional wildland fire risks. As such, the project would have no impacts on wildland fire risk and no mitigations would be required or recommended.

5 Other CEQA Considerations

5.1 Growth-Inducing Impacts

Section 15126.2(e) of the California Environmental Quality Act (CEQA) Guidelines requires a discussion of how the potential growth-inducing impacts of the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Induced growth is distinguished from the direct employment, population, or housing growth of a project (14 CCR 15000 et seq.). If a project has characteristics that "may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively," then these aspects of the project must be discussed as well. Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place in the absence of the proposed project. Typically, the growth-inducing potential of a project would be considered significant if it stimulates population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities, such as the Santa Barbara County Association of Governments (SBCAG).

1. The CEQA Guidelines also indicate that growth should not be assumed to be either beneficial or detrimental (14 CCR 15126.2[d]). According to Section 15126.2(e) of the CEQA Guidelines, a project is defined as growth inducing when it directly or indirectly:
2. Fosters population growth;
3. Fosters economic growth;
4. Includes the construction of additional housing in the surrounding environment;
5. Removes obstacles to population growth;
6. Taxes existing community service facilities, requiring construction of new facilities that could cause significant environmental effects; and/or
7. Encourages or facilitates other activities that could significantly affect the environments, either individually or cumulatively.

5.1.1 Growth Inducement Due to Population Growth

As discussed in Section 4.4, Population and Housing, of this Environmental Impact Report (EIR), the proposed Carpinteria Rincon Trail Project (project) would not contribute to population growth in the City of Carpinteria (City) or the County of Santa Barbara (County). The proposed project would generate short-term employment opportunities during construction of the proposed trail. Given the temporary duration of project construction of approximately 24 months and availability of construction workers within Santa Barbara and Ventura Counties, project construction is unlikely to generate a significant increase in population and/or new development that could result in a significant impact to the environment. The proposed trail maintenance would be performed by existing City or County parks and recreation/maintenance staff and would not require additional part- or full-time employees. Therefore, the project would not induce substantial unplanned population growth in an area, either directly or indirectly, and would not result in growth inducement due to population growth.

5.1.2 Growth Inducement Due to Economic Growth

An increase in population would foster economic growth by increasing demand for regional and local goods and services. However, as discussed above, the proposed project would generate short-term employment opportunities during construction of the proposed trail and no additional employees during operations and maintenance of the trail. Therefore, the project is not expected to result in substantial growth inducement associated with economic growth.

5.1.3 Growth Inducement Due to Additional Housing

The proposed project involves construction of a proposed trail and no housing is proposed. Therefore, the proposed project would not result in growth inducement due to additional housing.

5.1.4 Growth Inducement Due to Removal of Obstacles

Indirect growth can also occur by a project installing infrastructure that can support further growth. The proposed project includes development of a recreational trail. Therefore, the project would not require utility infrastructure. The proposed Carpinteria Rincon Trail would extend from the eastern end of Carpinteria Avenue, in the City of Carpinteria, to Rincon Beach County Park, in unincorporated Santa Barbara County. The new, shared-use trail would provide a strategic addition to Carpinteria's Coastal Vista Trail that upon completion, will connect Padaro Lane to the west and Rincon Beach County Park to the east. In addition, the project would provide a connection to the newly opened bike path to Mussel Shoals as well as serve as a link in the larger California Coastal Trail. Although the proposed project would result in expansion of pedestrian and bicycle infrastructure, which would provide additional recreational opportunities to nearby residents and visitors, the proposed project is not anticipated to result in additional development in the area. Therefore, as the proposed project would not provide a surplus in traditional urban systems infrastructure capacity that would induce growth in surrounding areas, the project would not be considered growth inducing due to removal of obstacles to population growth.

5.2 Significant Irreversible Changes

The California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) require an Environmental Impact Report (EIR) to address any significant irreversible environmental changes that would result from a project should it be implemented. Pursuant to Section 15126.2(d) of the CEQA Guidelines, significant irreversible environmental impacts could involve:

- Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely;
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
- Irreversible damage from environmental accidents associated with the project;
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether a project could result in significant and irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them.

Implementation of the proposed project would involve consumption of limited, slowly renewable, and non-renewable resources. This consumption would occur during the construction phase of the project and would not continue throughout its operational lifetime. The project would require a commitment of resources that would include materials needed for the proposed trail, fuel and operational materials/resources, and the transportation of goods and people to and from the project site.

Construction of the project would require the consumption of resources that are not renewable or that may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: aggregate materials such as sand, gravel, or stone; water; and fossil fuels such as gasoline and oil.

Once constructed, the proposed project would result in consumption of minor limited, slowly renewable, and non-renewable resources. The resources that would be committed during operation of the project could include petroleum needed for transportation to and from the site, for those trail users not opting to cycle or walk to the new trail. No other fossil fuels, such as electricity or petroleum, would be required for operations of the proposed project. As discussed in Section 4.2, Energy, of this EIR, the project would result in less-than-significant impacts related to the potential wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation.

Additionally, the project would involve an unquantifiable, but limited, use of potentially hazardous materials typical for construction, such as gasoline, diesel fuel, lubricating oil, grease, and solvents. These materials would be contained, stored, and used on site in accordance with manufacturers' instructions and applicable standards and regulations. Compliance with regulations would serve to protect against a significant and irreversible environmental change that could result from the accidental release of hazardous materials.

Furthermore, the project would result in direct permanent impacts to one special-status wildlife species, the silvery legless lizard, and nesting birds and sensitive natural communities. Permanent project impacts would consist of vegetation clearing, grading, and construction of the proposed trail. Permanent impacts to special-status wildlife species, nesting bird habitats, and sensitive natural communities would be considered potentially significant under CEQA and would require implementation of mitigation measures, as outlined in Section 3.3, Biological Resources, to reduce impacts to a level below significance.

5.3 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires an EIR to describe significant impacts that cannot be avoided, even with implementation of feasible mitigation measures. Chapter 1, Executive Summary, of this EIR provides a summary of the environmental impacts that could result from implementation of the proposed project and feasible mitigation measures that could reduce or avoid those environmental impacts As discussed throughout Chapter 3, Environmental Analysis, with implementation of mitigation measures, the proposed project would not result in any significant and unavoidable impacts.

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6 Alternatives

6.1 Introduction

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Environmental Impact Reports (EIRs) are required to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6[a]). This EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR 15126.6[a]). The alternatives discussion is required even if these alternatives "would impede to some degree the attainment of the project objectives or would be more costly" (14 CCR 15126.6[b]).

The inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The final decision regarding the feasibility of alternatives lies with the decision maker for a given project who must make the necessary findings addressing the potential feasibility of reducing the severity of significant environmental effects (California Public Resources Code, Section 21081; see also 14 CCR 15091).

6.2 Project Objectives

The proposed trail was identified by the City to meet critical safety and public access needs. Objectives of the proposed Carpinteria Rincon Trail Project (project) include the following:

- Improve pedestrian and bicyclist safety, as well as vehicular safety, by significantly reducing unsafe and/or illegal use of the railway corridor and the U.S. Highway 101 shoulder.
- Enhance regional mobility for cyclists and pedestrians, while enhancing support of regional initiatives to promote alternative transportation modes between Carpinteria, Santa Barbara County and Ventura County, by providing a continuous bike and pedestrian path connecting Santa Barbara County to Ventura County.
- Reduce air pollution from vehicle-related air quality emissions and traffic congestion on local and regional transportation systems by promoting pedestrian and bicycle access to coastal resources and recreation opportunities via a scenic multi-use trail, as an alternative to use of motorized vehicles to access and experience such coastal resources.
- Improve the local coastal bluff environment through improved water quality of surface water runoff through stabilization of bluff slope faces that are currently eroding into the Pacific Ocean, and enhancement of sensitive coastal bluff scrub habitats in the project area. Also, avoid deposits of petroleum fuels or lubricants associated with typical motor vehicle use for transportation in close proximity to the ocean, preventing such pollutants from stormwater runoff entering the adjacent marine environment.
- Complete a critical missing link in the California Coastal Trail consistent with the goals of Senate Bill 908, including provision of a continuous trail as close to the ocean as possible, with connections to the shoreline at appropriate intervals and sufficient access to encourage public use. The California Coastal Trail is intended to offer scenic coastal vistas, wildlife viewing areas, recreational or interpretive facilities, and other points of interest, and is recognized in regions throughout the state as a key resource or opportunity for these coastal-oriented experiences.

- Provide a coastal-oriented pathway that supports the broadest use by the public through a design that complies with standards established via the Americans with Disabilities Act (ADA).
- Provide new scenic coastal access and coastal tourism opportunities in the City of Carpinteria, and Santa Barbara County.

6.3 Significant Impacts

As discussed throughout Chapter 3, Environmental Analysis, of this EIR, implementation of the proposed project would not result in any significant and unavoidable impacts on the environment. Prior to mitigation, the proposed project would result in potentially significant impacts related to aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and utilities and service systems. However, with implementation of mitigation measures provided in Table 1-1, Summary of Project Impacts, of Chapter 1, Executive Summary, all potentially significant impacts would be mitigated to below a level of significance.

6.4 Alternatives Considered but Rejected

State CEQA Guidelines Section 15126.6(c) provides guidance in selecting a range of reasonable alternatives for the project. The EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

State CEQA Guidelines Section 15126.6(f)(1) provides the following guidance in selecting a range of reasonable alternatives for the project. There are many factors that may be taken into account when addressing the feasibility of a range of potential alternatives for the project, such as site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). The alternatives discussion shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects (14 CCR 15126.6[f]). The EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination (14 CCR 15126.6[c]).

The EIR need not discuss every alternative to the project. A range of alternatives that are "reasonable" for analysis have been evaluated and are discussed below in Section 6.5, Project Alternatives Under Further Consideration. The following describes other alternatives considered by the City of Carpinteria (City) but dismissed from further evaluation in this EIR, and a brief description of the reasons for their rejection.

6.4.1 Alternative Location

Pursuant to Section 15126.6(f)(2) of the CEQA Guidelines, the City considered the potential for alternative locations to the project. The proposed project is planned to function as the local section of the scenic California Coastal Trail, and would be connected to existing trail segments on both ends. The proposed project is heavily oriented toward closing this important regional gap within this existing trail system. Therefore, no feasible alternative locations exist for the proposed project. As such, an alternative location was ultimately rejected from further analysis in the EIR.

6.5 Project Alternatives Under Further Consideration

Section 15126.6 of the CEQA Guidelines states that the EIR shall "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

The range of alternatives evaluated in an EIR is governed by the "rule of reason" that requires the EIR set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative (14 CCR 15126.6[a]).

In developing the alternatives to be addressed in this EIR, the potential alternatives were evaluated in terms of their ability to meet the basic objectives of the project, while reducing or avoiding the environmental impacts of the project identified in Chapter 3 of this EIR.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in California Code of Regulations (CCR) Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, the Carpinteria Planning Commission (see PRC Section 21081[a] [3]).

This chapter discusses alternatives to the proposed project, including the No Project/No Build Alternative. The No Project/No Build Alternative is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines that examines the environmental effects that would occur if the project were not to proceed. The alternatives addressed in this chapter are listed below, followed by a more detailed discussion of each:

1. Alternative 1: No Project/No Build Alternative
2. Alternative 2: Maximize Existing Benchwork/Topography Alternative
3. Alternative 3: Steeper Slopes/Reduced Earthwork Alternative
4. Alternative 4: Freeway Adjacent Trail Avoiding Bluff Face Alternative

6.6 Alternatives Impact Summary

6.6.1 No Project/No Build Alternative (Alternative 1)

Project Alternative 1 Summary

CEQA Guidelines Section 15126.6 requires the inclusion of a No Project/No Build Alternative (Alternative 1) to be analyzed. Under Alternative 1, no development would occur on the project site. Accordingly, the site characteristics of this alternative would be equivalent to the existing conditions for each category analyzed in Chapter 3 of this EIR. In particular, pedestrian and cyclist travel between the eastern terminus of Carpinteria Avenue and Rincon Beach County Park would continue to be limited to the shoulder of US Highway 101 or to informal pathways that require illicit crossing of the UPRR alignment. In addition, the excessively steep cut slopes along the ocean bluffs, remnant from former transportation projects, would continue to experience elevated erosion rates.

Project Alternative 1 Impact Analysis

Aesthetics

The proposed project would result in less than significant impacts associated with aesthetics, with implementation of **Mitigation Measure (MM) AES-1** and **MM-BIO-3**. Alternative 1 would not result in any changes to the existing visual character, views, or lighting and glare. The site would remain as undeveloped land. Therefore, no impacts to aesthetics would occur under Alternative 1 because no development would occur on the project site and **MM-AES-1** and **MM-BIO-3** would not be required to reduce impacts to aesthetics. Therefore, the project's impacts to aesthetics would be reduced under Alternative 1.

Air Quality

Under Alternative 1, there would be no criteria air pollutant emissions during construction or for maintenance during operation. The Alternative would not generate traffic as there would be no construction or operation, and thus would not impact sensitive receptors, create a CO hotspot, or emit toxic air contaminants. This Alternative would also not generate odors as there would be no construction or operation. There would be no impact to air quality under Alternative 1, and thus impacts would be reduced.

Biological Resources

The No Project/No Build Alternative would not result in any changes to the currently undeveloped project site. The No Project/No Build Alternative would not result in any direct/indirect impacts to biological resources as would occur with development of the proposed project, since there would be no project related grading or construction involved. Therefore, impacts to biological resources including sensitive native vegetation communities, special-status wildlife species, and nesting birds would be reduced under the No Project/No Build Alternative.

Cultural Resources

The No Project/No Build Alternative would not result in any changes to the currently undeveloped project site. The No Project/No Build Alternative would not result in any direct/indirect impacts to cultural resources as would occur with development of the proposed project, since there would be no project related grading or construction involved. Therefore, impacts to cultural resources would be eliminated under the No Project/No Build Alternative and reduced compared to the proposed project.

Energy

The proposed project would result in less than significant impacts to energy. Under Alternative 1, there would be no energy use as the development of a trail would not occur. Therefore, no impact to energy would occur under Alternative 1; thus, impacts would be reduced.

Geology and Soils

The No Project/No Build Alternative would not result in any changes to the project site. The No Project/No Build Alternative would not result in any direct/indirect impacts to geologic resources as would occur with development of the proposed project, since there would be no project related grading or earthwork modification. However, as discussed in Section 3.5.1, the existing ocean-facing slope south of the proposed bridge is considered to be

susceptible to surficial/local instability under static conditions. These steep slopes in the southern trail alignment are the result of former landform modification carried out for the railroad alignment and former state highway, and do not represent natural conditions resulting from natural weathering of the involved earth materials and geologic formations. Therefore, erosion of the existing hillside could still occur under existing conditions and therefore under Alternative 1. The proposed project would implement measures such as native plantings and the application of hydro-seed, to stabilize slope areas to minimize soil erosion; no such remedial measures to address slope instability would occur under the No Project/ No Build alternative, However, Alternative 1 would not require implementation of mitigation measures to address significant geology-related impacts from occurring that involve structural damage from seismic events, differential settlement of the pedestrian bridge structure, shallow slope instability associated with seismic activity, and increased soil erosion on slopes graded for the project. Therefore, impacts related to short-term construction-related increased erosion and structural damage from seismicity, would be reduced under the No Project/No Build Alternative.

Greenhouse Gas Emissions

Under Alternative 1, there would be no greenhouse gas (GHG) emissions during construction or for maintenance during operation. There would be no loss of sequestered carbon as no vegetation would be removed. This Alternative may not be consistent with some of the County's or City's goals to increase recreation opportunities or the state's goal to create multimodal communities, which are designed to reduce GHG emissions by encouraging alternative modes of transportation instead of motor vehicle access to coastal recreation areas. Impacts to GHG emissions would be less than significant and similar to that of the proposed project

Hazards and Hazardous Emissions

The No Project/No Build Alternative would not result in any changes to the project site. The No Project/No Build Alternative would not result in any direct/indirect impacts to hazards or hazardous emissions during project construction, as would occur with development of the proposed project, since there would be no project related construction involved. Therefore, impacts related to hazards or hazardous emissions would be reduced under the No Project/No Build Alternative.

Hydrology and Water Quality

Under Alternative 1, there would be no construction or other alterations to the existing project site. As such, water quality impacts associated with erosion of disturbed soil and release of construction related petroleum products would be avoided. Although the proposed project would result in improved stormwater drainage infrastructure and implementation of features such as native plantings and the application of hydro-seed, to stabilize slope areas to minimize soil erosion and avoid sediment-related water quality impacts, impacts to hydrology and water quality associated with the proposed project would be potentially significant and mitigation measures **MM-WAT-1** through **MM-WAT-6** would be required. Alternative 1 would result in no development at the project site and therefore potentially significant impacts would be avoided and mitigation measures would not be required. As such, hydrology, and water quality impacts under Alternative 1 would be reduced.

Land Use and Planning

Impacts due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be potentially significant. Therefore, **Mitigation Measures (MM) AES-1; MM-BIO-1** through **MM-BIO-6; MM-CR-1** through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through

MM-WAT-6; MM-NOI-1 through MM-NOI-2; MM-TCR-1 would reduce impacts to conflicts with any land use plan, policy, or regulations to less than significant with mitigation. Alternative 1 would be inconsistent with City and County General Plan policies that support construction of the proposed trail. However, because Alternative 1 would result in no development, mitigation measures would not be required and impacts would be reduced compared to the proposed project.

Noise

The No Project/No Build Alternative would not result in any changes to the project site. The No Project/No Build Alternative would not result in any direct/indirect impacts from noise emissions during project construction, as would occur with development of the proposed project, since there would be no project related construction involved. Therefore, impacts related to noise would be reduced under the No Project/No Build Alternative.

Recreation

Under Alternative 1, there would be no changes or alterations to the project site. There would be no provision of a multi-use trail for cyclists and pedestrians, and the substantial gap that currently exists in the Coastal Trail system would remain. In this regard, enhancement of local and regional biking and hiking opportunities delivered by the project would not occur under Alternative 1, and recreational and safety benefits of the project would not be realized. On the other hand, re-grading of the bluff slopes would not occur under Alternative 1, thereby preserving the existing wind and uplift conditions along the bluffs that currently support soaring opportunities in the air space above the trail alignment. This Alternative may not be consistent with some of the County's or City's goals to increase recreation opportunities via completion of a local path that also closes a gap in the regional coastal trail network, or the state's goal to create multimodal transportation opportunities to reduce reliance on private vehicle use. Therefore, the recreational impacts of Alternative 1 would be similar to or greater than the proposed project.

Transportation

Under Alternative 1, there would be no changes or alterations to the project site. There would be no provision of a multi-use trail for cyclists and pedestrians, and the substantial gap that currently exists in the Coastal Trail system would remain. The use of a vehicle by residents in visiting the Rincon Beach County Park would continue, due to a lack of a safe alternative to vehicle travel from points within Carpinteria. Transportation hazards would persist, in the form of pedestrians using informal trails along the UPRR corridor to navigate to Rincon Beach County Park. In this regard, enhancement of local and regional biking and hiking opportunities delivered by the project would not occur under Alternative 1, and a solution to existing pedestrian hazards of the project would not be realized. The proposed project would contain adequate signage and traffic calming measures to protect pedestrians and cyclists from hazards associated with vehicle parking maneuvers in the Rincon Beach County Park parking lot. Alternative 1 may not be consistent with some of the County's or City's goals to create multimodal transportation opportunities to reduce reliance on private vehicle use, and to provide a safe environment for pedestrian and bicyclist travel. Impacts would be slightly greater under Alternative 1 than the proposed project, because the existing risks to pedestrians and cyclists crossing the UPRR tracks would remain unaddressed.

Tribal Cultural Resources

The No Project/No Build Alternative (Alternative 1) would not result in any changes to the currently undeveloped project site. The No Project/No Build Alternative would not result in any direct/indirect impacts to cultural resources as would occur with development of the proposed project, since there would be no project related grading or construction involved. Therefore, impacts to cultural resources would be eliminated under the No Project/No Build Alternative and reduced compared to the proposed project.

Utilities and Service Systems

The proposed project could have potentially significant impacts upon stormwater systems, for which mitigation has been required. Under Alternative 1, there would be no construction or other alterations to the existing project site. As such, impacts to stormwater systems would be avoided and mitigation would not be required. However, under Alternative 1, existing failing stormwater systems would remain. Nonetheless, Alternative 1 would avoid all construction and mitigation measures **MM-WAT-1** through **MM-WAT-5,** outlined in Section 3.14.5, would not be required. Therefore, impacts to utilities and service systems under Alternative 1 would be reduced.

Relation to Project Objectives

Primary objectives include closing a substantial gap in the Coast Trail System, which in turn would enable regional commuting opportunities that employ alternative transportation modes (i.e., walking and cycling). Another objective is to provide recreation opportunities for all residents, and to enhance formal access to coastal resources including ocean views and a direct route to Rincon Beach County Park from Carpinteria, and to Rincon Bluffs from Rincon Point. The no project alternative would not achieve these primary objectives of the project.

6.6.2 Maximize Existing Benchwork/Topography Alternative (Alternative 2)

Project Alternative 2 Summary

The Maximize Existing Benchwork/Topography Alternative (Alternative 2) would involve development of the originally proposed trail, as described and analyzed in the 2015 Mitigated Negative Declaration (MND). Per the 2015 MND, development under Alternative 2 would consist of a 12-foot wide and approximately 4,000-foot long pedestrian and bicycle shared use trail, that would also extend from the eastern end of Carpinteria Avenue, in the City of Carpinteria (City), to the Rincon Beach County Park in Santa Barbara County (see Figure 6-1, Proposed Alternatives), but following a different alignment than the proposed project. The trail alignment under Alternative 2 was configured to largely follow existing topographic benches that were originally created (and since abandoned) for previous railroad and highway alignments within the project site. Using the existing benches for the alignment was assumed to minimize the need for topographic modification and earthwork volumes. Under Alternative 2, the northern portion of the trail, from the eastern terminus of Carpinteria Avenue to the Union Pacific Railroad (UPRR) corridor, which crosses the middle of the site, traverses an engineered slope, cut during construction of the U.S. Highway 101. The trail proposed under Alternative 2 would cross the UPRR tracks in an area that consists of engineered slopes cut during construction of the UPRR. On the southern side of the UPRR alignment, new grading not associated with an existing bench was proposed, accompanied by extensive retaining walls, to connect the trail to an existing informal trail on an existing cut bench extending westward from Rincon Beach County Park that was abandoned by the UPRR in the late 1960's. The Alternative 2 trail route would be flat in this area.

Project Alternative 2 Impact Analysis

Aesthetics

The proposed project would result in less than significant impacts associated with aesthetics, with implementation of **MM-AES-1** and **MM-BIO-3**. Alternative 2 would result in development of a trail that would follow a different alignment than the proposed project, which would follow existing topographic benches that were originally created (and since abandoned) for previous railroad and highway alignments within the project site. However, because Alternative 2

would be located within a similar location, it would still potentially result in impacts to scenic vistas and scenic resources and would potentially result in significant adverse impacts on visual character or quality of the site and its surroundings because of the removal of mature vegetation and addition of new human-scale development including approximately 1,000 linear feet of retaining walls with a height of up to 14 feet above grade. **MM-AES-1,** which requires City Architectural Review Board and County Board of Architectural Review approval, and **MM-BIO-3**, which requires restoration or enhancement of coastal sage scrub and coastal bluff scrub communities in areas temporarily impacted by construction of the trail or adjacent area, would still be required. Therefore, impacts would be similar to but marginally greater than, the proposed project under Alternative 2.

Air Quality

Alternative 2 would result in a narrower but longer trail than the proposed project. It would result in 46,000 cubic yards (CY) of cut and 10,500 CY of fill, resulting in 35,500 CY of export. This is lower than the proposed project's 92,526CY of export and therefore would result in fewer haul trucks during construction. Alternative 2 would result in fewer haul truck trips and less construction activity as it is fewer square feet of path compared to the proposed project. Therefore, criteria air pollutant emissions during construction are expected to be less than the proposed project. Impacts would be less than significant during construction. During operation, Alternative 2 would result in emissions from maintenance activities similar to the proposed project. Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. Operational impacts would be considered less than significant and similar to the proposed project.

Biological Resources

The Maximum Existing Benchwork/Topography Alternative, would overall disturb less area than the proposed project. Project temporary impacts total 4.02 acres and this alternative has no temporary impacts identified, resulting in a net decrease of 4.02 acres of temporary impacts. It should be noted that although temporary impacts have not been identified, this alternative will likely result in temporary impacts. Project permanent impacts total 1.02 acres and this alternative includes 0.67 acres of permanent impacts resulting in a net decrease of 0.35 acres of permanent impacts. Overall, the net impacts will decrease by 4.37 acres under this alternative since less grading and earthwork is required. More specifically, the project would result in 3.55 acres of temporary impacts to County ESH and City ESHA and this alternative has no temporary impacts identified, resulting in a net decrease of 3.55 acres of temporary impacts to County ESH and City ESHA. The project will result in 0.76 acres of permanent impacts to County ESH and City ESHA and this alternative includes 0.51 acres of permanent impacts to County ESH and City ESHA, resulting in a net decrease of 0.25 acres of permanent impacts to County ESH and City ESHA. Overall, the net impacts to County ESH and City ESHA would decrease by 3.80 acres under this alternative since less grading and earthwork is required.

Because the vast majority of impacts under the proposed project are occurring within sensitive native vegetation communities identified as County ESH and City ESHA and require mitigation, this alternative would result in fewer overall impacts. However, mitigation measures associated with County ESH and City ESHAs would still be required. While less area is proposed to be impacted under this alternative, similar impacts to special-status wildlife species and nesting birds may occur and would require similar mitigation. Therefore, due to the decreased overall direct impacts to sensitive native vegetation communities identified as County ESH and City ESHA, impacts to biological resources would be reduced under the Maximum Existing Benchwork/Topography Alternative, Alternative 2.

Cultural Resources

Alternative 2 would result in a narrower but longer trail than the proposed project. As discussed in Section 3.4, Cultural Resources, cultural resources are thought to be present between the UPRR crossing bridge and U.S. Highway 101. Development under Alternative 2 would still result in development of the trail in this general area, and would therefore result in impacts to these cultural resources. In addition, the project could still potentially impact undiscovered cultural resources, including archaeological resources and human remains. **MM-CR-1** through **MM-CR-4** would still be required. Impacts would be similar to the proposed project.

Energy

The proposed project would result in less than significant impacts to energy. Alternative 2 would result in a narrower but longer trail than the proposed project. It would result in 46,000 CY of cut and 10,500 CY of fill, resulting in 35,500 CY of export. This is lower than the proposed project's 92,526CY of export and therefore would result in fewer haul trucks during construction. Alternative 2 would result in fewer haul truck trips and less construction activity as it is fewer square feet of path compared to the proposed project. Therefore, energy use during construction are expected to be less than the proposed project. During operation, Alternative 2 would result in emissions from maintenance activities similar to the proposed project. Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would consume energy. Operational impacts would be considered less than significant and similar to the proposed project.

Geology and Soils

Alternative 2 would result in 46,000 CY of cut and 10,500 CY of fill, for a total of 56,500 CY of earthwork, which would be approximately 46.2% lower than the proposed project's 122,246 CY of total earthwork. Given the much lower volume of earthwork involved, temporary erosion impacts during construction would be reduced with this alternative; however, **MM-GEO-3** would continue to be required. A similar bridge structure over the UPRR alignment would be employed, although it would be greater in length, and therefore more difficult to design to withstand forces created during a seismic event; **MM-GEO-1** and **MM-GEO-2** would continue to be required. The most substantial difference geologically for Alternative 2 is that geotechnical testing during advancement of the design identified an extensive landslide along the portion of the proposed alignment where the trail changes direction from west to east, on the south side of the UPRR alignment. In order to attempt to stabilize a large landslide feature such as this, multiple deep caissons can be required, and would be intended to pin the mass in place. However, movement can still occur between the caissons, and the expense of the caisson installation could be prohibitive. In that available engineering and geotechnical methods for stabilizing the landslide mass are not known to be feasible, geology and soils impacts related to slope instability under Alternative 2 are considered significant and unavoidable, and impacts would be significantly greater compared to the proposed project.

Greenhouse Gas Emissions

Alternative 2 would result in a narrower but longer trail than the proposed project resulting in 35,500 CY of export. This is lower than the proposed project's 92,526 CY of export and therefore would result in fewer haul trucks during construction. Alternative 2 would result in fewer haul truck trips and less construction activity as it is fewer square feet of path compared to the proposed project. Therefore, GHG emissions during construction are expected to be reduced compared to the proposed project. Impacts would be less than significant during construction. During operation, Alternative 2 would result in emissions from maintenance activities similar to the proposed project.

Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. Operational impacts would be considered less than significant, and similar to the proposed project.

Hazards and Hazardous Emissions

Alternative 2 would involve a trail length considerably longer than the project trail length. The additional length would not affect use or operation of the trail since no hazardous wastes are anticipated from these activities. However, construction of the proposed project would require heavy construction equipment, which involves the use of hydrocarbon fuels and lubricants that are considered hazardous materials, Concrete is considered a hazardous material until it cures, and is included in the project construction. Paint or other surface coatings are also considered hazardous materials, until they are fully dried; the bridge and certain fencing elements may involve paint application on site. With a comparatively longer trail length under Alternative 2, the volumes of hazardous materials associated with construction would increase and the risk of release would be slightly elevated over project levels. The section of the trail north of the UPRR corridor (the western portion) would have the same potential to encounter soils with ADL as the project. Overall, impacts would be only marginally greater for Alternative 2 compared to the project, relative to the volumes of hazardous materials associated with construction and the risk of release, as well as handling and disposal of ADL containing soils. **MM-WAT-2** and **MM-HAZ-1** would continue to be required, and residual impacts would also be less than significant.

Hydrology and Water Quality

Alternative 2 would result in 46,000 CY of cut and 10,500 CY of fill, for a total of 56,500 CY of total earthwork, which would be approximately 46.2% lower than the proposed project's 122,246 CY of total earthwork. Given the much lower volume of earthwork involved, temporary erosion impacts during construction would be reduced with this alternative; however, **MM-WAT-1**, **MM-WAT-2**, and **MM-WAT-3** would continue to be required. Alternative 2 would also involve a trail length considerably longer than the project trail length. The additional length would increase the impervious surface of the trail, resulting in greater volumes of stormwater runoff. Project storm drain systems would need to be expanded in capacity, and additional new storm drains on the face of the bluff, west of the UPRR crossing point, could be necessitated to serve the trail segments south and west of the UPRR crossing. Given the potential need for additional bluff-face drains, Alternative 2 would have greater hydrology impacts than the project. While **MM-WAT-4**, **MM-WAT-5**, and **MM-WAT-6** would continue to be required to address long-term operational affects upon water quality, storm drain system maintenance requirements and the potential for failure of storm drain system components would be greater under Alternative 2.

Land Use and Planning

The proposed project would result in less than significant impacts to land use and planning with incorporation of **MM-BIO-1** through **MM-BIO-4**, which prescribe required mitigation measures to satisfy requirements found in City and County policies governing ESHA, and less than significant impacts to conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect with implementation of **MM-AES-1; MM-BIO-1** through **MM-BIO-6; MM-CR-1** through **MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1** through **MM-WAT-6; MM-NOI-1** through **MM-NOI-2; MM-TCR-1**. As discussed under Biological Resources, above, Alternative 2 would result in decreased overall direct impacts to sensitive native vegetation communities identified as County ESH and City ESHA. However, mitigation measures associated with County ESH and City ESHAs would still be required. In addition, Alternative 2 would still be required to implement similar mitigation measures to address any potential conflicts with land use plan, policy, or regulations adopted for the purpose of avoiding or

mitigating an environmental effect. However, because Alternative 2 would result in decreased overall direct impacts to sensitive native vegetation communities impacts to land use and planning would be reduced under the Maximum Existing Benchwork/Topography Alternative, Alternative 2.

Noise

Alternative 2 would involve a trail length substantially longer than the project, which would increase the duration of activities involving concrete installation and the related necessary equipment. The installation of numerous deep caissons could also be required to attempt to stabilize the landslide area for the trail segments immediately south of the UPRR crossing. The additional trail segments under Alternative 2 would occur south and west of the UPRR crossing, which are not closer to any noise-sensitive users than the remaining trail segments common to the project. Rincon Point residences would remain the closest noise-sensitive receptors to project construction activities. Based on the noise level values at the nearest sensitive receptor, daytime construction noise levels would average approximately 12 dBA lower than ambient noise levels. However, construction noise levels in the evening or overnight period could be plainly audible above background levels and could also result in sleep disturbance for residential occupants. Therefore, as with the project, Alternative 2 temporary construction noise impacts are potentially significant. **MM-NOI-1** and **MM-NOI-2** would continue to be required to reduce construction noise impacts to a less than significant level. Noise impacts from Alternative 2 would be marginally greater than the project, due to the need to import specialized equipment and materials by additional heavy truck trips for the caisson installation.

Recreation

Under Alternative 2, a multi-use trail for cyclists and pedestrians would be constructed and operated, and the substantial gap that currently exists in the Coastal Trail system would be filled. In this regard, enhancement of local and regional biking and hiking opportunities delivered by the project would also occur under Alternative 2, and the recreational benefits of the project would be realized. In addition, members of the soaring community have provided comments indicating they believe this original trail alignment would not have adverse effects upon the existing wind and uplift conditions along the bluffs that currently support soaring opportunities in the air space above the trail alignment. However, the original alignment did not achieve an overall path grade that would meet ADA requirements, and therefore the trail under alternative 2 would not meet the objective of providing recreation opportunities to the broadest segment of the local and visitor populations. Overall, the recreation impacts and benefits of Alternative 2 would be very similar to the project, in that perceived lesser impacts on soaring opportunities under this alternative would be offset by eliminating trail use by mobility impaired individuals.

Transportation

Alternative 2 would provide a multi-use trail for cyclists and pedestrians, and the substantial gap that currently exists in the Coastal Trail system would be eliminated. The use of a vehicle by residents in visiting the Rincon Beach County Park would be expected to decline, due to the existence of a new safe alternative to vehicle travel from points within Carpinteria. Transportation hazards associated with pedestrians crossing the UPRR alignment to navigate to Rincon Beach County Park would be resolved. In this regard, the enhancements of local and regional biking and hiking opportunities delivered by the project would occur under Alternative 2, and a solution to existing pedestrian hazards of the project would be realized. This alternative would have transportation benefits and impacts equivalent to the project.

Tribal Cultural Resources

Alternative 2 would be narrower but longer than the proposed project. As discussed in Section 3.13, Tribal Cultural Resources, no previously recorded archaeological resources of Native American origin or TCRs were identified within the project site. Further, no TCRs have been identified by California Native American tribes as part of the City's AB 52 notification process, and no California Native American tribes requested consultation with the City. However, there is still a potential for unknown subsurface TCRs to be significantly impacted by the project, which could result in a potentially significant impact. Development under Alternative 2 would still result in development of the trail in this general area, and would therefore result in similar impacts to TCRs. **MM-CR-1** through **MM-CR-4** and **MM-TCR-1** would still be required. Impacts would be similar to the proposed project.

Utilities and Service Systems

Alternative 2 would result in 46,000 CY of cut and 10,500 CY of fill, for a total of 56,500 CY of total earthwork, which would be approximately 46.2% lower than the proposed project's 122,246 CY of total earthwork. Although a much lower volume of earthwork would be required for Alternative 2, impacts to existing drainage patterns of the site would still occur. Therefore, **MM-WAT-1**, **MM-WAT-2**, **MM-WAT-3**, and **MM-WAT-4** would continue to be required. Alternative 2 would also involve a trail length considerably longer than the project trail length. The additional length would increase the impervious surface of the trail, resulting in greater volumes of stormwater runoff. Project storm drain systems would need to be expanded in capacity, and additional new storm drains on the face of the bluff, west of the UPRR crossing point, could be necessitated to serve the trail segments south and west of the UPRR crossing. Given the potential need for additional bluff-face drains, Alternative 2 would have greater impacts to utilities and service systems than the project.

Relation to Project Objectives

Alternative 2 would meet project objectives including closing an important gap in the coastal trail network, the provision of a safe route for cyclists and pedestrians between eastern Carpinteria and Rincon Beach County Park, the promotion of alternative transportation to reduce air quality and GHG emissions, and the creation of ocean viewing opportunities for cyclists and pedestrians along the section of the trail southward of the UPRR alignment. However, the presence of a substantial landslide area that could prove infeasible to stabilize makes the feasibility of this alignment very questionable. Also, as discussed in Recreation, above, the original alignment did not achieve an overall path grade that would meet ADA requirements, and therefore the trail under alternative 2 would not meet the objective of providing recreation opportunities to the broadest segment of the local and visitor populations.

6.6.3 Steeper Slopes/Reduced Earthwork Alternative (Alternative 3)

Project Alternative 3 Summary

Under the proposed project, to achieve compliance with pathway surface slope limitations under the Americans with Disability Act (ADA), the existing benched slope would be regraded along the entire trail alignment. On some portions of the trail, the proposed project also includes creation of a second earthwork bench on the new slope above the trail to reduce erosion potential. The Steeper Slopes/Reduced Earthwork Alternative (Alternative 3) would remove one of the earthwork benches that was originally proposed on the slope above the trail alignment, for a portion of the trail length. The cross sections proposed under Alternative 3 are shown in Illustration 6-1, Steeper Slopes/Reduced Earthwork Alternative (Alternative 3) Trail Cross Section, below. Alternative 3 would result in a 7.6% reduction of earthwork, or 10,015 less CY, compared to the project. Under Alternative 3, the proposed

alignment would be the same as the proposed project. Similar to the proposed project, a bridge would be provided to provide safe crossing for trail users over the UPRR. However, the cross section of the trail south of the UPRR crossing, on the eastern portion of the trail alignment, would be different. More specifically, Alternative 3 would not provide benches above the trail (to control drainage and rockfall).

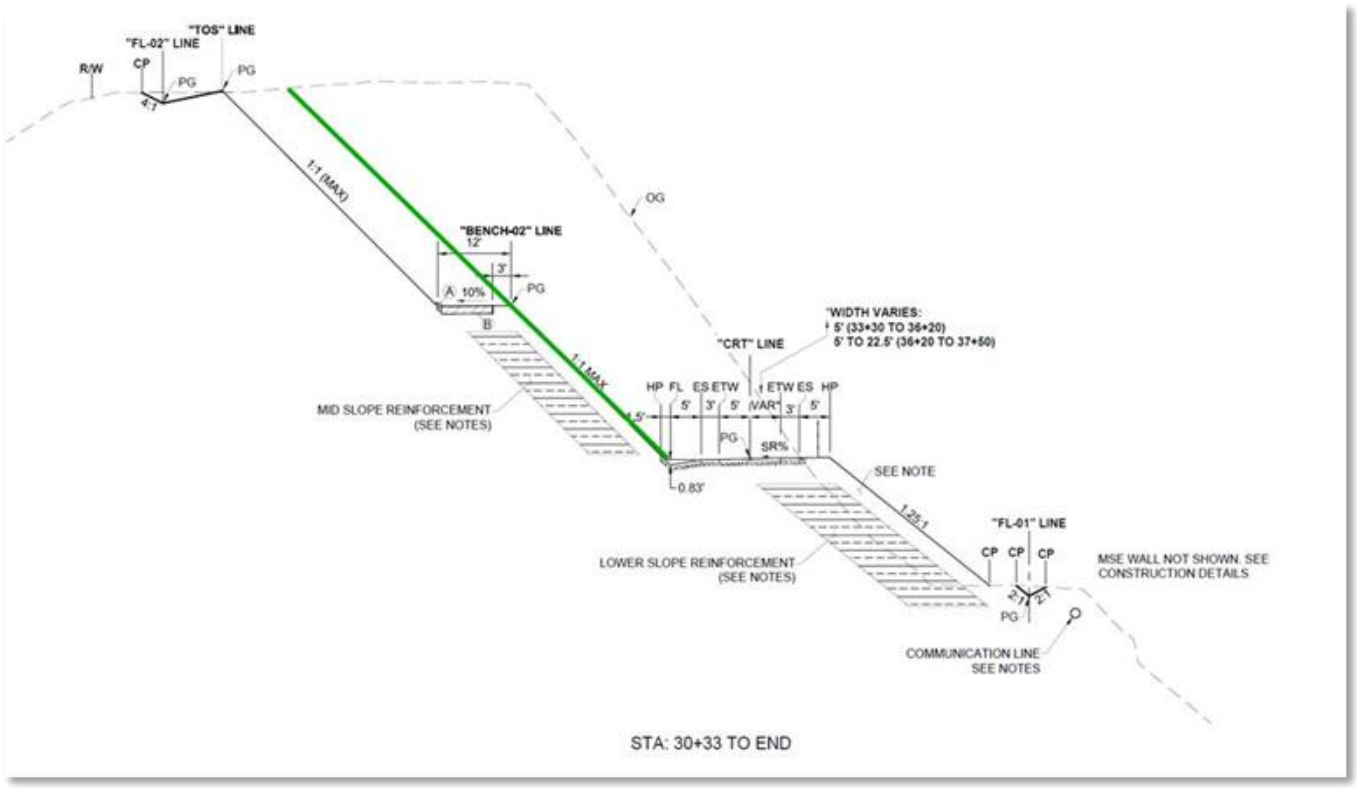

Illustration 6-1 Steeper Slopes/Reduced Earthwork Alternative (Alternative 3) Trail Cross Section

Legend for Illustration 6-1:

CP	Control Point (survey tie-in)
CRT	Center of Route Travel
ETW	Edge of Travel Way
ES	Edge of Shoulder
FL	Flow Line (of drain swale adjacent to path)
HP	High Point (of drain swale adjacent to path)
OG	Original Grade
PG	Project Grade

Project Alternative 3 Impact Analysis

Aesthetics

The proposed project would result in less than significant impacts associated with aesthetics, with implementation of **MM-AES-1** and **MM-BIO-3**. Alternative 3 would result in development of a trail that would follow the same alignment as the proposed project. However, under Alternative 3, one of the earthwork benches that was originally proposed

on the slope above the trail alignment would be removed, for a portion of the trail length. However, because Alternative 3 would be located within the same location as the project, it would still potentially result in impacts to scenic vistas and scenic resources and would potentially result in a significant adverse impact on visual character or quality of the site and its surroundings because of the removal of mature vegetation and addition of new human-scale development. **MM-AES-1,** which requires City Architectural Review Board and County Board of Architectural Review approval, and **MM-BIO-3**, which requires restoration or enhancement of coastal sage scrub and coastal bluff scrub communities in areas temporarily impacted by construction of the trail or adjacent area, would still be required. Therefore, impacts would be similar to the proposed project under Alternative 3.

Air Quality

Alternative 3 would result in 96,077 CY of cut and 10,570 CY of fill, resulting in 85,507 CY of export. This is lower than the proposed project's 92,526 CY of export and therefore would result in fewer haul trucks during construction. Therefore, criteria air pollutant emissions during construction are expected to be less than the proposed project. Impacts would be less than significant during construction. During operation, Alternative 3 would result in emissions from maintenance activities similar to the proposed project. Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. Operational impacts would be considered less than significant, and similar to that of the proposed project.

Biological Resources

Alternative 3 would disturb approximately the same area as the proposed project. While the volume of sediment removed and grading configuration proposed for this alternative would reduce overall earthwork, it would occur within the same overall grading and development footprint since the location of the trail alignment would be the same as for the proposed project. Additionally, impacts to special-status wildlife species and nesting birds would be similar under this alternative since the temporary and permanent impact footprints are approximately the same. The Steeper Slopes/Reduced Earthwork Alternative would result in similar temporary and permanent impacts to biological resources as the proposed project and would require similar mitigation because development would generally occur within the same footprint as the proposed project. Therefore, the Steeper Slopes/Reduced Earthwork Alternative would result in similar impacts to biological resources.

Cultural Resources

Alternative 3 would disturb approximately the same area as the proposed project. As discussed in Section 3.4, cultural resources are present between the UPRR crossing bridge and U.S. Highway 101. Development under Alternative 2 would still result in development of the trail in the same area, and would therefore result in impacts to these existing cultural resources. In addition, the project could still potentially impact undiscovered cultural resources, including archaeological resources and human remains. **MM-CR-1** through **MM-CR-4** would still be required. Impacts would be similar to the proposed project.

Energy

Alternative 3 would result in 96,077 CY of cut and 10,570 CY of fill, resulting in 85,507 CY of export. This is slightly lower than the proposed project's 92,526 CY of export and therefore would result in fewer haul trucks during construction. Therefore, energy use during construction is expected to be less than the proposed project. During operation, Alternative 3 would result in energy use from maintenance activities similar to the proposed project.

Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal energy usage. Operational impacts would be considered less than significant, and similar to the proposed project.

Geology and Soils

Alternative 3 would result in 110,019 less CY of earthwork, compared to the project. Under Alternative 3, the proposed alignment would be the same as the proposed project. However, for the cross section of the trail south of the UPRR crossing, on the eastern portion of the trail alignment, Alternative 3 would not provide benches above the trail. Given the lower volume of earthwork involved, temporary erosion impacts during construction would be reduced with this alternative; however, **MM-GEO-3** would continue to be required. The same bridge structure over the UPRR alignment would be employed, and therefore **MM-GEO-1** and **MM-GEO-2** would continue to be required. Updated geotechnical design details would be needed to address long-term stability of the regraded slopes south of the UPRR alignment, but the project engineers have indicated that feasible methods to achieve such stability are available and could be detailed in an updated geotechnical report if Alternative 3 were to be selected for implementation. Therefore, impacts would be similar to the proposed project.

Greenhouse Gas Emissions

Alternative 3 would result in 96,077 CY of cut and 10,570 CY of fill, resulting in 85,507 CY of export. This is slightly lower than the proposed project's 92,526 CY of export and therefore would result in fewer haul trucks during construction. Therefore, GHG emissions during construction are expected to be less than the proposed project. Impacts would be less than significant during construction. During operation, Alternative 3 would result in GHG emissions from maintenance activities similar to the proposed project. Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. Operational impacts would be considered less than significant, and similar to the proposed project.

Hazards and Hazardous Emissions

Alternative 3 would involve an identical trail length to the project, but would reduce earthwork by approximately 10,019 CY. The use of heavy equipment would be slightly reduced in duration, compared to the project, due to the reduced earthwork volume. The section of the trail north of the UPRR corridor (the western portion) would have the same potential to encounter soils with ADL. Overall, impacts would remain similar or the same as the project relative to the volumes of hazardous materials associated with construction and the risk of release, as well as handling and disposal of ADL containing soils. **MM-WAT-2** and **MM-HAZ-1** would continue to be required, and residual impacts would also be less than significant.

Hydrology and Water Quality

Alternative 3 would involve an identical trail length to the project but would reduce earthwork by approximately 10,019 CY. With reduced earthwork volume, the potential for erosion during construction would be reduced under Alternative 3, as compared to the project; however, **MM-WAT-1**, **MM-WAT-2**, and **MM-WAT-3** would continue to be required to address potential erosion and other water quality impacts during construction. The trail alignment under Alternative 3 would match the project, and therefore all the proposed storm drain components would continue to adequately serve the stormwater runoff volumes from the project. As with the project, **MM-WAT-4**, **MM-WAT-5**, and **MM-WAT-6** would continue to be required to address long-term operational affects upon water quality. Overall, Alternative 3 would marginally reduce hydrology and water quality impacts when compared to the project.

Land Use and Planning

The proposed project would result in less than significant impacts to land use and planning with incorporation of MM-BIO-1 through MM-BIO-4, prescribes required mitigation measures to satisfy requirements found in City and County policies governing ESHA. As discussed under Biological Resources, above, Alternative 3 would disturb approximately the same area as the proposed project, resulting in similar impacts to ESHA. In addition, the project would result in less than significant impacts to conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect with implementation of MM-AES-1; MM-BIO-1 through MM-BIO-6; MM-CR-1 through MM-CR-4; MM-GEO-1 through MM-GEO-3; MM-HAZ-1; MM-WAT-1 through MM-WAT-6; MM-NOI-1 through MM-NOI-2; MM-TCR-1. It is anticipated that Alternative 2 would require similar mitigation measures to reduce potential land use impacts. Thus, impacts to land use and planning would be similar under this alternative.

Noise

Alternative 3 would involve an identical trail length and alignment to the project but would reduce earthwork by approximately 10,019 CY. With reduced earthwork volume, the duration for earthwork activities using heavy equipment would be lessened; nonetheless MM-NOI-1 and MM-NOI-2 would continue to be required to reduce construction noise impacts to a less than significant level. Noise impacts from Alternative 3 would be similar to the project, but somewhat less due to the reduced earthwork volumes involved, as compared to the project.

Recreation

Under Alternative 3, a multi-use trail for cyclists and pedestrians identical to the project would be constructed and operated, and the substantial gap that currently exists in the Coastal Trail system would be filled. Enhancement of local and regional biking and hiking opportunities delivered by the project would also be achieved under Alternative 3, and recreational benefits of the project would be realized. A critical difference would be incorporated, however, in the grading profile for the trail segment along the bluff face adjacent to the ocean; this segment would not be re-graded to create a second bench above the trail bench (unlike the proposed project). The Air Flow Study (Appendix I) found that the elimination of the upper bench would result in a reduction in the vertical wind speed along the bluff edge by 10% to 20%, rather than the 30% maximum reduction resulting from the proposed project. In practical terms, a reduction in vertical wind speeds along the bluffs caused by regrading could maintain conditions favorable for paragliding and hang-gliding activities to occur in the air space over the trail alignment. A vertical wind speed reduction of 10% to 20% would have a lower effect upon soaring opportunities than the 30% reduction associated with the proposed project. As such, Alternative 3 would have lesser impacts on recreation resources and opportunities than the project, specifically in regard to soaring opportunities. Alternative 3 would continue to meet primary recreational objectives for the project by providing a trail that offers views of the Pacific Ocean, that is ADA compliant, and which achieves a safe connection between Carpinteria and the Rincon Beach County Park that can function as an alternative transportation mechanism. This alternative would therefore have lesser impacts on recreation resources than the proposed project.

Transportation

Under Alternative 3, a multi-use trail for cyclists and pedestrians identical to the project would be constructed and operated. Alternative 3 would therefore also close the substantial gap that currently exists in the Coastal Trail system, equivalent to the project. The use of a vehicle by residents in visiting the Rincon Beach County Park would be expected to decline under Alternative 3 as well, due to the existence of a new safe alternative to vehicle travel from points within Carpinteria. Transportation hazards associated with pedestrians crossing the UPRR alignment to

navigate to Rincon Beach County Park would be resolved. In this regard, the enhancements of local and regional biking and hiking opportunities delivered by the project would occur under Alternative 3, and a solution to existing pedestrian hazards of the project would also be realized. This alternative would have transportation benefits and impacts equivalent to the project.

Tribal Cultural Resources

Alternative 3 would disturb approximately the same area as the proposed project. As discussed in Section 3.13, no previously recorded archaeological resources of Native American origin or TCRs were identified within the project site. Further, no TCRs have been identified by California Native American tribes as part of the City's AB 52 notification process, and no California Native American tribes requested consultation with the City. However, there is still a potential for unknown subsurface TCRs to be significantly impacted by the project, which could result in a potentially significant impact. Development under Alternative 3 would result in development of the trail in the same area, and would therefore result in similar impacts to TCRs. **MM-CR-1** through **MM-CR-4** and **MM-TCR-1** would still be required. Impacts would be similar to the proposed project.

Utilities and Service Systems

Alternative 3 would involve an identical trail length to the project but would reduce earthwork by approximately 10,019 CY. Although Alternative 3 would result in reduced earthwork volume, impacts to existing drainage patterns of the site would still occur. Therefore, **MM-WAT-1, MM-WAT-2, MM-WAT-3, and MM-WAT-4** would continue to be required. Therefore, impacts to utilities and service systems would be similar under Alternative 3.

Relation to Project Objectives

Given that Alternative 3 would employ the same alignment as the project and would incorporate an identical trail width to the project, this alternative would be equivalent to the project in meeting all the stated project objectives. With regard to the project objective of reducing regional greenhouse gas emissions, Alternative 3 would be marginally more successful in meeting this objective, as earthwork would be reduced under this alternative, leading to fewer construction equipment emission contributions to greenhouse gas levels.

6.6.4 Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4)

Under the Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4), the proposed trail alignment would be the same as the proposed project in the area north of UPRR and within the UPRR crossing. However, south of the UPRR crossing, the proposed alignment would be shifted to the north to remain on the north side of the ridge, and adjacent to the U.S. Highway 101 corridor, compared to the proposed project which locates this segment on the slopes on the south side of the same ridge, and facing the Pacific Ocean. Further, the trail proposed under Alternative 4 would extend further to the southeast, past the Rincon Beach County Park, and terminate at Bates Road (see Figure 6-1). The proposed UPRR crossing would not change under Alternative 4 compared to the proposed project. Under Alternative 4, most of the stormwater down drains proposed along the southern side of the UPRR trail crossing (see Illustration 2-6, Major Storm Drainage Components of the Project, in Chapter 2, Introduction & Project Description), would not be constructed; surface drainage would instead be delivered to existing systems serving the US 101 corridor.. Lastly, under this alternative, retaining walls would be required for the section of trail

extending to Bates Road, aligned to the north of the Rincon Beach County Park parking lot. Retaining walls along this portion of the trail would be approximately 500 feet in length.

Project Alternative 4 Impact Analysis

Aesthetics

The proposed project would result in less than significant impacts associated with aesthetics, with implementation of **MM-AES-1** and **MM-BIO-3**. Alternative 4 would result in development of a trail that would follow the same alignment as the proposed project in the area north of UPRR and within the UPRR crossing. However, south of the UPRR crossing, the proposed alignment would be shifted to the north to remain on the north side of the ridge, and adjacent to the U.S. Highway 101 corridor. In addition, under Alternative 4, the proposed trail alignment would extend further to the southeast, past the Rincon Beach County Park, and terminate at Bates Road. Therefore, without mitigation, impacts may be slightly greater than the proposed project, due to greater area of development. Nonetheless, Alternative 4 would be required to implement **MM-AES-1,** which requires City Architectural Review Board and County Board of Architectural Review approval, and **MM-BIO-3**, which requires restoration or enhancement of coastal sage scrub and coastal bluff scrub communities in areas temporarily impacted by construction of the trail or adjacent area. Lastly, as discussed above, under Alternative 4, retaining walls would be required for the section of trail extending to Bates Road, aligned to the north of the Rincon Beach County Park parking lot. Retaining walls along this portion of the trail would be approximately 500 feet in length. Therefore, due to additional retaining walls, that would be visible to motorists and visitors to the area, impacts to aesthetics under Alternative 4 would be greater compared to the proposed project.

Air Quality

Alternative 4 would result in a longer trail than the proposed project. It would result in 105,300 CY of cut and 710 CY of fill, resulting in 104,590 CY of export. This is greater than the proposed project's 94,100 CY of export and therefore would result in more haul trucks during construction. Alternative 4 would result in greater haul truck trips and greater construction activity as it is more square feet of path compared to the proposed project. Therefore, criteria air pollutant emissions during construction are expected to be greater than the proposed project, but still less than significant. During operation, maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. Operational impacts would be considered less than significant and would be similar to the proposed project.

Biological Resources

Based on impacts within the biological survey area, this alternative would result in a decrease of impacts to sensitive biological resources. However, since a portion of the trail alignment under this alternative has not been surveyed (vegetation mapping, special-status plant species, wildlife species, and tree assessment) a complete comparison analysis cannot be performed to determine if impacts to sensitive biological resources would be increased or reduced under the Freeway Adjacent Trail Avoiding Bluff Face Alternative. Therefore, additional surveys to detect potential sensitive biological resources would be required, and would include vegetation mapping, special-status plant species surveys, a special-status wildlife species habitat assessment, and a tree assessment. While it is unlikely that additional special-status plant or wildlife species may be present along the new trail alignment, since it is located within similar habitats and along previously disturbed and graded slopes within the proposed project footprint, this alternative may result in greater impacts to sensitive vegetation communities included as County ESH and City ESHA, and qualifying trees. The trail alignment under Alternative 4 is longer as compared to the proposed project resulting in more permanent impacts to undeveloped land, and may require removal of eucalyptus trees

located at the eastern terminus of the Rincon Beach County Park parking lot, which are qualifying trees and require mitigation for removal under Santa Barbara County Article II Zoning Ordinance. Therefore, Alternative 4 may require additional mitigation for impacts to sensitive vegetation communities, including County ESH and City ESHA. More specifically, Alternative 4 may result in greater areas of impacts to vegetation communities and therefore require greater mitigation acreages, outlined in a Habitat Mitigation and Monitoring Plan (see **MM-BIO-5**). Mitigation for removal of any qualifying trees impacted would also be required under Alternative 4. Similar impacts to special-status wildlife species and nesting birds are anticipated and would require similar mitigation.

Cultural Resources

Alternative 4 would result in greater ground disturbance compared to the proposed project, due to the longer length of the trail. It is anticipated that impacts to existing cultural resources would still occur, and that potential impacts to undiscovered cultural resources, including archaeological resources and human remains would be greater due to greater area of development. However, the presence of cultural resources within the area expanding the project footprint southeast, past the Rincon Beach County Park, and terminating at Bates Road, are unknown at this time. Therefore, development in this area would require additional investigation to appropriately determine the presence of existing cultural resources and potential impacts to these resources. **MM-CUL-1** through **MM-CUL-4** would still be required. Due to the longer length of the trail under Alternative 4, impacts to cultural resources would be slightly greater than the proposed project and additional mitigation may be required.

Energy

Alternative 4 would result in a longer trail than the proposed project. It would result in 105,300 CY of cut and 710 CY of fill, resulting in 104,590 CY of export. This is greater than the proposed project's 94,100 CY of export and therefore would result in more haul trucks during construction. Alternative 4 would result in greater haul truck trips and greater construction activity as it is more square feet of path compared to the proposed project. Therefore, energy use during construction is expected to be greater than the proposed project, but still less than significant. During operation, maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal energy use. Operational impacts would be considered less than significant and would be similar to the proposed project.

Geology and Soils

In Alternative 4, the proposed trail would employ the same alignment as the project along the north side of the UPRR alignment and would include the same bridge structure over the UPRR alignment. However, after the UPRR bridge, the trail would lead to the existing slope adjacent to U.S. Highway 101 on the north side of the ridge and would regrade this slope with a new bench for the trail. Alternative 4 would involve a similar volume of total earthwork as the project, and therefore short-term erosion impacts during construction would be the same or similar; **MM-GEO-3** would continue to be required. The same bridge structure over the UPRR alignment would be employed, and therefore mitigation measures **MM-GEO-1** and **MM-GEO-2** would continue to be required. The Alternative 4 trail is proposed to extend all the way to Bates Road, aligned to the north of the Rincon Beach County Park parking lot for the eastern portion. Along this section, retaining walls approximately 500 feet in length would be required, to create a bench in this sloped area.. In addition, as discussed in Section 3.5.1, the existing ocean-facing slope south of the proposed trail bridge is considered to be susceptible to surficial/local instability under static conditions. These steep slopes in the southern trail alignment are the result of former landform modification carried out for the railroad alignment and former state highway, and do not represent natural conditions resulting from natural weathering of the involved earth materials and geologic formations. Alternative 4 would not include

any grading of the ocean facing slopes east of the UPRR crossing, and therefore, erosion of the existing hillside could still occur under Alternative 4. The proposed project would implement measures such as native plantings and the application of hydro-seed, to stabilize these ocean-facing slope areas to minimize soil erosion; no such remedial measures to address ocean-facing slope instability would occur under Alternative 4. Given the need for retaining walls for the trail section adjacent to the Rincon Beach County Park, and the absence of remedial grading to address the unstable sections of the ocean-facing slopes, this alternative would have moderately greater impacts to geology and soils than the project

Greenhouse Gas Emissions

Alternative 4 would result in a longer trail than the proposed project. It would result in 105,300 CY of cut and 710 CY of fill, resulting in 104,590 CY of export. This is greater than the proposed project's 94,100 CY of export and therefore would result in more haul trucks during construction. Alternative 4 would result in greater haul truck trips and greater construction activity as it is more square feet of path compared to the proposed project. Therefore, GHG emissions during construction are expected to be greater than the proposed project. Impacts would, however, continue to be less than significant during construction. During operation, Alternative 4 would result in GHG emissions from maintenance activities similar to the proposed project. Maintenance activities include landscape watering, vegetation control and other trail amenity care and repair, which would involve the temporary use of a light-duty truck that would generate nominal air pollutant emissions. Operational impacts would be considered less than significant, and would be similar to the proposed project.

Hazards and Hazardous Emissions

Alternative 4 would involve a trail length considerably longer than the proposed project trail length. The additional length would not affect use or operation of the trail since no hazardous wastes are anticipated from these activities. However, construction of the proposed project would require heavy construction equipment, which involves the use of hydrocarbon fuels and lubricants that are considered hazardous materials. Concrete is considered a hazardous material until it cures, and is included in the project construction. Paint or other surface coatings are also considered hazardous materials, until they are fully dried; the bridge and certain fencing elements may involve paint application on site. With a comparatively longer trail length under Alternative 4, the volumes of hazardous materials associated with construction would increase and the risk of release would be slightly elevated over project levels. Because the entire trail would be aligned on existing slopes facing U.S. Highway 101, a greater volume of soils containing aerially deposited lead (ADL) may be encountered. Surface soils that could potentially contain ADL are likely to be removed and transported off the site. However, some soils containing ADL could be used as fill for the project or could be used off site as fill in areas where the public could have exposure to the soils. Consequently, as with the proposed project, impacts from soil containing ADL under Alternative 4 could be potentially significant. **MM-HAZ-1** would be required to reduce ADL impacts to less than significant. The marginally greater impacts from hazardous materials under Alternative 4 would still be reduced to a level of less than significant through implementation of **MM-WAT-2** and **MM-HAZ-1**, which would continue to be required.

Hydrology and Water Quality

The proposed project would result in construction of improved stormwater drainage infrastructure, which would not be constructed under Alternative 4. In addition, Alternative 4 would result in a similar scale of total earthwork to the proposed project; as such, **MM-WAT-1**, **MM-WAT-2**, and **MM-WAT-3** would continue to be required. In addition, Alternative 4 would involve a trail length considerably longer than the project trail length. The additional length would increase the impervious surface of the trail, resulting in greater volumes of stormwater runoff. Project storm

drain systems would need to be expanded in capacity to accommodate the increased runoff; storm drain management for Alternative 4 has not been fully investigated for the portion of the trail east of the UPRR alignment, but since the entire trail would be on the slope adjacent to U.S. Highway 101, some intertie with Caltrans drainage systems (including possible expansion) may be required. Given the potential need for expansion of drainage systems serving the U.S. Highway 101 corridor, Alternative 4 would have greater hydrology impacts than the project. MM-WAT-4, MM-WAT-5, and MM-WAT-6 would continue to be required to address long-term operational affects upon water quality. In addition, Alternative 4 would fail to correct the elevated erosion associated with the existing steep cut slopes along the ocean bluffs, resulting in greater water quality impacts than the proposed project.

Land Use and Planning

As discussed under Biological Resources, above, because development would generally occur beyond the extent of the current biological survey area and the area of disturbance would be greater due to the length of the Alternative 4 trail, it is assumed that impacts to biological resources would be greater than the proposed project. Alternative 4 may require additional mitigation for impacts to sensitive vegetation communities, including County ESH and City ESHA. More specifically, Alternative 4 may require greater mitigation acreages, outlined in a Habitat Mitigation and Monitoring Plan (see MM-BIO-5). Therefore, impacts to land use and planning would be greater compared to the project.

Noise

Alternative 4 would involve a trail length substantially longer than the project, which would increase the duration of activities involving concrete installation and the related necessary equipment. The additional trail segments under Alternative 4 would occur along the slope facing U.S. Highway 101, which is closer to the most proximate noise-sensitive users than the remaining trail segments common to the proposed project. Rincon Point residences would remain the closest noise-sensitive receptors to project construction activities, which would now be as close as approximately 225 feet (reduced from a minimum distance of 775 feet for the project). At these closest distances, daytime construction noise levels would average approximately 6 dBA lower than ambient noise levels. However, construction noise levels in the evening or overnight period could be plainly audible above background levels and could also result in sleep disturbance for residential occupants. Therefore, as with the project, Alternative 4 temporary construction noise impacts are potentially significant. MM-NOI-1 and MM-NOI-2 are required to reduce construction noise impacts to a less than significant level. Noise impacts from Alternative 4 would be similar to the proposed project, but somewhat greater due to the more extensive concrete work and reduced distance between construction work and adjacent residences.

Recreation

Under Alternative 4, a multi-use trail for cyclists and pedestrians would be constructed and operated, and the substantial gap that currently exists in the Coastal Trail system would be filled, achieving the desired enhancement of local and regional biking and hiking opportunities delivered by the project. In addition, with alignment of the trail along the slope adjacent to the freeway, rather than on the ocean bluff face, Alternative 4 would have reduced effects upon the existing wind and uplift conditions along the bluffs that currently support soaring opportunities in the air space above the trail alignment. However, Alternative 4 would not meet the objective of providing trail users with an experience oriented to the ocean environment north of the UPRR bridge to as great a degree as the project. Rather than a sweeping view of the ocean, beach, and Channel Islands, trail users east of the railroad bridge would overlook the U.S. Highway 101 corridor and be subject to elevated noise levels and emissions from vehicular traffic along this corridor. On the whole, the recreation impacts and benefits of Alternative 4 would be very similar to the project, in that lesser impacts on soaring opportunities under this alternative would be offset by eliminating ocean vistas southeast of the railroad bridge and providing a less noisy environment for enjoyment during walking and cycling along the path.

Transportation

Once again, Alternative 4 would provide a multi-use trail in nearly the same alignment as the project for cyclists and pedestrians. Alternative 4 would therefore also close the substantial gap that currently exists in the Coastal Trail system, similar to the project. The use of a vehicle by residents in visiting the Rincon Beach County Park would be expected to decline under Alternative 4 as well, due to the existence of a new safe alternative to vehicle travel from points within Carpinteria. Transportation hazards associated with pedestrians crossing the UPRR alignment to navigate to Rincon Beach County Park would be resolved. In this regard, the enhancements of local and regional biking and hiking opportunities delivered by the project would occur under Alternative 4, and a solution to existing pedestrian hazards of the project would also be realized. Unlike the proposed project, Alternative 4 would route the trail along the north side of the existing parking lot for Rincon Beach County Park, thereby avoiding potential cyclist and pedestrian conflicts with vehicle parking maneuvers. On the other hand, Alternative 4 may create similar hazards to the project by creating a crossing adjacent to the U.S. Highway 101 off-ramp at Bates Road. As such, Alternative 4 would have similar transportation impacts to the proposed project.

Tribal Cultural Resources

Alternative 4 would result in greater ground disturbance compared to the proposed project, due to the longer length of the trail. As discussed in Section 3.13, no previously recorded archaeological resources of Native American origin or TCRs were identified within the project site. Further, no TCRs have been identified by California Native American tribes as part of the City's AB 52 notification process, and no California Native American tribes requested consultation with the City. However, there is still a potential for unknown subsurface TCRs to be significantly impacted by the project, which could result in a potentially significant impact. Development under Alternative 4 would result in development of a longer trail alignment, and could therefore result in greater impacts to TCRs. However, the presence of existing tribal cultural resources within the area expanding the project footprint southeast, past the Rincon Beach County Park, and terminating at Bates Road, are unknown at this time. Therefore, development in this area would require additional investigation to appropriately determine the potential presence of existing tribal cultural resources and potential impacts to these resources. **MM-CR-1** through **MM-CR-4** and **MM-TCR-1** would still be required, and impacts would be potentially greater than the proposed project.

Utilities and Service Systems

Alternative 4 would involve a longer trail length than the project. The additional length would increase the impervious surface of the trail, resulting in greater volumes of stormwater runoff. Project storm drain systems would need to be expanded in capacity to accommodate the increased runoff; storm drain management has not been fully investigated for the portion of the Alternative 4 trail east of the UPRR alignment, but since the entire trail would be on the slope adjacent to U.S. Highway 101, some intertie with Caltrans drainage systems (including possible expansion) may be required. Given the potential need for expansion of drainage systems serving the U.S. Highway 101 corridor, Alternative 4 would have greater impacts to utilities and service systems than the project. **MM-WAT-1, MM-WAT-2, MM-WAT-3,** and **MM-WAT-4** would continue to be required under this alternative and more mitigation may be required.

Relation to Project Objectives

Alternative 4 would be capable of achieving certain project objectives including closing a substantial gap in the Coast Trail System, which in turn would enable regional commuting opportunities that employ alternative transportation modes (i.e., cycling). Alternative 4 would also satisfy the objective to provide recreation opportunities for all residents, and a direct route to Rincon Beach County Park from Carpinteria, and to Rincon Bluffs from Rincon

Point. Alternative 4 would not, however, meet the multiple project objectives associated with providing trail users with an experience oriented to the ocean environment to the same extent as the project and the other alternatives would provide. Rather than a sweeping view of the ocean, beach, and Channel Islands, trail users would overlook the U.S. Highway 101 corridor and be subject to elevated noise levels and emissions from vehicular traffic along this corridor. Lastly, Alternative 4 would not meet the objective of improving the local coastal bluff environment through improved water quality of surface water runoff through stabilization of ocean-facing bluff slope faces that are currently eroding into the Pacific Ocean, nor would it achieve enhancement of sensitive coastal bluff scrub habitats along the bluff top south of the UPRR alignment in the project area. In this regard, Alternative 4 would not satisfy a number of key objectives identified for the project.

6.7 Environmentally Superior Alternative

The No Project Alternative would result in the least environmental impacts and would be the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. In this case, the environmentally superior alternative is the Steeper Slopes/Reduced Earthwork Alternative (Alternative 3). Alternative 3 would meet all of the project objectives. With regard to the project objective of reducing regional greenhouse gas emissions, Alternative 3 would be marginally more successful in meeting this objective, as earthwork would be reduced under this alternative, leading to fewer construction equipment emission contributions to greenhouse gas levels. This alternative would also marginally reduce erosion potential during construction (due to reduced earthwork volumes), and slightly reduce construction-related noise impacts, compared to the project. Lastly, alternative 3 would also have lesser impacts upon existing soaring opportunities above the trail alignment. The project's impacts are compared to each alternative's impacts in Table 6-1.

Table 6-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/ No Build Alternative (Alternative 1)	Maximize Existing Benchwork/ Topography Alternative (Alternative 2)	Steeper Slopes/ Reduced Earthwork Alternative (Alternative 3)	Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4)
Aesthetics	Less Than Significant with the Incorporation of Mitigation	Reduced	Greater	Similar	Greater
Air Quality	Less Than Significant	Reduced	Reduced for construction; similar for operations	Reduced for construction; similar for operations	Greater for construction; similar for operations
Biological Resources	Less Than Significant with the Incorporation of Mitigation	Reduced	Reduced	Similar	Greater

Table 6-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/ No Build Alternative (Alternative 1)	Maximize Existing Benchwork/ Topography Alternative (Alternative 2)	Steeper Slopes/ Reduced Earthwork Alternative (Alternative 3)	Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4)
Cultural, Tribal Cultural	Less Than Significant with the Incorporation of Mitigation	Reduced	Similar	Similar	Greater
Energy	Less Than Significant	Reduced	Reduced for construction; similar for operations	Reduced for construction; similar for operations	Greater for construction; similar for operations
Geology and Soils	Less Than Significant with the Incorporation of Mitigation	Reduced	Greater	Similar	Greater
Greenhouse Gas Emissions	Less Than Significant	Similar	Reduced for construction; similar for operations	Reduced for construction; similar for operations	Greater for construction; similar for operations
Hazards, Hazardous Materials	Less Than Significant with the Incorporation of Mitigation	Reduced	Greater	Similar	Greater
Hydrology and Water Quality	Less Than Significant with the Incorporation of Mitigation	Reduced	Greater	Reduced	Greater
Land Use and Planning	Less Than Significant with the Incorporation of Mitigation	Reduced	Reduced	Similar	Greater
Noise	Less Than Significant with the Incorporation of Mitigation	Reduced	Greater	Reduced	Greater
Recreation	Less Than Significant	Similar	Similar	Reduced	Similar
Transportation	Less Than Significant with the Incorporation of Mitigation	Greater	Similar	Similar	Similar

Table 6-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/ No Build Alternative (Alternative 1)	Maximize Existing Benchwork/ Topography Alternative (Alternative 2)	Steeper Slopes/ Reduced Earthwork Alternative (Alternative 3)	Freeway Adjacent Trail Avoiding Bluff Face Alternative (Alternative 4)
Utilities and Service Systems	Less Than Significant the Incorporation of Mitigation	Reduced	Greater	Similar	Greater

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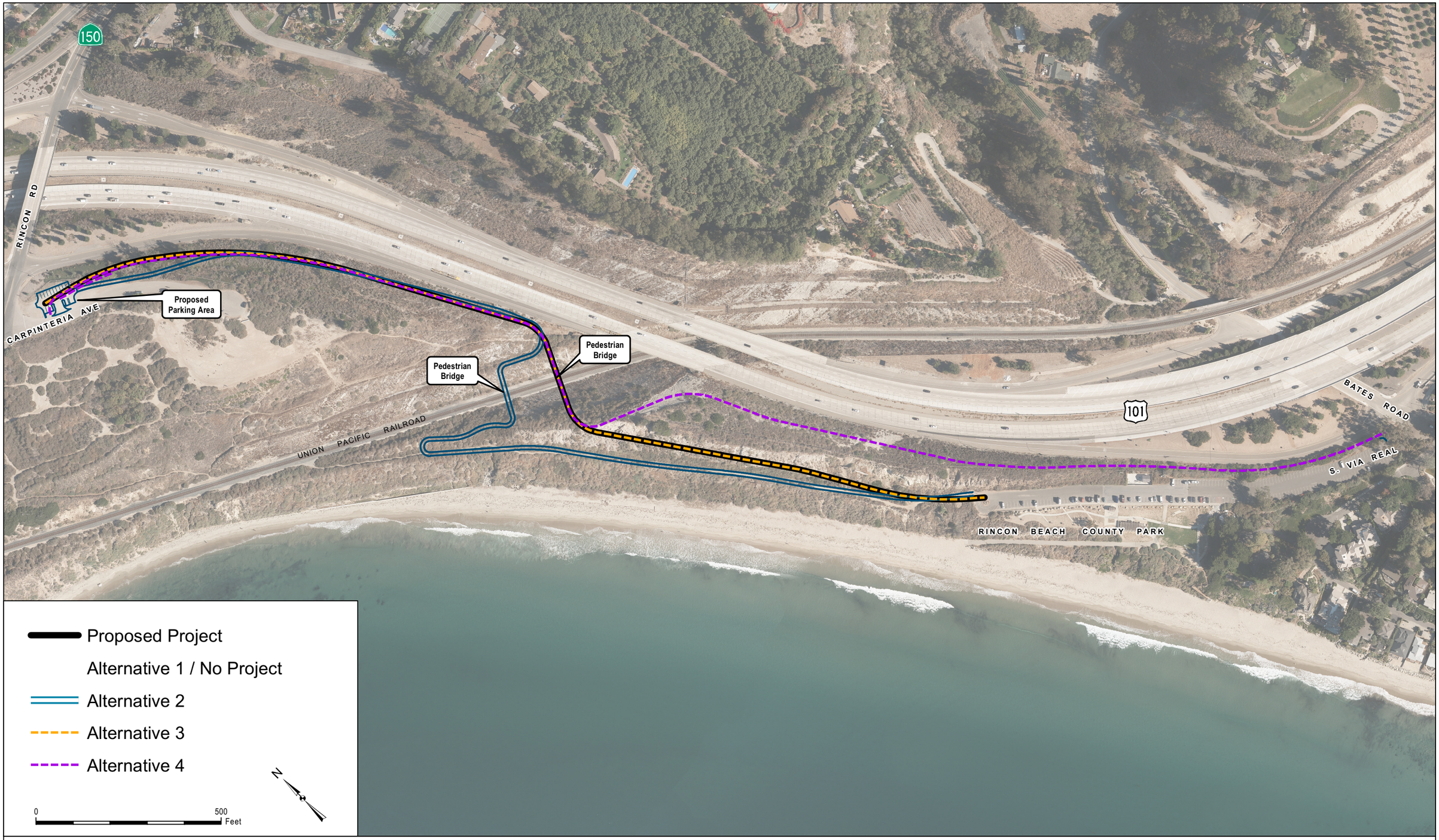

AERIAL SOURCE: CIRGIS 2017

FIGURE 6-1

Proposed Alternatives

Carpinteria Rincon Trail EIR

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8 References

Chapter 1 Executive Summary

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

Chapter 2 Introduction & Project Description

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria 2009. *Carpinteria Rincon Trail Project Study Report*. September 30, 2009.

FRA (Federal Railroad Administration). 2020. Train Accident Reports. https://railroads.dot.gov/accident-and-incident-reporting/train-accident-reports/train-accident-reports.

Santa Barbara County Grand Jury. 2019. Railway Fatalities in Santa Barbara County. http://www.sbcgj.org/2019/RailwayFatalities.pdf.

Chapter 3 Environmental Analysis

Section 3.1 Aesthetics

Caltrans (California Department of Transportation). 2014. South Coast 101 HOV Lanes Project Final Environmental Impact Report/ Environmental Assessment with Finding of No Significant Impact. August 2014.

Caltrans. 2020a. California State Scenic Highway System Map. Accessed September 24, 2020. https://www.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983.

Caltrans. 2020b. Scenic Highways System Lists. Accessed September 23, 2020. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2009. *Carpinteria Rincon Trail Project Study Report*. September 30, 2009.

County of Santa Barbara. 2009. Comprehensive Plan – Environmental Resources Management Element (ERME). May 2009.

U.S. Census Bureau. 2020. City and Town Population Totals: 2010-2019. Accessed September 22, 2020. https://www.census.gov/data/datasets/time-series/demo/popest/2010s-total-cities-and-towns.html.

Section 3.2 Air Quality

California Department of Public Health. 2019. "Epidemiologic Summary of Coccidioidomycosis in California, 2016." June 2019. Accessed December 2020. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf.

CAPCOA (California Air Pollution Control Officers Association). 2017. *California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2* Prepared by Trinity Consultants and the California Air Districts. Accessed October 2017. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01_user-39-s-guide2016-3-1.pdf?sfvrsn=2.

CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000. Accessed August 2016. http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf.

CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Accessed August 2016. http://www.arb.ca.gov/ch/landuse.htm.

CARB. 2016a. "Glossary of Air Pollution Terms." CARB website. Accessed June 2016. http://www.arb.ca.gov/html/gloss.htm.

CARB. 2016b. "Ambient Air Quality Standards." May 4, 2016. Accessed August 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

CARB. 2020. "iADAM: Air Quality Data Statistics." Accessed July 2016. http://www.arb.ca.gov/adam/topfour/topfour1.php.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2020. Environmental Thresholds and Guidelines Manual. September. Accessed December 2020. https://cosantabarbara.app.box.com/s/vtxutffe2n52jme97lgmv66os7pp3lm5.

County of Santa Barbara. 2021. Interactive Land Use Designation/Zoning Map. Accessed January 2021. https://www.arcgis.com/home/webmap/viewer.html?webmap=fa3545a29dac49aeacc81669b956e3e5&extent=-120.9142,34.093,-118.9408,35.4355.

EPA (U.S. Environmental Protection Agency). 2009. *Integrated Science Assessment for Particulate Matter*. U.S. EPA, EPA/600/R-08/139F, 2009.

EPA. 2013. *Integrated Science Assessment of Ozone and Related Photochemical Oxidants*. U.S. EPA, EPA/600R-10/076F, 2013.

EPA. 2016a. “Criteria Air Pollutants.” July 21, 2016. Accessed August 2016. https://www.epa.gov/criteria-air-pollutants.

EPA. 2016b. *Integrated Science Assessment for Oxides of Nitrogen-Health Criteria (2016 Final Report)*. U.S. EPA, EPA/600/R-15/068, 2016.

EPA. 2016c. “EPA Region 9 Air Quality Maps and Geographic Information.” Last updated April 27, 2016. Accessed August 2016. http://www.epa.gov/region9/air/maps/.

EPA. 2016d. “Area Designations for the 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard – Round 3.” July 22, 2016. Accessed February 2017. https://www.epa.gov/sites/production/files/2016-07/documents/areadesign.pdf.

EPA. 2020. “AirData: Access to Air Pollution Data.” Last updated February 23, 2016. Accessed August 2016. http://www.epa.gov/airdata/ad_rep_mon.html.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.* California Environmental Protection Agency, OEHHA. February 2015. Accessed April 3, 2018. http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

Santa Barbara County Public Health Department. 2018. Public Health Investigation into Reported Valley Fever Cases Between December 4, 2017 and March 31, 2018. Accessed December 2020. https://www.countyofsb.org/uploadedFiles/phd/PROGRAMS/Epidemiology/Other/2018%20Valley%20Fever%20Investigation%20General%20Data.pdf.

SBCAPCD (Santa Barbara County Air Pollution Control District). 2017. Scope and Content of Air Quality Sections in Environmental Documents. June. Accessed December 2020. https://www.ourair.org/wp-content/uploads/ScopeContentJune2017-LimitedUpdate.pdf.

SBCAPCD. 2016. *2016 Ozone Plan*. October 2016. https://www.ourair.org/wp-content/uploads/Final-2016-Ozone-Plan-Approved-October-20-2016.pdf.

SBCAPCD. 2017. Scope and Content of Air Quality Sections in Environmental Documents. June. Accessed January 2021. https://www.ourair.org/wp-content/uploads/ScopeContentJune2017-LimitedUpdate.pdf.

SBCAPCD. 2019. *2019 Ozone Plan*. Final. December 19, 2019. Accessed December 2020. https://www.ourair.org/wp-content/uploads/2019-12-19-Final-Plan.pdf.

SBCAPCD. 2020. Modeling Guidelines for Health Risk Assessments. June. Accessed December 2020. https://www.ourair.org/wp-content/uploads/apcd-15i.pdf.

SBCAPCD and SBCAG 2011. 2010 Clean Air Plan. January. Accessed January 2021. https://www.ourair.org/wp-content/uploads/Final2010CleanAirPlan.pdf.WRCC (Western Regional Climate Center). 2020.

Temperature and Precipitation. Accessed October 2020. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7902.

Section 3.3 Biological Resources

CDFW (California Department of Fish and Wildlife). 2010. Natural Communities List. List of Vegetation Alliances and Associations. September 2010. http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp

CDFW. 2018. Rarefind 5: Commercial version. Online database. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed April 2018–August 2019. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

CDFW. 2019. California Natural Community Conservation Plans. April 2019. Accessed October 14, 2020. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=68626&inline

CDFW. 2020a. Rarefind 5: Commercial version. Online database. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed December 2020. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

CDFW. 2020b. "California Natural Community list." Sacramento, California: CDFW. September 9, 2020. Accessed December 2020 at https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities.

CDFW. 2020c. “California Sensitive Natural Communities” Sacramento, California: CDFW. September 9, 2020. Accessed December 2020 at https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April.

City of Carpinteria. 2015. Proposed Final Mitigated Negative Declaration. Carpinteria Rincon Trail. May 4, 2015.

City of Carpinteria. 2019. Proposed Final Subsequent Mitigated Negative Declaration. Carpinteria Rincon Trail. December 31, 2019.

CNPS (California Native Plant Society). 2020. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Sacramento, California: California Native Plant Society. Accessed December 6, 2020 at www.rareplants.cnps.org.

CNPS. 2021. Calscape. Restore Nature One Garden at a Time. Sacramento, California: California Native Plant Society. Accessed January 20, 2021. https://calscape.org/

Condor Environmental Planning Services. 1996. Carpinteria Bluffs Biological Resources and Environmentally Sensitive Habitat. Prepared for: City of Carpinteria. October 28.

County of Santa Barbara. 2008. *Environmental Thresholds and Guidelines Manual*. County of Santa Barbara, Planning and Development.

County of Santa Barbara 2019. County of Santa Barbara Coastal Land Use Plan. Republished 2019. Accessed October 20, 2020. https://cosantabarbara.app.box.com/s/cx95k0r4hnfo58hg291fi5gzf5rrdurd

Dudek. 2012a. Draft Carpinteria Bluffs Area III Project Biological Resources Due Diligence Report. Prepared for: The Theimer Group. February.

Dudek. 2012b. Wetland Delineation of Pool Features at Carpinteria Bluffs Areas III per the California Coastal Act, City of Carpinteria, California. July 18.

Firma. 2008. Carpinteria Bluffs Areas 2 and 3 Biological Resource Analysis & Mapping. Prepared for: King Ventures and The City of Carpinteria.

INTERFACE Planning and Counseling Corporation. 1981. Administrative Draft Environmental Impact Report Carpinteria Bluffs, Areas III Development Plan. C.E.I.R. No. 81-2. Prepared for the City of Carpinteria. May.

Jepson Flora Project. 2020. Jepson eFlora. Berkeley, California: University of California. Accessed December 6, 2020 at http://ucjeps.berkeley.edu/interchange/index.html.

Lehman, P.E. 2020. "*The Birds of Santa Barbara County, California", Revised edition*, June. Accessed December 2020. http://www.sbcobirding.com/lehmanbosbc.html.

LSA Associates Inc. 1997. Evaluation Report Carpinteria Bluffs Biological Resources and Environmentally Sensitive Habitat Areas. Prepared for: City of Carpinteria. May 29.

NatureServe. *2020. NatureServe Explorer: An Online Encyclopedia of Life. Arlington, Virginia: NatureServe.* Accessed December *2020.* https://explorer.natureserve.org/AboutTheData/Statuses.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* March 2008. http://www.sdcanyonlands.org/pdfs/veg_comm_sdcounty_2008_doc.pdf.

Papenfuss, T.J., and Parham, J.F. 2013. "Four New Species of California Legless Lizards (*Anniella*)," Breviora 536(1), 1-17, (16 September 2013). https://doi.org/10.3099/MCZ10.1

Pelton, E., S. Jepsen, C. Schultz, C. Fallon, and S. H. Black. 2016. State of the Monarch Butterfly Overwintering Sites in California. 40+vi pp. Portland, OR: The Xerces Society for Invertebrate Conservation. Accessed December 2020. Monarch_Overwintering_Study.pdf (fws.gov)

Sage Institute Inc. 2009. 2008-2009 Second Wet Season 90-Day Vernal Pool Branchiopod Survey Report, King Ventures Rincon Bluffs Carpinteria, California. Prepared for King Ventures. August.

Sawyer, J., T. Keeler-Wolf, J. Evens. 2009. *Manual of California Vegetation*, 2nd ed. California Native Plant Society, Sacramento.

Shamoun-Baranes, Judy. Felix Leichti. Wouter M. G. Vansteelant. 2017. Atmospheric Conditions Create Freeways, Detours and Tailbacks for Migrating Birds. Accessed February 22, 2021. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5522504/

USDA (U.S. Department of Agriculture). 2020a. Web Soil Survey. USDA, Natural Resources Conservation Service, Soil Survey Staff. Accessed December 2020. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

USDA. 2020b. “California.” State PLANTS Checklist. Accessed December 6, 2020 at http://plants.usda.gov/dl_state.html.

USFWS (U.S. Fish and Wildlife Service). 2020a. Information for Planning and Consulting (IPaC). Accessed December 2020: https://ecos.fws.gov/ipac/

USFWS. 2020b. Critical Habitat Mapper. Accessed December 2020. https://ecos.fws.gov/ecp/report/table/critical-habitat.html

USFWS. 2020c. National Wetlands Inventory (NWI). Accessed September 2020 https://fws.gov/wetlands/USFWS (U.S. Fish and Wildlife Service). 2020. National Wetlands Inventory. Accessed December 2020. https://www.fws.gov/wetlands/.

USGS (U.S. Geological Survey). 2020. National Hydrography Dataset, Flowline Map. Accessed December 2020. http://nhd.usgs.gov/data.html.

VJS Biological Consulting. 2008. *Initial Biological Assessment: Rincon Trail*. Letter to Matt Roberts, City of Carpinteria, Director of Parks and Recreation. November 17.

Wilken, D. 2007. *Rare Plants of Santa Barbara County*. Central Coast Center for Plant Conservation, Santa Barbara Botanic Garden.

Wilken, D. 2018. DRAFT Rare Plants of Santa Barbara County. Santa Barbara Botanical Garden (SBBG). Version 2.0. March.

Xerces Society. 2020. Western Monarch New Year’s Count. Western Monarch Thanksgiving & New Year’s Count Data, 1997-2019. Available at https://www.westernmonarchcount.org/data/.

Section 3.4 Cultural Resources

Antevs, Ernst. 1948. "Climatic changes and pre-white man: the Great Basin, with emphasis on glacial and postglacial times." *University of Utah Bulletin* 38 (20): 168-191.

Arnold, Jeanne E. 1987. *Craft specialization in the prehistoric Channel Islands, California*. Berkeley: University of California Press.

Arnold, J. 1992. "Complex hunter-gatherer-fishers of prehistoric California: chiefs, specialists and marine adaptations of the Channel Islands." *American Antiquity* 57: 60-84.

Arnold, J. 1995. "Transportation innovation and social complexity among maritime hunter-gatherer societies." *American Anthropologist* 97 (4): 733-747.

Arnold, J., ed. 2001. *The origins of a Pacific Coast chiefdom*. Salt Lake City: University of Utah Press.

Arnold, J., ed. 2004. *Foundations of Chumash complexity*. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles, Perspectives in California Archaeology, Volume 7.

Arnold, Jeanne E., and A. P. Graesch. 2001. "The evolution of specialized shellworking among the Island Chumash." In *The origins of a Pacific Coast chiefdom: the Chumash of the Channel Islands*, edited by Jeanne E. Arnold, 71-112. Salt Lake City: University of Utah Press.

Arnold, Jeanne E., and Ann M. Munns. 1994. "Independent or attached specialization: the organization of shell bead production in California." *Journal of Field Archaeology* 21: 473-489.

Arnold, Jeanne E., Roger H. Colten, and S. Pletka. 1997. "Contexts of cultural change in insular California." *American Antiquity* 62 (2): 300-318.

Basgall, Mark E. 1987. "Resource intensification among hunter-gatherers: acorn economies in prehistoric California." In *Research in Economic Anthropology*, 21-52. JAI Press.

Basgall, Mark E., and Delbert L. True. 1985. Archaeological investigations in Crowder Canyon, 1973-1984: excavations at sites SBR-421B, SBR-421C, SBR-421D, and SBR-713, San Bernardino County, California. Report on file with the California Department of Transportation, District 8, San Bernardino, California.

Bennyhoff, James A., and Richard E. Hughes. 1987. "Shell bead and ornament exchange networks between California and the Western Great Basin." *Anthropological Papers of the American Museum of Natural History* 64 (2).

Bernard, Julienne. 2004. "Status and the swordfish: the origins of large-species fishing among the Chumash." In *Foundations of Chumash complexity*, edited by Jeanne E. Arnold, 25-51. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles, Perspectives in California Archaeology, Volume 7.

Bettinger, Robert L. 1999. "From Traveler to Processor: regional trajectories of hunter-gatherer sedentism in the Inyo-Mono region, California." In *Settlement Pattern Studies in the Americas: fifty years since Viru*, edited by B.R. Billman and Gary M. Feinman, 39-55. Washington D.C.: Smithsonian Institution Press.

Blackburn, Thomas C. 1976. "Ceremonial integration and social interaction in Aboriginal California." In *Native Californians: a theoretical retrospective*, edited by Lowell John Bean and Thomas C. Blackburn, 225-244. Ramona: Ballena Press.

Bolton, Herbert Eugene. 1967. *Spanish Exploration in the Southwest, 1542-1706*. New York: Barnes and Noble.

Brown, Alan K. 1967. *The aboriginal population of the Santa Barbara channel. Archaeological Survey Report, No. 69.* Berkeley: University of California Archaeological Research Facility.

Brown, A. 2001. *A description of distant roads: original journals of the first expedition into California, 1769-1770* by Juan Crespi. San Diego, CA: Sasn Diego State University.

Byrd, Brian F., and Shannon DeArmond. 2018. *Vizualizing Indigenous persistence during Spanish colonization of the San Francisco Bay Area.* Electronic document, web application : http://arcg.is/1u4DiD.

Byrd, Brian F., Shannon DeArmond, and Laurel Engbring. 2018. "Re-visualizing Indigenous persistence during colonization from the perspective of traditional settlements in the San Francisco Bay-Delta Area." *Journal of California and Great Basin Anthropology* 38 (2): 163-190.

Dixon, E. James. 2001. "Human colonization of the Americas: timing, technology and process." *Quaternary Science Reviews* 20: 277-299.

Erlandson, Jon M. 1997a. "The middle Holocene along the California coast." In *The archaeology of the California coast during the middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow, 1-10. Los Angeles: Institute of Archaeology, University of California, Los Angeles, Perspectives in California Archaeology, Volume 4.

Erlandson, J. 1997b. "The middle Holocene on the western Santa Barbara coast." In *The archaeology of the California coast during the middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow, 91-109. Los Angeles: Institute of Archaeology, University of California, Los Angeles, Perspectives in California Archaeology, Volume 4.

Erlandson, Jon M., and Terry L. Jones, eds. 2002. *Catalysts to complexity: late Holocene societies of the California coast*. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles.

Erlandson, Jon M., and Torben C. Rick. 2002. "Late Holocene cultural developments along the Santa Barbara coast." In *Catalysts to complexity: late Holocene societies of the California coast*, edited by Jon M. Erlandson and Terry L. Jones, 166-182. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles.

Erlandson, Jon M., Michael H. Graham, Bruce J. Bourque, Debra Corbett, James A. Estes, and Robert S. Steneck. 2007. "The kelp highway hypothesis: marine ecology, the coastal migration theory, and the peopling of the Americas." *Journal of Island and Coastal Archaeology* 2: 161-174.

Erlandson, Jon M., Theodore G. Cooley, and Richard Carrico. 1987. "A fluted projectile point fragment from the southern California coast: chronology and context at CA-SBA-1951." *Journal of California and Great Basin Anthropology* 9 (1): 120-128.

Erlandson, Jon M., Torben C. Rick, Terry L. Jones, and Judith F. Porcasi. 2007. "One if by land, two if by sea: who where the first Californians?" In *California Prehistory: colonization, culture, and complexity*, edited by Terry L. Jones and Kathryn A. Klar, 53-62. Lanham, MD: Alta Mira Press.

Erlandson, Jon M., Torben C. Rick, Todd J. Braje, Molly Casperson, Brendan J. Culleton, Brian Fulfrost, Tracy Garcia, Daniel A. Guthrie, Nicholas Jew, Douglas J. Kennett, Madonna L. Moss, Leslie Reeder, Craig Skinner, Jack Watts, and Lauren Willis. 2011. "Paleoindian seafaring, maritime technologies, and coastal foraging on California's Channel Islands." *Science* 221: 1181-1185.

Fauvelle, Mikael. 2011. "Mobile mounds: assymetrical exchange and the role of the Tomol in the development of Chumash complexity." *California Archaeology* 3: 141-158.

Fitzgerald, Richard T., ed. 2000. *Cross Creek: an Early Holocene / Millingstone Site*. Vol. 12, *California state Water Project, Coastal Branch Series*. San Luis Obispo: San Luis Obispo County Archaeological Society.

Fitzgerald, Richard T., and Terry L. Jones. 1999. "The Milling Stone Horizon revisited: new perspectives from Northern and Central California." *Journal of California and Great Basin Anthropology* 21 (1): 67-93.

Fladmark, K.R. 1979. "Alternate migration corridors for early man in North America." *American Antiquity* 44 (1): 55-69.

Gamble, Lynn H. 2002. "Archaeological evidence for the origin of the plank canoe in North America." *American Antiquity* 67: 301-315.

Gamble, L. 2008. *The Chumash world at European contact: power, trade, and feasting among complex hunter-gatherers.* Berkeley: University of California Press.

Gamble, Lynn H., and Chester D. King. 1997. "Middle Holocene adaptations in the Santa Monica Mountains." In *Archaeology of the California coast during the middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow, 61-72. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles.

Glassow, Michael A. 1990. *Archaeological Investigations on Vandenberg Air Force Base in Connection with the Development of Space Transportation System Facilities. Department of Anthropology, University of California, Santa Barbara. Submitted to USDI National Park Service, Western Region, Interagency Archaeological Services Branch, San Francisco, Contract No. CX-8099-2-0004*.

Glassow, M. 1992. "The relative dietary importance of marine foods through time in western Santa Barbara County." In *Essays on the Prehistory of California*, edited by Terry L. Jones, 115-128. Davis: Center for Archaeological Research at Davis.

Glassow, M. 1996. *Purisimeño Chumash Prehistory: Maritime adaptations along the Southern California coast. Edited by Jeffrey Quilter.Case Studies in Archaeology*. Fort Worth: Harcourt Brace.

Glassow, M. 1997. "Middle Holocene cultural development in the central Santa Barbara Channel region." In *Archaeology of the California Coast during the middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow. Los Angeles: Institute of Archaeology University of California, Los Angeles.

Glassow, Michael A., Larry Wilcoxon, and Jon M. Erlandson. 1988. "Cultural and environmental change during the Early Period of Santa Barbara Channel prehistory." In *The Archaeology of Prehistoric Coastlines*, edited by G. N. Bailey and J. E. Parkington, 64-77. Cambridge: Cambridge University Press.

Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the northern California Bight and the adjacent Transverse Ranges." In *California Prehistory: colonization, culture, and complexity*, edited by Terry L. Jones and Kathryn A. Klar, 191-213. Lanham, MD: Alta Mira Press.

Greenwood, Roberta S. 1972. *9000 years of prehistory at Diablo Canyon, San Luis Obispo County, California*. Vol. Occasional Paper No. 7. San Luis Obispo: San Luis Obispo County Archaeological Society.

Greenwood, R. 1978. "Obispeño and Purisimeño Chumash." In *Handbook of North American Indians*, edited by Robert F. Heizer, 520-529. Washington: Smithsonian Institution.

Groza, Randall G. 2002. "An AMS chronology for central California Olivella shell beads." MA Thesis, Anthropology, San Francisco State University.

Groza, Randall G., Jeffrey S. Rosenthal, John R. Southon, and Randall Milliken. 2011. "A refined shell bead chronology for late Holocene Central California." *Journal of California and Great Basin Anthropology* 31 (2): 13-32.

Hale, Micah J. 2001. "Technological organization of the Millingstone Pattern in southern California." MA, Anthropology, California State University, Sacramento.---. 2009. "Santa Barbara and San Diego: contrasting adaptive strategies on the southern California coast." PhD, Anthropology, University of California, Davis.

Hale, Micah J. 2009. "Santa Barbara and San Diego: contrasting adaptive strategies on the southern California coast." PhD, Anthropology, University of California, Davis.

Hale, M. 2010. "Modeling socioeconomic discontinuity in southern Alta California." *California Archaeology* 2 (2): 223-270.

Harrington, John P. 1942. "Culture element distributions: XIX, Central California Coast." *Anthropological Records* 7: 1-46.

Harrison, William M., and Edith S Harrison. 1966. "An archaeological sequence for the Hunting People of Santa Barbara, California." *University of California Archaeological Survey Annual Reports* 7: 1-89.

Heizer, Robert F. 1972. *California's oldest historical relic?* Berkeley, CA: Robert H. Lowie Museum of Anthropology, University of California, Berkeley.

Hollimon, Sandra E. 2004. "The role of ritual specialization in the evolution of prehistoric Chumash complexity." In *Foundations of Chumash complexity*, edited by Jeanne E. Arnold, 53-63. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles, Perspectives in California Archaeology, Volume 7.

Johnson, John R. 1982. "An ethnohistoric study of the Island Chumash." MA, Anthropology, University of California, Santa Barbara.

Johnson, J. 1988. "Chumash social organization: an ethnohistoric perspective." PhD, Anthropology, University of California, Santa Barbara.

Jones, Terry L. 1992. "Settlement trends along the California coast." In *Essays on the prehistory of maritime California*, edited by Terry L. Jones, 1-38. Davis: Center for Archaeological Research at Davis.

Jones, Terry L., and Brian F. Codding. 2019. *Foragers on America's western edge: the archaeology of California's Pecho Coast*. Salt Lake City: University of Utah Press.

Jones, Terry L., and Douglas J. Kennett. 1999. "Late Holocene sea temperatures along the central California coast." *Quaternary Research* 51: 74-82.

Jones, Terry L., Nathan E. Stevens, Deborah A. Jones, Richard T. Fitzgerald, and Mark G. Hylkema. 2007. "The Central Coast: a midlatitude milieu." In *California Prehistory: colonization, culture, and complexity*, edited by Terry L. Jones and Kathryn A. Klar, 125-146. Lanham, MD: Alta Mira Press.

Kennett, Douglas J. 2005. *The Island Chumash: behavioral ecology of a maritime society*. Berkeley: University of California Press.

Kennett, Douglas J., and James. P. Kennett. 2000. "Competitive and cooperative responses to climatic instability in southern California." *American Antiquity* 65 (2): 379-395.

Kennett, Douglas J., James P. Kennett, Jon M. Erlandson, and Kevin G. Cannariato. 2007. "Human responses to Middle Holocene climate change on California's Channel Islands." *Quaternary Science Reviews* 26 (3-4): 351-367. https://doi.org/10.1016/j.quascirev.2006.07.019.

King, Chester D. 1978. "Protohistoric and historic archaeology." In *Handbook of North American Indians*, edited by Robert F. Heizer, 58-68. Washington: Smithsonian Institution.

King, C. 1990. *Evolution of Chumash society: a comparative study of artifacts used for social system maintenance in the Santa Barbara Channel region before A.D. 1804*. New York: Garland.

Koerper, Henry C., Paul E. Langenwalter, and Adella Schroth. 1991. "Early Holocene adaptations and the transition phase problem: evidence from the Allan O. Kelly Site, Agua Hedionda Lagoon." In *Hunter-gatherers of early Holocene coastal California*, edited by Jon Erlandson and Roger H. Colten, 43-52. Los Angeles: Institute of Archaeology, University of California, Los Angeles, Perspectives in California Archaeology Volume 1.

Lambert, Patricia M. 1997. "Patterns of violence in prehistoric hunter-gatherer societies of coastal southern California." In *Troubled times*, edited by D. L. Martek and D. W. Frayer, 77-109. Amsterdam: Gordon and Breach.

Lambert, P. 2002. "The archaeology of war: a North American perspective." *Journal of Archaeological Research* 10 (3): 207-241.

Lambert, Patricia M., and Phillip L. Walker. 1991. "Physical anthropological evidence for the evolution of social complexity in coastal southern California." *Antiquity* 65 (249): 963-973.

Lantis, Margaret. 1938. "The Alaskan whale cult and its affinities." *American Anthropologist* 40 (3): 438-464.

Lebow, Clayton G., and Michael J. Moratto. 2005. *Management of Prehistoric Archaeological Resources. Vandenberg Air Force Base Integrated Cultural Resources Management Plan, vol. 5, edited by MJ Moratto and BA Price. Applied EarthWorks, Inc., Fresno, California. Submitted to U.S. Air Force, 30 CES/CEVPC, Vandenberg Air Force Base, California.*

Lebow, Clayton G., Erin A. Enright, Leeann G. Haslouer, Georganna Hawley, and Ann M. Munns. 2010. *Collection and management of radiocarbon data: fiscal years 2003–2009, including excavations at CA-SBA-612, -760/761/1748, -2322, -2919, -3328, and -3949 pursuant to Section 110 of the National Historic Preservation Act, Vandenberg Air Force Base, Santa Barbara County, California. Applied EarthWorks, Inc., Lompoc, California. Submitted to 30th Civil Engineer Squadron, Environmental Flight, Cultural Resources Section (30 CES/CEVNC), Vandenberg Air Force Base, California. USAF Contract No. FA4610-06-A-0002.*

Lebow, Clayton G., Leeann G. Haslouer, Erin A. Enright, Rebecca L. McKim, Douglas R. Harro, and Ann M. Munns. 2011. *Evaluations of archaeological site significance, Lompoc Wind Energy Project, Pacific Renewable Energy Generation LLC, Santa Barbara County, CA.*

Lebow, Clayton G., Rebecca L. McKim, Douglas R. Harro, and Ann M. Munns. 2006. *Prehistoric land use in the Casmalia Hills throughout the Holocene: archaeological investigations along Combar Road, Vandenberg Air Force Base, California. Applied EarthWorks, Inc., Lompoc, California. Submitted to 30 CES/CEVPC, Vandenberg Air Force Base, California.*

Lebow, Clayton G., Rebecca L. McKim, Douglas R. Harro, Ann M. Munns, and Carole Denardo. 2007. *Littoral adaptations throughout the Holocene: archaeological investigations at the Honda Beach Site (CA-SBA-530), Vandenberg Air Force Base, Santa Barbara County, California. Applied EarthWorks, Inc., Lompoc, California. Submitted to 30th Civil Engineer Squadron, Environmental Flight, Cultural Resources Section (30 CES/CEVNC), Vandenberg Air Force Base, California.*

Martin, S., and Virginia Popper. 2001. "Paleoethnobotanical investigations of archaeological sites on Santa Cruz Island." In *The origins of a Pacific Coast chiefdom: the Chumash of the Channel Islands*, edited by Jeanne E. Arnold, 245-259. Salt Lake City: University of Utah Press.

Masters, Patricia M., and Ivano W. Aiello. 2007. "Postglacial evolution of coastal environments." In *California Prehistory: colonization, culture, and complexity*, edited by Terry L. Jones and Kathryn A. Klar, 35-51. Lanham, MD: Alta Mira Press.

McDaniel McDevitt, Heather. 2013. "Exploration of Burton Mound continued: faunal analysis of a mainland Chumash site." MA, Anthropology, California State University, Northridge.

McGuire, Kelly R. 1993. *Test excavations at CA-FRE-61, Fresno County, California. .* California State University, Bakersfield, Museum of Anthropology, Occasional Papers in Anthropology 5. (Bakersfield, CA).

McLendon, Sally, and John R. Johnson. 1999. *Cultural affiliation and lineal descent of Chumash peoples in the Channel Islands and the Santa Monica Mountains.* Santa Barbara Museum of Natural History, Santa Barbara, and Hunter College, City University of New York. Report submitted to the Archeology and Ethnography Program, National Park Service, Washington, DC.

Meighan, Clement W. 1959. "Calfornian cultures and the concept of an Archaic stage." *American Antiquity* 24 (3): 289-318.

Morgan, Christopher T. 2007. "Reconstructing prehistoric hunter-gatherer foraging radii: a case study from California's southern Sierra Nevada." *Journal of Archaeological Science* 35 (2): 247-258.

Nelson, Margaret C., and Heidi Lippmeier. 1993. "Grinding-tool design as conditioned by land-use pattern." *American Antiquity* 58 (2): 286-305.

NPS (National Park Service). 1990. National Register Bulletin: Technical Information on the National Register of Historic Places: Survey, Evaluation, Registration, and Preservation of Cultural Resources. How to Apply the National Register Criteria for Evaluation. https://www.nps.gov/subjects/nationalregister/publications.htm

Priestley, Herbert I. 1937. *A historical, political, and natural description of California by Pedro Fages, soldier of Spain, dutifully made for the Viceroy in the year 1775*. Berkeley: University of California Press.

Raab, L. Mark, and Daniel O. Larson. 1997. "Medieval climatic anomaly and punctuated cultural evolution in coastal southern California." *American Antiquity* 62 (2): 319-336.

Ranch, Kohanya Jessica. 2012. "Changing perceptions and policy: redefining indigeneity through California Chumash revitalization." PhD, Anthropology, University of California, Riverside.

Rick, Torben C., and Michael A. Glassow. 1999. "Middle Holocene fisheries of the central Santa Barbara Channel, California: investigations at CA-SBA-53." *Journal of California and Great Basin Anthropology* 21 (2): 236-256.

Rick, Torben C., René L. Vellanoweth, Jon M. Erlandson, and Douglas J. Kennett. 2002. "On the antiquity of the single-piece shell fishook: AMS radiocarbon evidence from the southern California coast." *Journal of Archaeological Science* 29: 933-942.

Rindge, Ronald L. 1985. *The rediscovery of the Pueblo de las Canoas*. Malibu, CA: The Malibu Historical Society and The Malibu Lagoon Museum.

Rogers, David B. 1929. *Prehistoric man of the Santa Barbara coast*. Santa Barbara: Santa Barbara Museum of Natural History.

Rosenthal, Jeffrey S. 2011. "Building a new chronological framework for the west-central Sierra Nevada." In *A new frame of reference: prehistoric cultural chronology and ecology in the north-central Sierra Nevada*, edited by Jeffrey S. Rosenthal, 37-66. Davis, CA: Center for Archaeological Research at Davis Publication Number 16.

Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton. 2007. "The Central Valley: a view from the catbird's seat." In *California Prehistory: colonization, culture, and complexity*, edited by Terry L. Jones and Kathryn A. Klar, 147-163. Lanham, MD: Alta Mira Press.

Sandos, James A. 1985. "Levantamiento!: The 1824 Chumash uprising reconsidered." *Southern California Quarterly* 67 (2): 109-033.

Smith, Donald E., and Frederick J. Teggart. 1909. *Diary of Gaspar de Portola during the California expedition of 1769-1770*. Berkeley: University of California Publications of the Academy of Pacific Coast History, Volume 1, Number 3.

Stevens, Nathan E. 2013. *NRHP eligibility testing at CA-SBA-246, an early Holocene site on Vandenberg Air Force Base, Santa Barbara, California. .* Submitted to 30th Engineer Squadron, Environmental Flight, Cultural Resources Section (30 CES/CEVNC), Vandenberg Air Force Base, California. DRAFT.

Sutton, Mark Q., Joan S. Schneider, and Robert M. Yohe II. 1993. "Archaeological investigations at the Siphon Site (CA-SBR-6580): A Millingstone Horizon site in Summit Valley, California." *San Bernardino County Museum Association Quarterly* 40 (3).

Teggart, Frederick J. 1909. *The official account of the Portola expedition of 1769-1770*. Berkeley: University of California Publications of the Academy of Pacific Coast History, Volume 1, Number 2.

Wagner, Henry R. 1928. "Spanish voyages to the northwest coast in the sixteenth century, Chapter IV." *California Historical Society Quarterly* 7 (1): 20-77.---. 1929. *Spanish voyages to the northwest coast of North America in the Sixteenth Century*. San Francisco: California Historical Society.

Wagner, H. 1929. *Spanish voyages to the northwest coast of North America in the Sixteenth Century*. San Francisco: California Historical Society.

Walker, Phillip L. 1989. "Cranial injuries as evidence of violence in prehistoric southern California." *American Journal of Physical Anthropology* 80: 313-323.

Wallace, William J. 1955. "A suggested chronology for Southern California coastal archaeology." *Southwestern Journal of Anthropology* 11 (3): 214-230.

Warren, Claude N. 1968. "Cultural tradition and ecological adaptation on the southern California coast." *Eastern New Mexico University Contributions in Anthropology* 1 (3): 1-15.

Section 3.5 Geology and Soils

CGS (California Geological Survey). 1996. Probabilistic Seismic Hazard Assessment for the State of California. DMG Open-File Report 96-08. http://www.conservation.ca.gov/cgs/rghm/psha/ofr9608/Pages/Index.aspx

CGS. 2002. California Geomorphic Provinces, Note 36.

CGS. 2018a. Alquist-Priolo Earthquake Fault Zoning Act.

CGS. 2018b. *The Alquist–Priolo Earthquake Fault Zoning (AP) Map*. Released January 11, 2018. http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/WHITE_LEDGE_PEAK_EZRIM.pdf.

CGS. 2018c. *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/ Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*. Special Publication 42, Revised 2018.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2009. Santa Barbara County Comprehensive Plan Environmental Resources Management Element.

County of Santa Barbara. 2011. Santa Barbara County Comprehensive Plan Seismic Safety and Safety Element.

County of Santa Barbara. 2019. Santa Barbara County Comprehensive Plan Coastal Land Use Plan.

Dibblee, T.W., and Ehrenspeck, H.E., ed. 1986. Geologic map of the Carpinteria quadrangle, Santa Barbara County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-04, scale 1:24,000

SAIC (Science Applications International Corporation). 1996. *Phase 1 Cultural Resources Investigation Cellular Communications Facility, AT&T Wireless Services, Bates Road, Rincon Point, California*.

USDA (U.S. Department of Agriculture). 2020. *Web Soil Survey*. USDA, Natural Resources Conservation Service. Accessed October 2020. http://websoilsurvey.nrcs.usda.gov.

USGS (U.S. Geological Survey). 2009. Geologic Map of the Santa Barbara Coastal Plain Area, Santa Barbara County, California.

USGS. 2018. "Landslide Hazards." Accessed November 9, 2018. https://www.usgs.gov/natural-hazards/landslide-hazards.

Section 3.6 Greenhouse Gas Emissions

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

75 Federal Register (FR) 25324–25728. Final Rule: "Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards." July 6, 2010.

76 FR 57106–57513. Final Rule: "Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles." November 14, 2011.

77 FR 62624–63200. Final Rule: "2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards." October 15, 2012.

80 FR 64510–64660. Final rule: "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units."

80 FR 64661–65120. Final rule: "Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units."

CALGreen (California Green Building Code). 2016. *2016 Green Building Standards Code*. http://codes.iccsafe.org/app/book/toc/2016/California/Green/index.html.

CalRecycle (California Department of Resources, Recycling and Recovery). 2015. *AB 341 Report to the Legislature*. August 2015.

CAPCOA (California Air Pollution Control Officers Association). 2017. *California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2.* Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. Accessed May 2018. http://caleemod.com/.

CARB (California Air Resources Board). 2008. *Climate Change Proposed Scoping Plan: A Framework for Change*. December 12, 2008. http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf.

CARB. 2011. *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles*. December 7, 2011.

CARB. 2014. *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006*. May 2014. http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

CARB. 2015. Glossary of Terms Used in GHG Inventories. http://www.arb.ca.gov/cc/inventory/faq/ghg_inventory_glossary.htm.

CARB. 2017. *The 2017 Climate Change Scoping Plan Update*. November 2017. Accessed December 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

CARB. 2020. "California Greenhouse Gas Inventory – 2020 Edition." Accessed December 2020. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf.

CAT (California Climate Action Team). 2006. *Final 2006 Climate Action Team Report to the Governor and Legislature*. Sacramento, California: California Environmental Protection Agency, Climate Action Team. March 2006.

CAT. 2010. *Climate Action Team Report to Governor Schwarzenegger and the California Legislature*. Sacramento, California: California Environmental Protection Agency, Climate Action Team. December 2010. Accessed February 2014. http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/CAT-1000-2010-005.PDF.

CCCC (California Climate Change Center). 2006. "Our Changing Climate: Assessing the Risks to California." CEC-500-2006-077. July 2006.

CCCC. 2012. "Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California." CEC-500-2012-007. July 2012.

CEC (California Energy Commission). 2018. 2019 Building Energy Efficiency Standards Frequently Asked Questions. March. Accessed January 2021. https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

CNRA (California Natural Resources Agency). 2009. *2009 California Climate Adaptation Strategy*. A Report to the Governor of the State of California in Response to Executive Order S-13-2008. http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf.

CNRA. 2014. *Safeguarding California: Reducing Climate Risk*. An update to the 2009 California Climate Adaptation Strategy. http://resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf.

CRNA. 2016. *Safeguarding California: Implementing Action Plans*. March 2016. http://resources.ca.gov/docs/climate/safeguarding/Safeguarding%20California-Implementation%20Action%20Plans.pdf.

CNRA. 2017. *Draft Report Safeguarding California Plan: 2017 Update, California's Climate Adaptation Strategy*. May 2017. http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-2017-Update.pdf.

CNRA. 2018. *Safeguarding California Plan: 2018 Update, California's Climate Adaptation Strategy*. January 2018. http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf.

County of Santa Barbara. 2011. Santa Barbara County Climate Action Strategy. September. Accessed January 2021. https://www.countyofsb.org/csd/asset.c/172.

County of Santa Barbara. 2015. County of Santa Barbara Energy and Climate Action Plan. May. Accessed January 2021. https://www.countyofsb.org/csd/asset.c/173.

County of Santa Barbara. 2018. Energy and Climate Action Plan 2017 Progress Report. December. Accessed December 2020. https://www.countyofsb.org/csd/asset.c/270

County of Santa Barbara. 2020. Environmental Thresholds and Guidelines Manual. September. Accessed December 2020. https://cosantabarbara.app.box.com/s/vtxutffe2n52jme97lgmv66os7pp3lm5.

EPA (U.S. Environmental Protection Agency). 2007. Energy Independence and Security Act of 2007. Accessed August 2018. https://www.gpo.gov/fdsys/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf.

EPA. 2016. Glossary of Climate Change Terms. https://www3.epa.gov/climatechange/glossary.html.

EPA. 2017. "Climate Change." Last updated January 19, 2017. Accessed January 2017 at https://www.epa.gov/climatechange. Currently available at https://19january2017snapshot.epa.gov/climatechange_.html.

EPA. 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018.* Accessed December 2020. https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf.

EPA and NHTSA (National Highway Traffic Safety Administration). 2016. *EPA and NHTSA Adopt Standards to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond*. August 2016. https://nepis.epa.gov/Exe/ZyPDF.cgi/P100P7NL.PDF?Dockey=P100P7NL.PDF.

IPCC (Intergovernmental Panel on Climate Change). 1995. *IPCC Second Assessment: Climate Change 1995.* A report of Working Group I of the IPCC. New York, New York: Cambridge University Press. Accessed May 10, 2018. https://www.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf.

IPCC. 2007. "Summary for Policymakers," in *Climate Change 2007: The Physical Science Basis,* edited by S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller, 1–18. A report of Working Group I of the IPCC. New York, New York: Cambridge University Press. Accessed December 29, 2009. https://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf.

IPCC. 2013. *Climate Change 2013: The Physical Science Basis—Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by T.F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P.M. Midgley. Cambridge, United Kingdom and New York, New York: Cambridge University Press.

IPCC. 2014. "Climate Change 2014: Impacts, Adaptation, and Vulnerability – Summary for Policymakers." In *Part A: Global and Sectoral Aspects, Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by C.B. Field, V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White, 1–32. Cambridge, United Kingdom, and New York, New York: Cambridge University Press. http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf.

Olivier, J.G.J., and J.A.H.W. Peters. 2018. Trends in Global CO2 and Total Greenhouse Gas Emissions – 2018 Report. The Hague, Netherlands: PBL Netherlands Environmental Assessment Agency. December 2018. Accessed May 2019. https://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2018-trends-in-global-co2-and-total-greenhouse-gas-emissons-2018-report_3125.pdf.

OPR (California Governor's Office of Planning and Research). 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review.* Technical Advisory. Sacramento, California: OPR. June 19, 2008. http://opr.ca.gov/docs/june08-ceqa.pdf.

SBCAG. 2013. 2040 RTP-SCS. August 15. Accessed January 2021. http://www.sbcag.org/2013-rtp.html.

SBCAG. 2017. Fast Forward 2040. August 17. Accessed January 2021. http://www.sbcag.org/rtp.html.

Section 3.7 Hazards and Hazardous Materials

CalEPA (California Environmental Protection Agency). 2021. *Unified Program.* Accessed January 2021. https://calepa.ca.gov/cupa/about/.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2009. Comprehensive Plan, Hazardous Waste Element, May 2009

County of Santa Barbara 2017. Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan.

DTSC (California Department of Toxic Substances Control). 2021. EnviroStor. Website. Accessed January 14, 2021. https://www.envirostor.dtsc.ca.gov/public/map/.

SFBRWQCB (San Francisco Bay Regional Water Quality Control Board). 2020. *Environmental Screening Levels.* Website. Accessed October 2020. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.

SWRCB (State Water Resources Control Board). 2021. GeoTracker Database. Accessed January 14, 2021. https://geotracker.waterboards.ca.gov/map/.

Section 3.8 Hydrology and Water Quality

Caltrans (California Department of Transportation). 2018. Caltrans_Transportation_Asset_Management_Plan._Jan_2018

CDOC (California Department of Conservation). 2009. California Department of Conservation Tsunami Inundation Map For Emergency Planning - Carpinteria Quadrangle.

City of Carpinteria. 1997. Guidelines for the Implementation of the California Environmental Quality Act of 1970.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria 2019. Sea Level Rise Vulnerability Assessment and Adaptation Project (Report). March 2019

County of Santa Barbara 2017. 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan. Accessed October 2020. http://www.countyofsb.org/ceo/asset.c/3416

County of Santa Barbara. 2019. Santa Barbara County Comprehensive Plan – Coastal Land Use Plan. June 2019.

FEMA (Federal Emergency Management Agency). 2019. FEMA Flood Map Service Center. Accessed October 2019. https://msc.fema.gov/portal/firmette?latitude= 34.38428478705369&longitude=-119.45652897338809

RWQCB (Regional Water Quality Control Board). 2017. Water Quality Control Plan for the Central Coastal Basin. Central Coast Region. September 2017.

SWRCB (State Water Resources Control Board). 2019. Water Quality Control Plan Ocean Waters of California. February 2019.

USDA (U.S. Department of Agriculture). 2019. Web Soil Survey. Accessed October 2020. http://websoilsurvey.nrcs.usda.gov.

Section 3.9 Land Use and Planning

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2021. City of Carpinteria Municipal Code Title 14 Zoning. Accessed January 2021. https://library.municode.com/ca/carpinteria/codes/code_of_ordinances?nodeId=TIT14ZO.

County of Santa Barbara. 2019. *Santa Barbara County Comprehensive Plan Coastal Land Use Plan. June 2019*.

County of Santa Barbara. 2020. *Land Use Designation and Zoning Map.* Accessed September 2020. https://www.arcgis.com/home/webmap/viewer.html?webmap=fa3545a29dac49aeacc81669b956e3e5&extent=-120.9142,34.093,-118.9408,35.4355

SBCAG (Santa Barbara County Association of Governments). 2013. 2040 *Regional Transportation Plan & Sustainable Communities Strategy.* August 2013.

Section 3.10 Noise

Caltrans (California Department of Transportation). 2013. Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol. September 2013.

Caltrans. 2020. Transportation and Construction Vibration Guidance Manual. April 2020.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2020. Municipal Code, Chapter 12.04. June 2020.

County of Santa Barbara. 2008. Environmental Thresholds and Guidelines Manual. September 2008.

County of Santa Barbara. 2009. Santa Barbara County Comprehensive Plan – Noise Element. May 2009.

FHWA (Federal Highway Administration). 2008. Federal Highway Administration's Roadway Construction Noise Model (RCNM).

FTA (Federal Transit Authority). 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018.

Section 3.11 Recreation

BHPA (British Hang-Gliding and Paragliding Association). 2021. Elementary Pilot Training Guide. Accessed January 2021. https://www.flyingfever.net/images/pdf/BHPAEPTrainingGuide.pdf

California Coastal Conservancy 2010. Staff Recommendation Carpinteria Rincon Coastal Trail. Final No. 10-032-01. December 2.

California Coastal Conservancy 2017. Strategic Plan 2018-2022.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2009a. *Carpinteria Rincon Trail Project Study Report*. September 30, 2009.

City of Carpinteria. 2009b. *Coastal Access Feasibility Study*. Prepared by HDR for the City of Carpinteria Department of Parks and Recreation. Final Report. September 23.

City of Carpinteria 2016. Carpinteria Municipal Code, Title 14 – Zoning.

County of Santa Barbara 2009. Santa Barbara County Comprehensive Plan – Open Space Element.

County of Santa Barbara. 2019. Santa Barbara County Comprehensive Plan – Local Coastal Plan.

Torrey Pines Gliderport. 2021. Accessed January 2021. https://www.flytorrey.com/faqs/how-much-wind-do-you-need/

Section 3.12 Transportation

Caltrans (California Department of Transportation). 2014. South Coast 101 HOV Lanes Project Final Environmental Impact Report/ Environmental Assessment with Finding of No Significant Impact. August 2014.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

Covina Residents for Responsible Development v. City of Covina; City Ventures Inc., et al., Real Parties in Interest. (2018) 21 Cal.App.5th 712.

County of Santa Barbara. 2009. Comprehensive Plan – Circulation Element. May 2009.

County of Santa Barbara. 2019. Santa Barbara County Comprehensive Plan – Coastal Land Use Plan. June 2019.

SBCAG (Santa Barbara County Association of Governments). 2016. Congestion Management Program. October 2016.

SBCAG. 2017. Fast Forward 2040: Regional Transportation Plan and Sustainable Communities Strategy.

Section 3.13 Tribal Cultural Resources

Blackburn, Thomas C. 1975. *December's child: a book of Chumash oral narratives*. Berkeley: University of California Press.

Bolton, Herbert Eugene. 1927. *Fray Juan Crespi: missionary explorer on the Pacific coast, 1769-1774*. Berkeley: University of California Press.

Brown, Alan K. 1967. *The aboriginal population of the Santa Barbara channel. Archaeological Survey Report, No. 69*. Berkeley: University of California Archaeological Research Facility.

Coues, Elliot. 1900. *On the trail of a Spanish pioneer: the diary and itinerary of Francisco Garcés (missionary priest) in his travels through Sonora, Arizona, and California*. New York: Francis P. Harper.

Gamble, L. 2008. *The Chumash world at European contact: power, trade, and feasting among complex hunter-gatherers*. Berkeley: University of California Press.

Geiger, Maynard. 1969. *Franciscan missionaries in Hispanic California: 1769-1848*. San Marino, CA: The Huntington Library.

Geiger, Maynard, and Clement W. Meighan. 1976. *As the padres saw them: California Indian life and customs as reported by the Franciscan Missionaries 1813-1815*. Santa Barbara: Santa Barbara Mission Archive LIbrary.

Gill, Kristina M., Mikael Fauvelle, and Jon M. Erlandson, eds. 2019. *An archaeology of abundance: reevaluating the marginality of California's islands*, *Society and ecology in island and coastal archaeology*. Gainesville, FL: University Press of Florida.

Goddard I. 1996. The classification of the Native languages of North America. In: Goddard I, editor. Handbook of North American Indiands, Volume 17, Languages. Washington D.C.: Smithsonian Institution. p 290-324.

Golla, Victor. 2011. *California Indian languages*. Berkeley: University of California Press.

Grant, Campbell. 1978a. "Chumash: introduction." In *Handbook of North American Indians*, edited by Robert F. Heizer, 505-508. Washington: Smithsonian Institution.

Grant, C. 1978b. "Eastern Coastal Chumash." In *Handbook of North American Indians*, edited by Robert F. Heizer, 509-519. Washington: Smithsonian Institution.

Haley, Brian D., and Larry R. Wilcoxon. 1997. "Anthropology and the making of Chumash tradition." *Current Anthropology* 38 (5): 761-794.

Haley, B., and L.R. Wilcoxon. 1999. "Point Conception and the Chumash Land of the Dead: revisions from Harrington's notes." *Journal of California and Great Basin Anthropology* 21 (2): 213-235.

Harrington, John P. 1942. "Culture element distributions: XIX, Central California Coast." *Anthropological Records* 7: 1-46.

Hudson, Travis, and Thomas C. Blackburn. 1979. *The material culture of the Chumash interaction sphere. Volume I: Food procurement and transportation*.*Ballena Press Anthropological Papers, No. 25*. Los Altos and Santa Barbara: Ballena Press and the Santa Barbara Museum of Natural History.

Hudson, T., and T.C. Blackburn. 1983. *The material culture of the Chumash interaction sphere. Volume II: Food preparation and shelter*.*Ballena Press Anthropological Papers, No. 27*. Los Altos and Santa Barbara: Ballena Press and the Santa Barbara Museum of Natural History

Hudson, T., and T.C. Blackburn. 1985. *The material culture of the Chumash interaction sphere. Volume III: Clothing, ornamentation, and grooming*.*Ballena Press Anthropological Papers, No. 28*. Los Altos and Santa Barbara: Ballena Press and the Santa Barbara Museum of Natural History.

Hudson, T., and T.C. Blackburn. 1986. *The material culture of the Chumash interaction sphere. Volume IV: Ceremonial paraphernalia, games, and amusements*.*Ballena Press Anthropological Papers, No. 30*. Los Altos and Santa Barbara: Ballena Press and the Santa Barbara Museum of Natural History.

Hudson, Travis, Thomas C. Blackburn, Rosario Curletti, and Janice Timbrook. 1981. *The eye of the flute: Chumash traditional history and ritual as told by Fernando Librado Kitsepawit to John P. Harrington*. Santa Barbara: Santa Barbara Museum of Natural History.

Johnson, John R. 1982. "An ethnohistoric study of the Island Chumash." MA, Anthropology, University of California, Santa Barbara.

Johnson, J. 1988. "Chumash social organization: an ethnohistoric perspective." PhD, Anthropology, University of California, Santa Barbara.

King, Chester D. 1976. "Chumash intervillage economic exchange." In *Native Californians: a theoretical retrospective*, edited by Lowell John Bean and Thomas C. Blackburn, 289-318. Ramona: Ballena Press.

King, Linda B. 1969. "The Medea Creek cemetery (LAN-243): an investigation of social organization from mortuary practices." In *Archaeological Survey Annual Report*, 23-68. Los Angeles: University of California, Los Angeles.

Kroeber, Alfred L. 1925. *Handbook of the Indians of California.Smithsonian Institution, Bureau of American Ethnology Bulleting 78*. Washington DC: Government Printing Office.

Priestley, Herbert I. 1937. *A historical, political, and natural description of California by Pedro Fages, soldier of Spain, dutifully made for the Viceroy in the year 1775*. Berkeley: University of California Press.

Wagner, Henry R. 1929. *Spanish voyages to the northwest coast of North America in the Sixteenth Century*. San Francisco: California Historical Society.

Section 3.14 Utilities and Service Systems

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2019. Santa Barbara County Comprehensive Plan – Coastal Land Use Plan. June 2019.

CVWD (Carpinteria Valley Water District). 2017. Carpinteria Groundwater Basin AB 3030 Groundwater Management Plan Annual Report Water Years 2015 and 2016. July 2017

Chapter 4 Effects Found Not to be Significant

Section 4.1 Agriculture and Forestry Resources

City of Carpinteria 2016. City of Carpinteria Zoning Districts. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_zoning-map.pdf

County of Santa Barbara. 2018. *Santa Barbara County Uniform Rules for Agricultural Preserves and Farmland Security Zones.* Accessed December 2020 http://www.countyofsb.org/plndev/policy/UniformRules.sbc

County of Santa Barbara 2020. Santa Barbara County Land Use and Zoning Map. Accessed December 2020 https://www.arcgis.com/home/webmap/viewer.html?webmap=fa3545a29dac49aeacc81669b956e3e5&extent=-120.9142,34.093,-118.9408,35.4355

DOC. 2020. *Santa Barbara County Important Farmland 2020.* Farmland Mapping and Monitoring Program (FMMP). Division of Land Resources Protection. Accessed December 2020. https://maps.conservation.ca.gov/DLRP/CIFF/.

Santa Barbara County Resource Recovery & Waste Management Division. 2021. Trash and Recycling Haulers. Accessed February 26, 2021. http://lessismore.org/materials/161-waste-hauler-contacts

USDA (U.S. Department of Agriculture). 2011. *Web Soil Survey*. Accessed October 2020. http://websoilsurvey.nrcs.usda.gov.

Section 4.2 Energy

California Gas and Electric Utilities. 2020. October. Accessed January 2021. https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.

CARB (California Air Resources Board). 2012. LEV III Amendments to the California GHG and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles. March 22. Accessed January 2021. https://ww3.arb.ca.gov/regact/2012/leviiighg2012/levfrorev.pdf.

CARB. 2013. "Clean Car Standards – Pavley, Assembly Bill 1493." Last reviewed May 6, 2013. Accessed May 12, 2020. http://arb.ca.gov/cc/ccms/ccms.htm.

CARB. 2020. EMFAC2017 Web Database. V1.0.3. CARB, Air Quality Planning & Science Division, Mobile Source Analysis Branch. Accessed December, 2020. https://arb.ca.gov/emfac/emissions-inventory.

CEC (California Energy Commission). 2016. *2015 Integrated Energy Policy Report*. Publication Number: CEC-100-2015-001-CMF. Submitted June 18, 2016.

CEC. 2018a. "2019 Building Energy Efficiency Standards Fact Sheet." March 2018. Accessed June 9, 2020. https://calgreenenergyservices.com/wp/wp-content/uploads/2018_Title_24_2019_Building_Standards_FAQ.pdf.

CEC. 2018b. "2019 Building Energy Efficiency Standards – Frequently Asked Questions." March 2018. Accessed May 2019. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

CEC. 2018c. California Energy Demand 2018-2030 Revised Forecast. April 19. Accessed January 2021. https://efiling.energy.ca.gov/getdocument.aspx?tn=223244.

CEC. 2019. "Gasoline and Diesel Fuel Statistics." Accessed May 12, 2020. https://ww2.energy.ca.gov/almanac/.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2016. Energy Action Plan. August. Accessed December 2020. http://www.sceep.org/wp-content/uploads/2016/11/EAP-Carpinteria_2106.pdf.

County of Santa Barbara. 2015a. Energy Element. June. Accessed December 2020. https://cosantabarbara.app.box.com/s/mihghnn9kxxv7v60gtopyjeng1o998gc.

County of Santa Barbara. 2015b. Energy and Climate Action Plan. May. Accessed December 2020. https://www.countyofsb.org/csd/asset.c/173.

CPUC (California Public Utilities Commission). 2016. *Biennial RPS Program Update*. January 1, 2016. Accessed June 10, 2020. https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=8323.

CPUC. 2018. *2018 California Renewables Portfolio Standard Annual Report*. November 2018. Accessed February 18, 2019. http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/Renewables%20Portfolio%20Standard%20Annual%20Report%202018.pdf.

EIA. 2018. Consumption and Expenditures. Accessed January 2021. https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures.

EIA. 2019a. California Electricity Profile 2019. Accessed January 2021. https://www.eia.gov/electricity/state/california/index.php.

EIA. 2019b. California Natural Gas Consumption by End Use. Accessed January 2021. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm.

EIA. 2019c. Table CT7. Transportation Sector Energy Consumption Estimates, 1960-2018, California. Accessed January 2021. https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_use/tra/use_tra_CA.html&sid=CA.

EPA (U.S. Environmental Protection Agency). 2013. "Renewable Fuel Standard (RFS)." Last updated December 10, 2013. Accessed May 8, 2020. http://www.epa.gov/otaq/fuels/renewablefuels.

SCE. 2019. 2018 Power Content Label. July. Accessed January 2021. https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Southern_California_Edison.pdf.

The Climate Registry. 2020. "2020 Default Emission Factors." April 2020. Accessed December 2020. https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf.

Section 4.3 Mineral Resources

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2010. *Santa Barbara County Comprehensive Plan* – Conservation Element. August 2010.http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/Conservation.pdf.

County of Santa Barbara 2019. Santa Barbara County Comprehensive Plan – Coastal Land Use Plan. June 2019.

DOC (California Department of Conservation). 1989. *Mineral Land Classification Map: Aggregate Resources and Active Mines of all Other Mineral Commodities*. San Luis Obispo – Santa Barbara, P-C Region. Carpinteria Quadrangle. Plate 40.

DOGGR (California Department of Conservation, Division of Oil, Gas and Geothermal Resources). 2021. *Well Finder Web-Site*. Accessed January 2021. https://maps.conservation.ca.gov/doggr/wellfinder/#/119.47953/34.37883/16.

Section 4.4 Population and Housing

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2014. City of Carpinteria General Plan/Local Coastal Land Use Plan 2015-2023 Housing Element. November 2014. https://carpinteria.ca.us/wp-content/uploads/2020/03/Housing-Element-2015-2023.pdf. Accessed September 22, 2020.

City of Carpinteria. 2016. City of City of Carpinteria Zoning Districts. October 20, 2016. Accessed October 20, 2020. http://www.ci.carpinteria.ca.us/PDFs/cd_zoning%20map.pdf.

County of Santa Barbara. 2020. Santa Barbara County Land Use and Zoning Map. Accessed October 20, 2020. https://www.arcgis.com/home/webmap/viewer.html?webmap=fa3545a29dac49aeacc81669b956e3e5&extent=-120.9142,34.093,-118.9408,35.4355.

SBCAG (Santa Barbara County Association of Governments). 2019. Regional Growth Forecast 2050 Santa Barbara County. January 2019. Accessed September 22, 2020. http://www.sbcag.org/uploads/2/4/5/4/24540302/regional_growth_forecast_2050.pdf

U.S. Census Bureau. 2020. City and Town Population Totals: 2010-2019. Accessed October 20, 2002. https://www.census.gov/data/datasets/time-series/demo/popest/2010s-total-cities-and-towns.html.

Section 4.5 Public Services

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2013. Santa Barbara Operation Area Emergency Management Plan. Available: https://www.countyofsb.org/uploadedFiles/ceo/OEM/Docs/OEM_EMP_Final-2013.pdf.

County of Santa Barbara. 2019. Santa Barbara County Coastal Land Use Plan

CUSD (Carpinteria Unified School District). 2019. Schools. https://www.cusd.net/our-schools

CSFPD (Carpinteria – Summerland Fire Protection District). 2019. “Stations.” http://carpfire.com/stations

Santa Barbara County Sheriff’s Department. 2019. “Stations.” http://www.sbsheriff.org/

Section 4.6 Wildfire

CAL FIRE (California Department of Forestry and Fire Protection). 2019. 2019 Strategic Fire Plan for California. January 2019. http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf

California Public Resources Code, Division 4, Part 3, Chapter 2. Accessed October 2020. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4290.&lawCode=PRC

California Public Resources Code, Title 5, Division 1, Part 1, Chapter 6.8. Accessed October 2020. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=51175#:~:text=The%20Legislature%20hereby%20finds%20and,peace%2C%20health%2C%20or%20safety.

City of Carpinteria. 2003. *General Plan/Local Coastal Land Use Plan & Environmental Impact Report*. State Clearinghouse No. 1997121111. April 2003. Accessed December 2020. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara 2013. Emergency Management Plan. Accessed October 2020. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=39294.

County of Santa Barbara 2017. 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan. Accessed October 2020. http://www.countyofsb.org/ceo/asset.c/3416

County of Santa Barbara. 2019. Santa Barbara County Local Coastal Land Use Plan.

USFS, BLM, BIA, USFWS, and NPS (U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, and National Park Service). 2009. Guidance for Implementation of Federal Wildland Fire Management Policy. February 13, 2009. Accessed September 2020. https://www.doi.gov/sites/doi.gov/files/uploads/2009-wfm-guidance-for-implementation.pdf.

USFS. 2019. National Fire Plan. Accessed February 2019. https://www.forestsandrangelands.gov/resources/overview/index.shtml.

USFS. 2021. “Environmental Analysis Requirements for HFI and HFRA Projects.” Accessed October 2020. https://www.fs.fed.us/projects/hfi/field-guide/web/page03.php.

Chapter 5 Other CEQA Considerations

There are no references cited in this chapter.

Chapter 6 Alternatives

There are no references cited in this chapter.

Chapter 7 List of Preparers

There are no references cited in this chapter.

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