

NORTH COAST RAIL TRAIL

CA FLAP SCR T5(1)
SANTA CRUZ COUNTY, CA

ENVIRONMENTAL ASSESSMENT



Prepared For:



U.S. Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division
Lakewood, Colorado

October 23, 2020

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U.S. Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to:
(Federal) 42 U.S.C. 4332(2)(c)
(State) Division 13, California Public Resources Code
for
North Coast Rail Trail
CA FLAP SCR T5(1)
Santa Cruz County, CA

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WHAT'S IN THIS DOCUMENT

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with the Santa Cruz Regional Transportation Commission (RTC), has prepared this Environmental Assessment (EA), which examines the potential impacts of alternatives being considered for the proposed project located in Santa Cruz County, California. This document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, and the proposed avoidance, minimization and/or mitigation measures.

WHAT YOU SHOULD DO

- In accordance with 23 CFR 771.119 this EA will be available for public review and comment for 30-days.
- Please read this document. This document and related technical studies are available for review at the FHWA website at <https://highways.dot.gov/federal-lands/projects/ca/monterey-bay-1>
- We welcome your comments. If you have any comments about the Proposed Project, please send your written comments to:

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Before including a personal address, phone number, e-mail address, or other personal identifying information in written comments, anyone providing written comment should be aware their entire comment - including their personal identifying information - may be made publicly available at any time. While anyone wishing to comment may ask FHWA in their comment to withhold their personal identifying information from public review, FHWA cannot guarantee it will be able to do so.

- Send comments by the deadline: November 25, 2020

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Dustin Robbins using the contact information above.

WHAT HAPPENS NEXT

After comments are received from the public and reviewing agencies, FHWA, in cooperation with RTC, will respond to comments, prepare the final environmental decision document and

may: (1) give environmental approval to the proposed project, (2) conduct additional environmental studies, or (3) abandon the project or portions of the project. If the project is given environmental approval, part, or all, of the project can be designed and constructed after all of the required permits or agreements are obtained.

Following public and agency review of the EA, FHWA-CFLHD in coordination with RTC, will update the environmental analysis, if necessary, in response to comments received during the 30-day public review of the EA. Mitigation measures may be replaced with equal or more effective measures prior to project approval. If the impacts of the proposed project remain less than significant, then FHWA-CFLHD will conclude the NEPA process with a Finding of No Significant Impact (FONSI). Because the environmental analyses and impact calculations contained in the EA are based on conceptual design, the impacts represent a worst-case scenario. Refinements undertaken through the design process are anticipated to lessen both the extent and severity of impacts presented in this EA.

A Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

ACRONYM LIST

AASHTO	American Association of State Highway and Transportation Officials
APE	Area of Potential Effect
ASTM	American Society for Testing and Materials
BA	biological assessment
BAAQMD	Bay Area Air Quality Management District
BMP	best management practices
CAA	Clean Air Act
CARB	California Air Resource Board
CCC	Central California Coast
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFLHD	Central Federal Lands Highway Division
CFR	Code of Federal Regulations
CMP	corrugated metal pipe
CNPS	California Native Plant Society
CO	carbon monoxide
COFFA	California Organic Food and Farming Act
CRLF	California red-legged frog

CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dBA	A-weighted decibels
EA	environmental assessment
EIR	environmental impact report
EPA	Environmental Protection Agency
ESU	Evolutionary significant unit
FAC	Food and Agricultural Code
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FLAP	Federal Lands Access Program
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
GIS	Geographic Informational Systems
GMP	General Management Plan
GPS	Global Positioning System
HAPC	Habitat Areas of Particular Concern
IS	initial study
MBSST	Monterey Bay Sanctuary Scenic Trail
MBTA	Migratory Bird Treaty Act
mph	miles per hour
n.d.	no date
NAAQS	National Ambient Air Quality Standards

NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
PBF	physical or biological feature
PM	project mile
PUR	pesticide use record
PRC	Public Resource Code
RCRA	Resource Conservation and Recovery Act
REAP	rain event action plan
REC	recognized environmental conditions
RTC	Regional Transportation Commission
ROW	right-of-way
SHPO	State Historic Preservation Office
SLR	sea level rise
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Society
WEAT	Worker Environmental Awareness Training

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CHAPTER 1: PURPOSE AND NEED

1.1 Introduction

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with Santa Cruz County Regional Transportation Commission (RTC), is proposing to develop a 7.5-mile multi-use bicycle and pedestrian trail that would extend along the RTC-owned railroad corridor from Wilder Ranch State Park north to Davenport in unincorporated Santa Cruz County (Figure 1-1). This Project is in the northern portion, Segment 5, of the proposed 32-mile Coastal Rail Trail alignment and the broader Monterey Bay Sanctuary Scenic Trail (MBSST) Network.

1.2 Project Background

The Project is part of the MBSST, a two-county (Santa Cruz and Monterey counties) bicycle and pedestrian pathway project to promote appreciation for the Monterey Bay National Marine Sanctuary. In its entirety, the planned trail would extend the length of coastal Santa Cruz County, from the Monterey County line on the south to the San Mateo County line on the north. The Transportation Agency for Monterey County (TAMC) will be responsible for the portion in Monterey County, while the RTC is responsible for the Santa Cruz County portion in partnership with numerous local government entities. This Project only addresses a northern portion of the facility within Santa Cruz County.

The Coastal Rail Trail is located adjacent to the Santa Cruz Branch Rail Line. In 2012 the RTC purchased the Santa Cruz Branch Rail Line and at that time selected railroad operator Iowa Pacific Holdings (known locally as Santa Cruz and Monterey Bay Railway) to use the Santa Cruz Branch Rail Line. In July 2018, because the Santa Cruz and Monterey Bay Railway did not meet contractual obligations, RTC entered into an agreement with Progressive Rail to provide rail operations on the Santa Cruz Branch Rail Line and to serve as the common carrier on this line as designated by the Surface Transportation Board (STB). Regular freight service is currently provided in the south county area and may be extended to other portions of the county in the future. Commercial and recreational rail service is not currently provided within the project limits but may be considered in the future. The RTC prepared the Monterey Bay Sanctuary Scenic Trail Network Master Plan (Master Plan) to establish a continuous alignment, design standards, and guidelines for the Coastal Rail Trail and its associated Trail Network. The Master Plan divides the trail network into 20 segments: Segments 1-5 (Northern Reach), Segments 6-14 (Central Reach), and Segments 15-20 (Watsonville Reach). The Project represents a portion of Segment 5 of the Coastal Rail Trail in the Master Plan.

In compliance with the California Environmental Quality Act (Pub. Res. Code §21000 et seq., “CEQA”) and the CEQA Guidelines (Cal. Code Regs. Title 14, §15000 et seq.), the RTC certified the Environmental Impact Report (EIR) for the Master Plan on November 7th, 2013, and an addendum to the Master Plan Final EIR on February 6, 2014.

In 2015 the RTC secured federal funding for the Project. Because funding sources for this Project include state and federal sources, the environmental documentation for this Project must comply with both CEQA and the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq., “NEPA”), as amended. As the CEQA lead agency, the RTC prepared the North Coast Rail

Trail (NCRT) EIR (RTC 2019). The EIR evaluated two trail alignments, the Proposed Project (Coastal Side) and Alternative 1 (Trail Only). The Proposed Project would locate a new multi-use trail almost exclusively on the coastal side of the railroad tracks, largely consistent with the MBSST Master Plan. Under Alternative 1, the railroad tracks would be removed, and the trail would be located on the rail bed.

Other alternatives considered in the NCRT EIR included Alternative 2 (Inland Side) and Alternative 3 (Farmer's Alternative). Under Alternative 2 the trail would be located on the inland side of the tracks in the southern portion of the alignment, between Scaroni Road and Wilder Ranch. The northern portion, from Davenport to Scaroni Road, would be on the coastal side of the tracks. Under Alternative 3, the trail would be located outside the rail corridor and along the coastal side of Highway 1 in the southern portion of the alignment. The northern portion would be within the rail corridor on the rail bed with the tracks and ties removed.

According to the analysis in the NCRT EIR, Alternative 1 would have unavoidable adverse impacts to historical resources. This alternative would also result in severe impacts with regard to hazards/hazardous materials associated with removal of the tracks and ties. In addition, the alternative would have contractual, regulatory, and fiscal challenges, all of which would result in considerable delays in carrying out this alternative. Therefore, this alternative was not selected as the RTC preferred alternative. Alternatives 2 and 3 were dismissed from further consideration due to greater environmental impacts and failure to meet project objectives compared to the Proposed Project. The RTC certified the NCRT EIR in March 2019, selecting the Proposed Project identified in the EIR as their Preferred Alternative. Please refer to Section 5.0, *Project Alternatives*, of the NCRT EIR (Volume 2, RTC 2019) for further detail on the evaluation of alternatives.

This Environmental Assessment (EA) has been developed to meet CFLHD's obligations as the lead agency under the NEPA. This EA evaluates the Proposed Project selected by the RTC and incorporates by reference information and analysis from the NCRT EIR (RTC 2019). As stipulated by NEPA (40 CFR 1502.21), where NEPA documentation uses incorporation by reference, the incorporated part of the referenced document shall be briefly summarized or described. The analysis in this document concentrates on aspects of the project that could have a significant effect on the environment, and identifies feasible measures to mitigate (i.e., reduce or avoid) these impacts.

1.3 Project Funding

The Project has been divided into two phases and is receiving funds for design, engineering, environmental review, and construction from multiple sources, shown in Table 1-1.

Phase 1 includes the design, engineering, environmental review, and construction of 5.4 miles of the trail from Wilder Ranch to Panther/Yellowbank Beach and does not include parking lot improvements. Phase 1 is funded under the Federal Lands Access Program (FLAP) and by funds secured by RTC. Phase 2 includes the design, engineering, and environmental review for 2.1 miles of trail from Panther/Yellowbank Beach to Davenport and includes parking lot improvements. Funding for construction of Phase 2 will be the responsibility of the RTC and has not been secured. To provide a more conservative, worst case analyses of the physical effects, the analyses assume both phases would be constructed within the same 12-month timeframe. The Project phases are described in more detail in the *Chapter 2.0, Alternatives*.

Table 1-1 North Coast Rail Trail Project Funding Sources

Project	Grants/ Public Funds	Land Trust of Santa Cruz County ^a	Miles
Wil der Ranch to Panther/Yellowbank Beach (Phase 1)	\$813,000 ^c \$6,295,000 ^d	\$3,655,000	5.4
Panther/Yellowbank Beach to Davenport and parking lots (Phase 2) ^b	\$300,000 ^e	\$700,000	2.1
Segment 5 Total^f	\$7,408,000	\$4,355,000	7.5

^a Land Trust funds have been committed to the Proposed Project or a rail-with-trail scenario.

^b Funding for Phase 2 is secured for design, engineering, and environmental review. It does not include construction of the 2.1-mile trail segment (Panther/Yellowbank Beach to Davenport) or parking lot improvements at Davenport Beach, Bonny Doon Beach, and Panther/Yellowbank Beach.

^c California Coastal Conservancy and RTC Measure D. The California Coastal Conservancy committed \$950,000, which was not all spent on Segment 5. Therefore, \$813,000 was spent on Segment 5, and the balance of the commitment totaling \$137,000 is provided through Measure D.

^d Federal Lands Access Program (FLAP) funding from the Federal Highway Administration Division

^e Santa Cruz County Regional Transportation Commission – Regional Surface Transportation Program Exchange

^f The total does not include the entirety of Measure D funds that may be available to either match future grants or apply towards ongoing maintenance once facilities are built. The Measure D funds reflected cover expenses related to both Phases 1 and 2.

As shown in Table 1-1, federal funding makes up the bulk of funds for the Project. The \$6.3 million federal funding was awarded in spring of 2015 via a competitive process. The success of receiving the federal funding is largely attributed to the financial contribution from the Land Trust of Santa Cruz County.

FHWA FLAP Funding

The Federal Lands Access Program (FLAP) provides funds for projects on “access facilities.” An access transportation facility is a public highway, road, bridge, trail, or transit system that is located on, is adjacent to, or provides access to federal lands for which title or maintenance responsibility is vested in a state, county, town, township, tribal, municipal, or local government. The FLAP supplements state and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

The proposed project was placed in the FLAP in 2015 with matching funds from the RTC, as detailed in Table 1-1. As the federal partner, CFLHD is responsible for Project design and compliance with federal requirements, including the preparation of this EA to satisfy NEPA. CFLHD is also responsible for contracting and construction administration for the project. The start of construction will be dependent upon funding availability.

The preliminary estimated cost of construction is approximately \$8,000,000 million (2019 dollars) for Phase 1 and \$7,000,000 million (2019 dollars) for Phase 2.

Santa Cruz County Measure D: Transportation Improvement Expenditure Plan

In November 2016, Measure D was approved by over two thirds of Santa Cruz County voters. The half-cent, 30-year sales tax measure includes funding for transportation projects that provide safer routes to schools for local students; maintain mobility and independence for seniors and those with disabilities; invest in bicycle and pedestrian pathways and bridges; repave roadways, repair potholes, and improve safety on local streets; ease congestion on major

roadways; and reduce greenhouse gas emissions that causes global warming. The 2016 Measure D Transportation Improvement Expenditure Plan (Measure D Expenditure Plan) is available on the RTC website: https://sccrtc.org/wp-content/uploads/ExpenditurePlan-voterApproved_8Nov2016.pdf.

According to the Measure D Expenditure Plan, 17% of the revenues will be allocated for the Monterey Bay Sanctuary Scenic Trail, otherwise known as the Coastal Rail Trail, for people walking and bicycling along the coast in Santa Cruz County. Funds will be used for trail construction, maintenance, operation, management and drainage of the rail and trail corridor and will leverage other state and federal grants for completion of the trail network.

1.4 Proposed Project

The Project proposes the North Coast Rail Trail Project be developed along an existing rail corridor parallel to the coastline and Highway 1 in northern Santa Cruz County (**Figures 1-1 and 1-2**). The Project would provide access to federal lands in Santa Cruz County including BLM California Coastal National Monuments, BLM Coast Dairies and the National Oceanic Atmospheric Administration (NOAA) Monterey Bay National Marine Sanctuary.

The North Coast Rail Trail Project (Project) would be a new multi-use trail to be shared by bicyclists and pedestrians. It would extend approximately 7.5 miles along the rail line from the Wilder Ranch State Park parking lot on the south to the Davenport Beach parking area on the north. The Project would include a paved path with striping, parallel unpaved path and/or shoulder, fencing, and parking improvements with trail connections at three locations along the alignment. The Project does not include improvements to other existing spur trails or new spur trails to the bluffs and beaches.

The Project would place the new multi-use trail on the coastal side of the existing railroad tracks, consistent with the MBSST Master Plan (RTC 2014).

1.5 Project Location

The Project would be located in unincorporated northern Santa Cruz County along the Pacific Ocean coastline. The 7.5-mile-long Project area limits extend along the Santa Cruz Branch Rail Line corridor, from the Wilder Ranch State Park parking lot and existing trails on the south to the Davenport Beach parking lot on the north. The Project would align the trail on the coastal or southwesterly side of State Route 1 (Highway 1) and extend parallel to the highway and Pacific Ocean coastline.

The Project would be constructed predominantly on publicly-owned land, with the alignment within or adjacent to the RTC-owned rail corridor and through land owned by the California Department of Parks and Recreation (State Parks). A portion of the Proposed Project alignment would extend through State Parks land that is leased to farmers, and a small portion of the Proposed Project alignment would extend through private property at the southern end near Wilder Ranch. The three parking areas proposed for improvements would be developed on California Department of Transportation (Caltrans) ROW, RTC-owned land, and private property in Davenport.

Figure 1-1 North Coast Rail Trail Project Regional Location



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- County Boundary
- Monterey Bay Sanctuary Scenic Trail (MBSST)
- North Coast Rail Trail (Segment 5)
- Coastal Rail Trail Spine

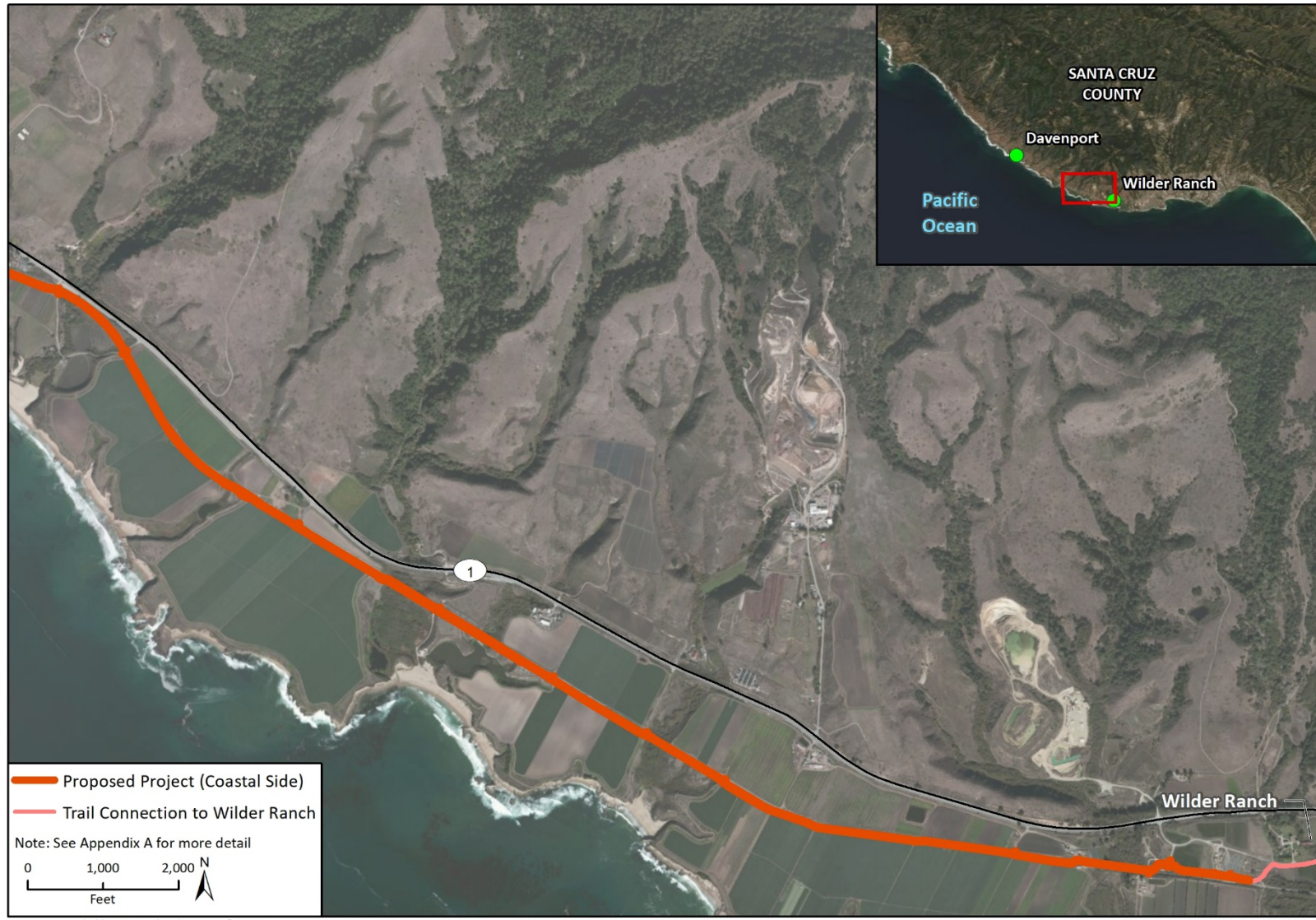


Fig. 1-1 Regional Location

Figure 1-2 North Coast Rail Trail Alignment: North (Davenport to Scaroni Road)



Figure 1-2 North Coast Rail Trail Alignment: South (Scaroni Road to Wilder Ranch)



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Fig 2.2 North Coast Rail Trail Alignments South

The Project would extend through undeveloped open space and agricultural land. Some rural residences and agricultural support structures are also located along the alignment. The unincorporated community of Davenport, with a population of approximately 400, is at the proposed northern terminus.

The entire alignment and three parking areas are in the Coastal Zone and are therefore subject to a California Coastal Commission federal consistency determination under the Coastal Zone Management Act.

1.6 Project Purpose, Need, and Objectives

The Project purpose is to provide an accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the existing rail corridor between Wilder Ranch State Park and Davenport, CA, consistent with the MBSST Network Master Plan (RTC 2014) and NCRT EIR (RTC 2019).

The trail is needed to provide the public with safe, non-motorized travel along the coast of Santa Cruz to access federal lands.

- There are gaps in the trails and bicycle/pedestrian network, including the California Coastal Trail resulting in a non-continuous trail network.
- The connectivity for bicyclists and pedestrians to access the coastal edge, beaches, and trails is limited.
- Currently, non-motorized users, in particular bicyclists, are forced to use the shoulders along Highway 1 posing considerable risk to the public. Highway 1 along the north coast of Santa Cruz County is a popular bicycling route for locals as well as tourists who want to experience the beauty of the coast and is part of the designated Pacific Coast Bicycle Route. However, high speed traffic, narrow shoulders, and limited sight distances can make cycling on Highway 1 challenging and a risk to public safety.

The Project objectives are based on and consistent with objectives and policies in the MBSST Network Master Plan (RTC 2014), as well as legal obligations associated with rail line purchase and funding sources, as discussed in the NCRT EIR (RTC 2019).

The Project objectives include the following:

1. Provide a continuous public trail along the Santa Cruz Branch Line railroad corridor and connecting spur trails in Santa Cruz County (Master Plan objective 1.1)
2. Provide an ADA-accessible trail, including parking areas with paths to the trail, where feasible
3. Develop the trail so future rail transportation service along the corridor is not precluded (Master Plan policy 1.2.4)
4. Maximize ocean views and scenic coastal vistas along a coastal alignment for experiencing and interpreting the Monterey Bay National Marine Sanctuary (sanctuary), and historical and agricultural landscapes (Master Plan policy 1.1.2 and 1.1.4, objective 2.1)
5. Maximize safety and serenity for experiencing and interpreting the sanctuary and landscapes by providing a trail separate from roadway vehicle traffic (Master Plan goal 1)

6. Minimize trail impacts to private lands, including agricultural, residential, and other land uses (Master Plan objective 1.5)
7. Minimize trail impacts to sensitive habitat areas and special-status plant and animal species (Master Plan objective 1.4, policy 1.4.1)
8. Utilize existing built trails, roadways, and other transportation facilities to the fullest extent possible (Master Plan objective 1.1, policy 1.1.3)
9. Utilize existing lands owned by various government entities, open space groups, and institutions to develop the trail (Master Plan objective 4.4)
10. Comply with requirements of approving state agencies, including Coastal Commission, Caltrans, and State Parks
11. Complete Project construction as soon as possible and as funding permits, maximize funding for the Project, and meet current funding obligations (Master Plan objective 4.6, policy 4.6.2 speak to maximizing funding).

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CHAPTER 2: ALTERNATIVES

This section describes the proposed action and the project alternatives that were developed pursuant to NEPA to meet the project purpose and need while avoiding or minimizing environmental impacts. The alternatives evaluated in this EA include the No Action Alternative and the Action Alternative.

2.1 Alternatives

A No Action Alternative and one Action Alternative (the Proposed Project) are analyzed in this EA. The National Environmental Policy Act requires agencies to analyze the consequences of taking no action, which is represented by the No Action Alternative. In addition, the No Action Alternative provides a baseline for comparing the consequences of the Action Alternative.

Under both alternatives, the railroad tracks would remain in place and would not be improved. The northern portion of the Santa Cruz Branch Line between Santa Cruz and Davenport, including the Project corridor, is not currently used for regular freight or passenger services. Potential future use of the rail for freight or passenger service is not yet certain and cannot be precluded. The NCRT EIR (RTC 2019), Section 1.2.2, provides further discussion on the status of rail operation and maintenance. Rail service is not a distinguishing factor between the Proposed Project and No Action alternatives, as future rail use is equally likely to occur in the foreseeable future under both alternatives. Therefore, rail use is not the focus of the analysis. The focus is the difference in environmental impacts as they relate to constructing or not constructing the trail and parking improvements.

2.1.1 No Action Alternative

Under the No Action Alternative, the proposed activity would not take place.

The North Coast Rail Trail Project would not be constructed as planned along the Santa Cruz Branch Rail Line between Davenport and Wilder Ranch. There would be no new trail along the rail corridor, no fencing to separate trail users from the rail and in some locations from adjacent agricultural land.

There would be no parking improvements at Davenport Beach, Bonny Doon Beach, or Panther/Yellowbank Beach. It is expected these existing parking areas and other existing trails in the area (i.e., outside of and crossing through the project corridor) would continue to be used as they currently have been by people to access the beaches and coastal bluffs.

The rail corridor would remain “as is” with no planned development of recreation or other uses; and the RTC would operate and maintain the rail corridor in accordance with current policy and legal obligations.

2.1.2 Action Alternative (Proposed Project)

The Proposed Project consists of developing a multi-use trail that would include an asphalt paved path with unpaved gravel shoulders. In addition, three parking lots along Highway 1 would be improved providing visitor amenities and ADA access to the trail. Figure 2-1, located at the end of this chapter, includes graphics of the entire 7.5-mile alignment and parking areas.

2.1.2.1 Trail Alignment

The trail would be located on the coastal side of the existing railroad tracks, except for the short portion on the south end of the Project where the trail would utilize the existing sidetracks and Wilder Ranch maintenance road (Figure 2-1).

In some areas where the railroad tracks extend through a rail cut with slopes on either side, the trail would follow the higher grade on the coastal side to minimize cutting into the slope and minimize impacts to sensitive resources, and to provide coastal views. In areas where the trail alignment is shifted up onto the bluff, the proposed trail would utilize existing farm roads or be constructed on a new alignment.

At the south end of the trail alignment, the Proposed Project includes a trail connection to Wilder Ranch. The trail connection would extend alongside and on existing paths between the rail corridor and Coast Road, and then continue along the coastal side of Coast Road. In this location the trail would be constructed adjacent to and slightly lower than Coast Road. The alignment was determined in coordination with State Parks to be located entirely on fill (previously disturbed land) to minimize impacts. The trail delineation along Coast Road, further separating the trail from the roadway (e.g., context appropriate wooden fencing, bollards, curb), would be determined in coordination with State Parks and California Coastal Commission. At Wilder Creek, context appropriate signs would be placed to direct trail users to the trail. Refer to Figure 1-2.

2.1.2.2 Trail Width

The typical trail cross-section would be 16 feet wide. This differs from the NCRT EIR (RTC 2019), which presented a 20-foot-wide path. The trail width was reduced to further minimize impacts to sensitive environments. The trail components include:

- 12-foot-wide paved path with striping to separate north- and south-bound users
- 2-foot-wide unpaved shoulder on each side
- Safety fencing between the trail and tracks in locations where the rail and trail are on the same grade and there is no vegetated buffer
- Fencing in select locations to minimize trespass into active agricultural fields

Representative cross-sections of the Proposed Project are shown in **Figure 2-2a through 2-2c**. The 12-foot-paved path would be consistent throughout the length of the alignment except at the connection to Wilder Ranch. In this location, the trail would be a 10-foot-wide paved path.

To allow continued access for farm equipment in the southern portion of the project, the coastal side shoulder of the trail would be widened to 19-feet. Preliminary design includes widened shoulders in five separate locations. Final locations for the widened shoulder will be coordinated with California State Parks.

2.1.2.3 Parking Lots

Trail connections from and improvements to Davenport Beach, Bonny Doon Beach, and Panther/Yellowbank Beach would occur under the Proposed Project. The lots are located on the coastal side of Highway 1, in the Caltrans right-of-way. Figure 1-1 and Figure 1-2 illustrates these locations and details. The capacity for parking at each location was assessed in the Transportation Analysis provided in Appendix K of the NCRT EIR (RTC 2019).

Davenport Beach Lot and Highway 1 Crossing

The existing Davenport Beach parking area is unpaved and consists of gravel and compacted soils. It is located at the north end of the trail alignment. The northern portion of the lot is publicly-owned and under RTC and Caltrans jurisdiction, and the southern portion of the lot is privately-owned. The existing lot accommodates informal parking for approximately 110 parked vehicles.

Under the Proposed Project, the northern portion of the parking area would be improved with paving and 43 marked parking spaces, a restroom facility, trash/recycling containers, bike racks, benches, and path to the trail. The path would be compliant with the Americans with Disabilities Act (ADA) (**Figure 2-3**). The privately-owned southern portion of the existing parking area would remain unpaved and available for informal parking, as allowed by the land owner.

The restroom facility would likely be a prefabricated structure and would provide for ADA use. The facility may include flush toilets and sink that would connect to the Davenport water and wastewater systems.

The Proposed Project would also include improvements for crossing Highway 1/Ocean Street intersection, currently equipped with flashing yellow caution lights and vehicle speed reduction signage. The improvements would be determined in coordination with Caltrans and may include increased signage, striping, and lighting upgrades.

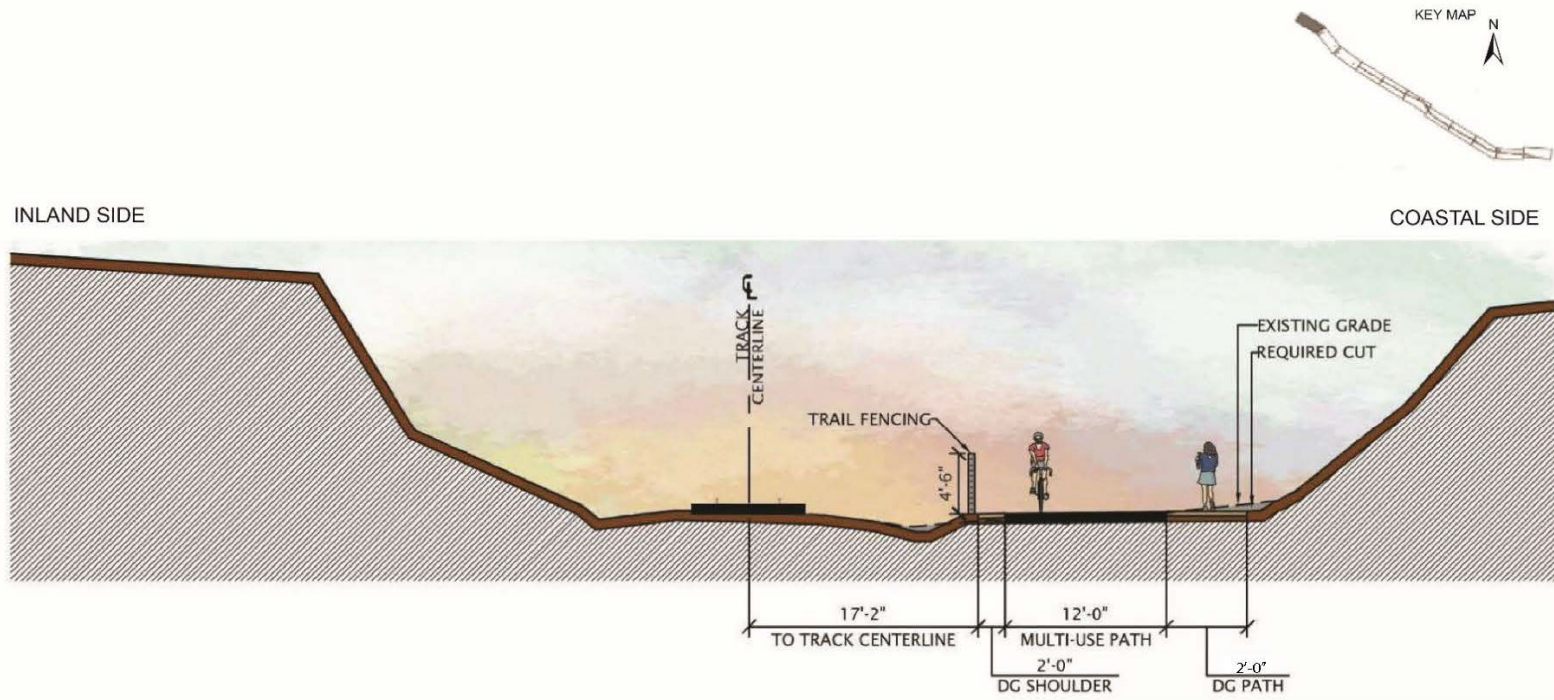
Bonny Doon Beach Lot

The existing Bonny Doon Beach parking area is paved and accommodates approximately 55 parked vehicles. It is located approximately 1.0 mile south of Davenport. The Proposed Project would include minor expansion of the paved area to accommodate bike racks and trash/recycling containers, but would not include additional parking spaces. A path to the trail would be formalized that may include timber encased steps or an asphalt path (**Figure 2-4**). This path would not be ADA-compliant.

Panther/Yellowbank Beach Lot

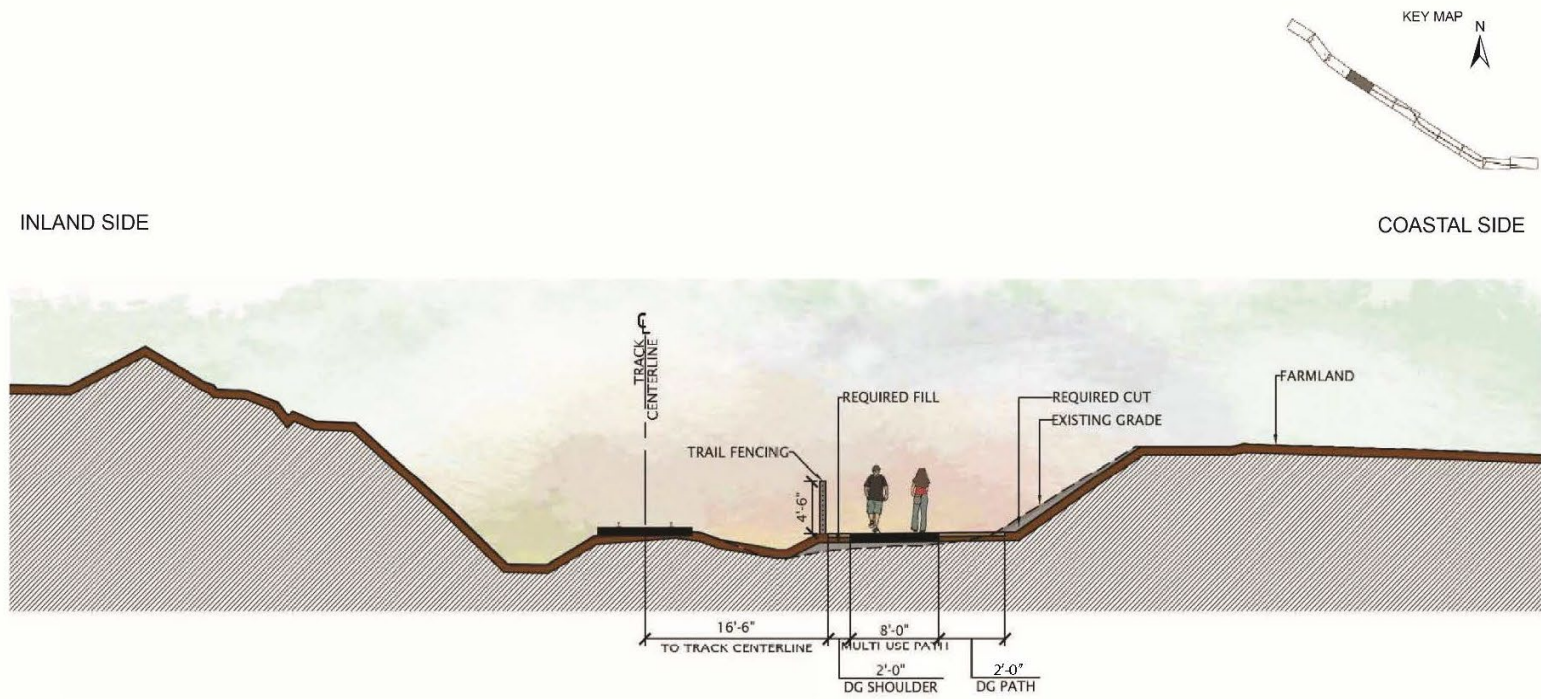
The existing Panther/Yellowbank parking area is an unpaved gravel and compacted soils lot that accommodates informal parking for approximately 160 parked vehicles. It is located approximately 2.0 mile south of Davenport. Improvements in this location would include paving and striping for 48 vehicles, a restroom facility, trash/recycling containers, bike racks, benches, and an ADA-accessible path to the trail (**Figure 2-5a and Figure 2-5b**). The restroom facility would be a pre-fabricated structure, with up to two ADA-accessible vault toilets. This alternative would also improve the turn into the parking lot from Highway 1. The improvements would be determined in coordination with Caltrans and may include a new left turn lane from the northbound direction.

Figure 2-2a North Coast Rail Trail Representative Cross-Section of Proposed Project



Source: RRM Design Group, 2018.

Figure 2-2b North Coast Rail Trail Representative Cross-Section of Proposed Project



Source: RRM Design Group, 2018.

Figure 2-2c North Coast Rail Trail Representative Cross-Section of Proposed Project

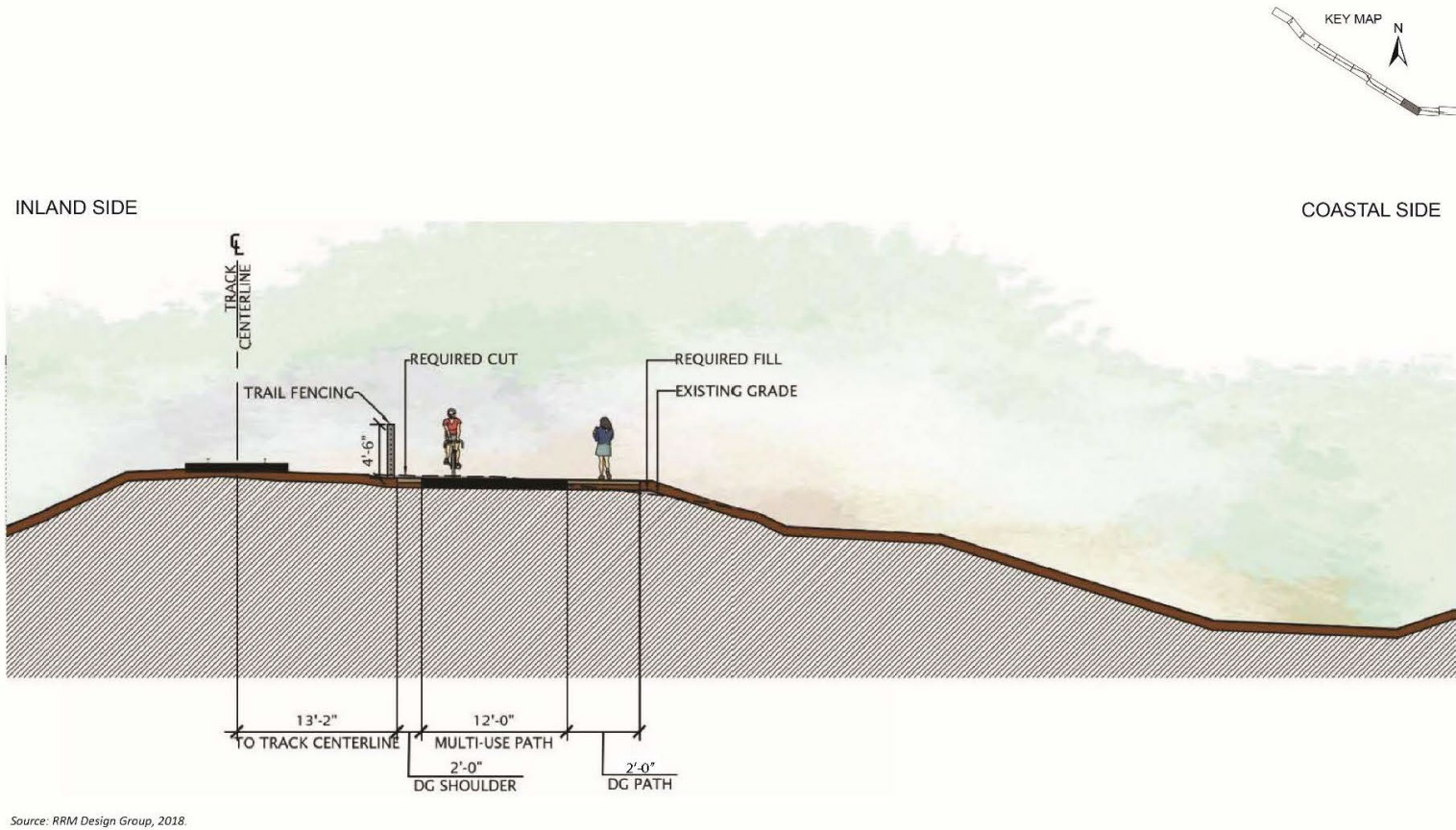
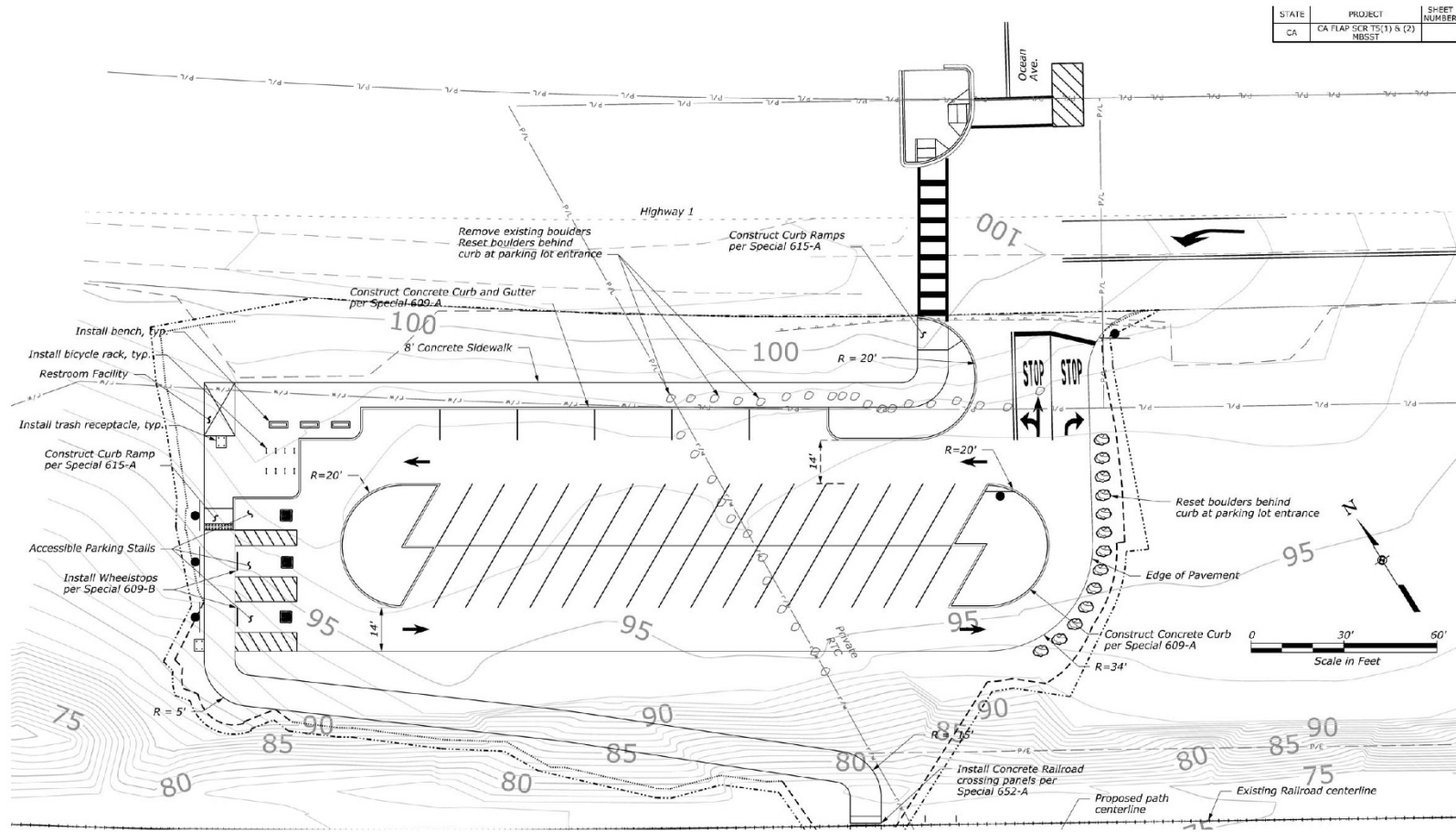
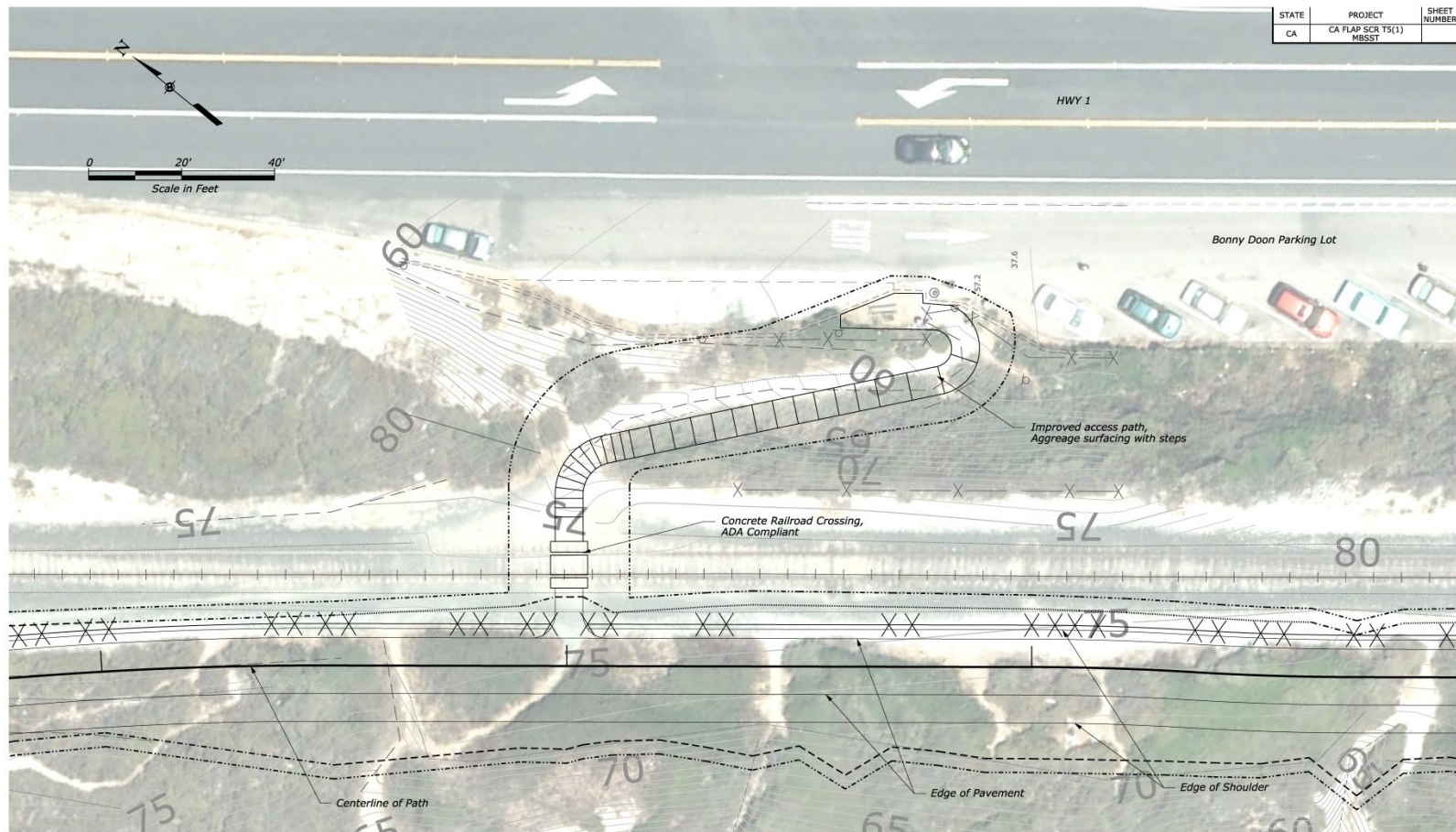


Figure 2-3 Davenport Beach Lot and Highway 1 Crossing



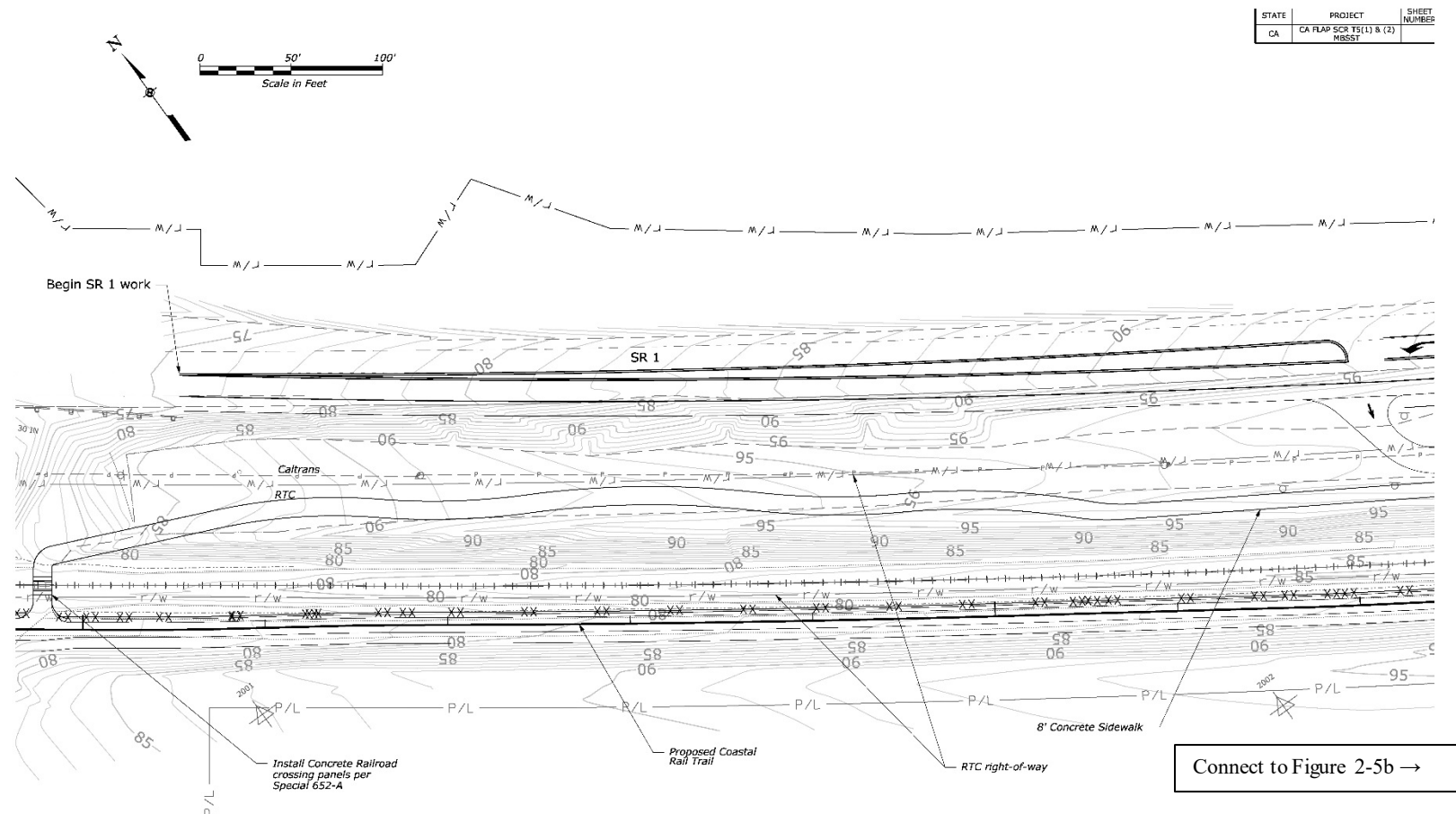
Source: U.S. Department of Transportation Federal Highway Administration Central Federal Lands Highway Division, 2018.

Figure 2-4 Bonny Doon Beach Lot



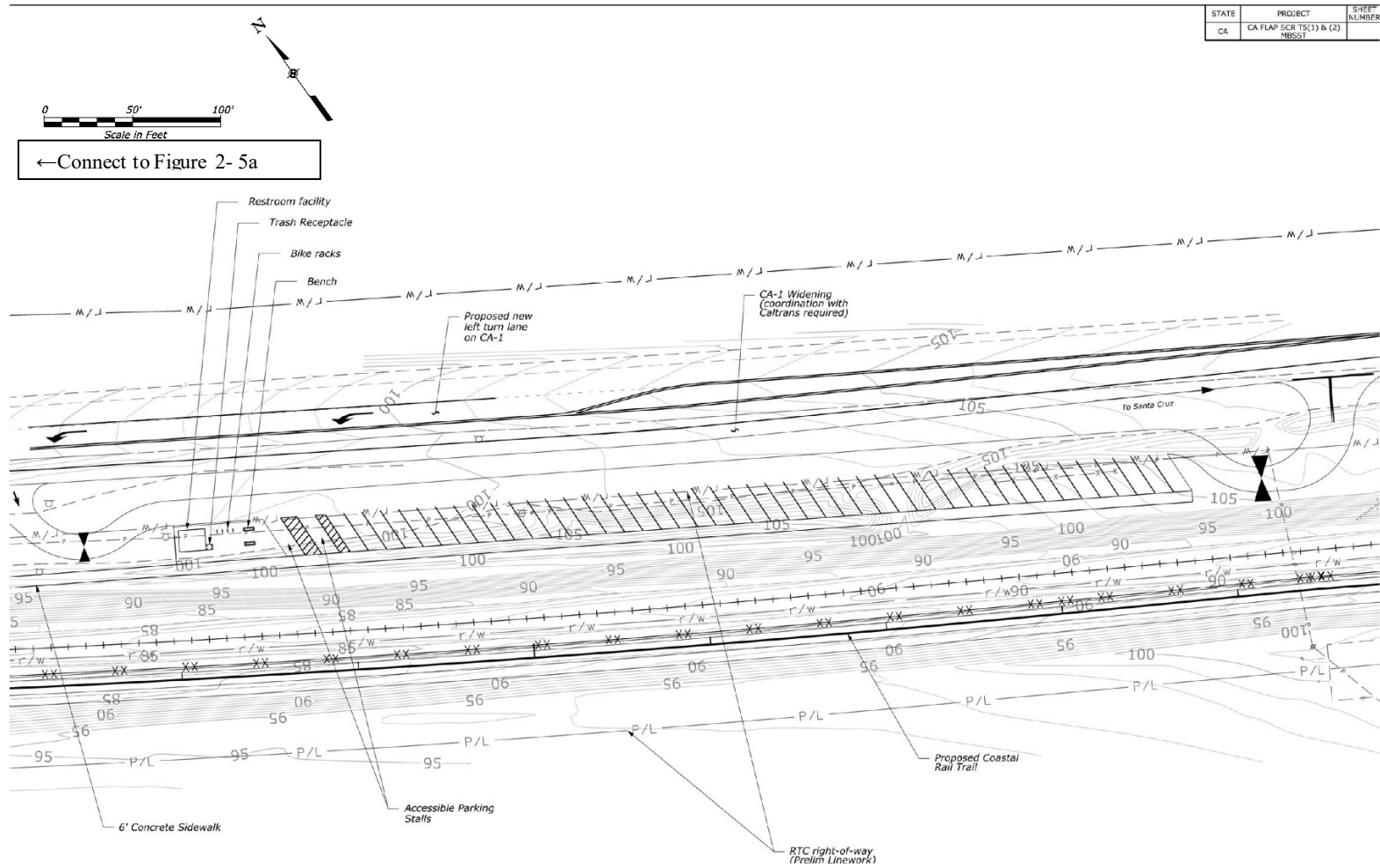
Source: U.S. Department of Transportation Federal Highway Administration Central Federal Lands Highway Division, 2017.

Figure 2-5a Panther/Yellowbank Beach Parking Lot



Source: U.S. Department of Transportation Federal Highway Administration Central Federal Lands Highway Division, 2017.

Figure 2-5b Panther/Yellowbank Beach Parking Lot



Source: U.S. Department of Transportation Federal Highway Administration Central Federal Lands Highway Division, 2017.

2.1.2.4 Trail Crossing

There are currently numerous crossing locations over the rail alignment along the 7.5-mile-long rail corridor, including 16 that are formal paved or unpaved roads for farm vehicles or personal vehicles, numerous informal trails used by pedestrian/bicyclists to access the coast, and two that are informal roads used by farmers. The Proposed Project would retain and formalize some crossings and close others as summarized in Table 2-1 and **Figure 2-6a** and **Figure 2-6b**. Typical crossings are shown in **Figure 2-7** and **Figure 2-8**.

The Proposed Project would establish or retain a total of 17 formal crossings, and close four existing formal crossing and six informal crossings. This plan would require collaboration between various stakeholders and therefore could be subject to change. Of the 10 crossings to be closed, six are informal crossings created by farmers to access operations or by pedestrians and bicyclists in order to access beaches, and four are formal California Public Utilities Commission (CPUC) crossings. For all farmer crossings proposed for closure, other adjacent crossings would be formalized to maintain farmer access. Of the 17 crossings to be established or retained, 12 are existing formal CPUC crossings and five are proposed new formal CPUC crossings. Formal crossings would be improved with the standard treatments for the Project (e.g., grading, pavement, concrete crossing panels, signage) in compliance with CPUC requirements.

The five proposed new formal CPUC crossings are located at:

- Davenport Parking lot trail connection;
- Bonny Doon Parking lot trail connection;
- Panther/Yellowbank Beach Parking lot trail connection;
- MP 25.05 in the southern agricultural portion of the project; and
- MP 24.19 near Wilder Ranch where the trail transitions from coastal to inland side of the railroad tracks.

The parking lot trail connection crossings and the trail crossing at MP 24.19 would become formalized pedestrian/bicycle (non-vehicular) crossings. The remaining crossings at MP 25.05 would become a formalized farm equipment crossing. To formalize non-vehicular crossings, a concrete crossing panel would be inserted between the tracks to facilitate traversing the tracks by bicyclists, and the signs and pavement markings would be updated.

At all formal crossings, there would be a break in the fencing that extends between the trail and the railroad tracks. Where farm equipment would be allowed access across the trail, there would be concrete pavement on the trail to minimize asphalt damage from the equipment. Additional design features, such as mud mats for the crossing approaches, may be incorporated to reduce the amount of dirt and debris being deposited on the trail.

2.1.2.1 Fencing

The Project would include the installation of fencing between the trail and agricultural lands at some locations where a natural or geographic barrier does not exist to prevent trail users from exiting the trail and entering agricultural land. In many locations, the trail and rail line would

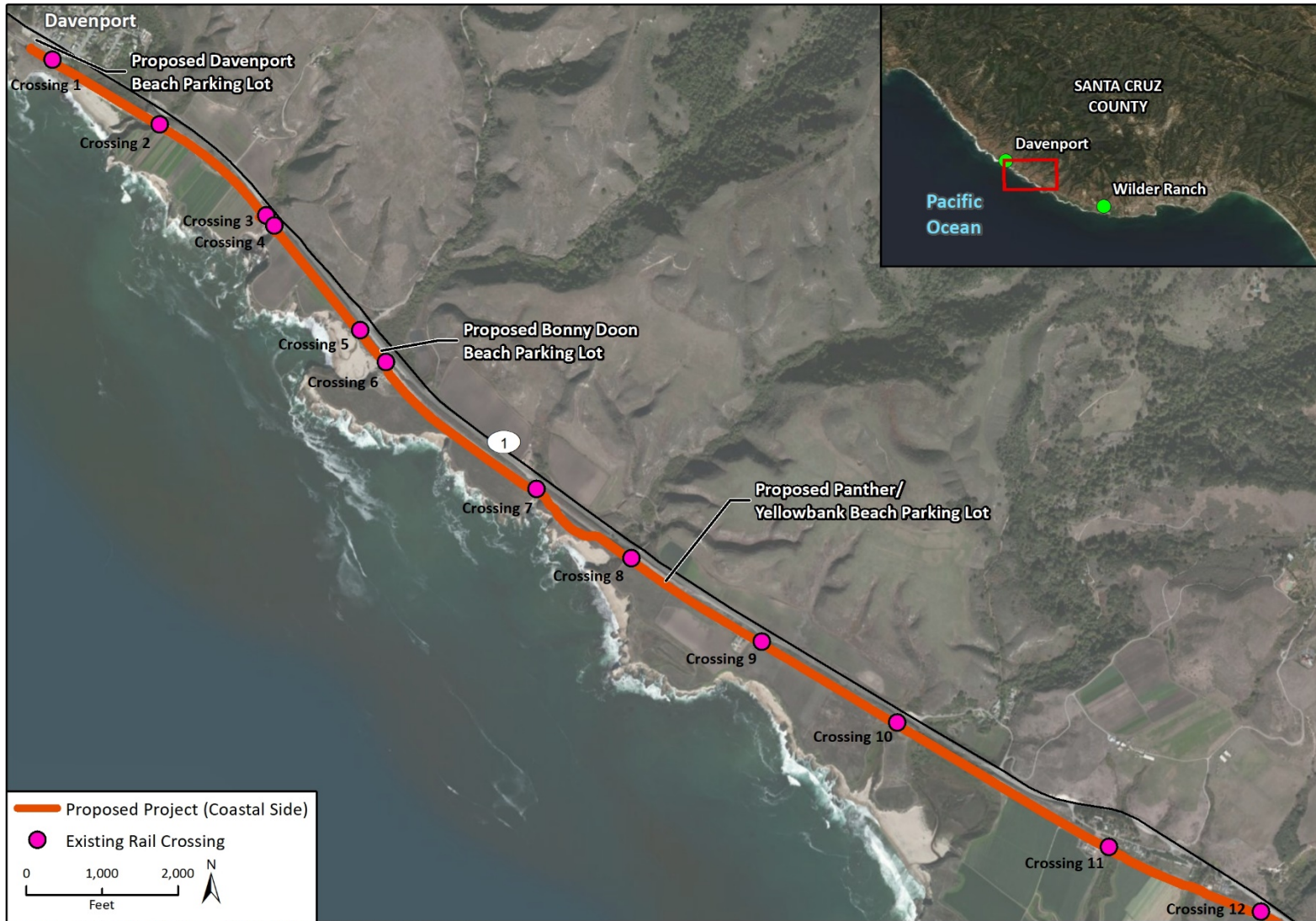
Table 2-1 Summary of Existing Trail Crossings

Existing Rail Crossing Mile Post		Crossing Type ^a	Proposed Project	Nearest Crossing ^b
30.97	Davenport Parking Lot	Informal Pedestrian	New Formal	
30.9	Private	Informal Pedestrian	Closing	310 N
30.6		Informal Pedestrian	Closing	1,860 S
30.25	Private	Formal CPUC	Improve	
30.21		Informal Pedestrian	Closing	190 N
29.88	Bonny Doon Beach Parking Lot	Informal Pedestrian	New Formal	
29.77		Informal Pedestrian	Closing	540 N
29.30	Private	Formal CPUC	Improve	
29.00	Panther/Yellowbank Beach Parking Lot	Informal Pedestrian	New Formal	
28.60	Private	Formal CPUC	Improve	
27.55	Private	Formal CPUC	Improving	
	Private	Formal CPUC	Previously Closed	
27.20	Scaroni Road North	Formal CPUC	Improving	
27.00	Scaroni Road South	Formal CPUC	Improving	
26.75	Private	Formal CPUC	Closing	1,180 N
26.73	Private	Formal CPUC	Previously Closed	
26.70	Private	Formal CPUC	Improving	
25.95	Private	Formal CPUC	Improving	
25.83		Informal Farmer's	Closing	540 N
25.60	Private	Formal CPUC	Improving	
25.30	Wilder Ranch Park Private	Formal CPUC	Improving	
25.10	Wilder Ranch Park Private	Formal CPUC	Closing	800 S
25.05		No Existing	New Formal Vehicle	
25.00	Wilder Ranch Park Private	Formal CPUC	Closing	500 N
24.95		Informal Farmer's	Closing	750 S
24.80	Wilder Ranch Park Private	Formal CPUC	Improving	
24.20	Wilder Ranch Park Private	Formal CPUC	Closing	225 S
24.19	Wilder Ranch Park	No Existing	New Formal Pedestrian	
24.00	Wilder Ranch Park Private	Formal CPUC	Improving	

^a Existing crossing locations shown in **Figure 2-6 a and b** and **Figure 2-1**

^b For the trails that would be closed, this is the distance (feet) to the nearest trail crossing northward (N) or southward (S) from the crossing that would be closed.

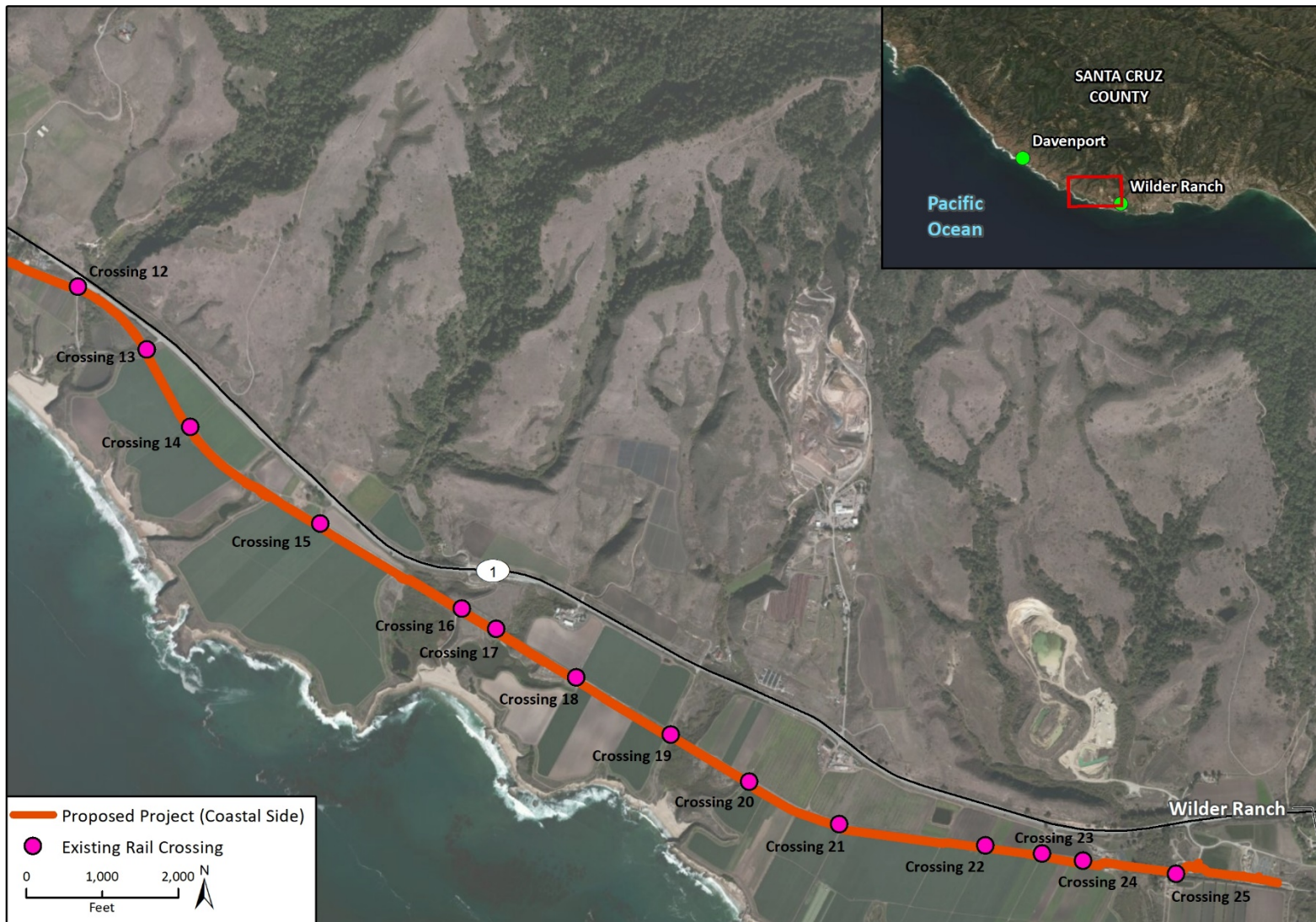
Figure 2-6a Existing Rail Crossings: North (Davenport to Scaroni Road)



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Fig 2-8a Rail Crossings North

Figure 2-6b Existing Rail Crossings: South (Scaroni Road to Wilder Ranch)



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Fig 2-8b Rail Crossings South

Figure 2-7 Typical Rail Crossing Public Road

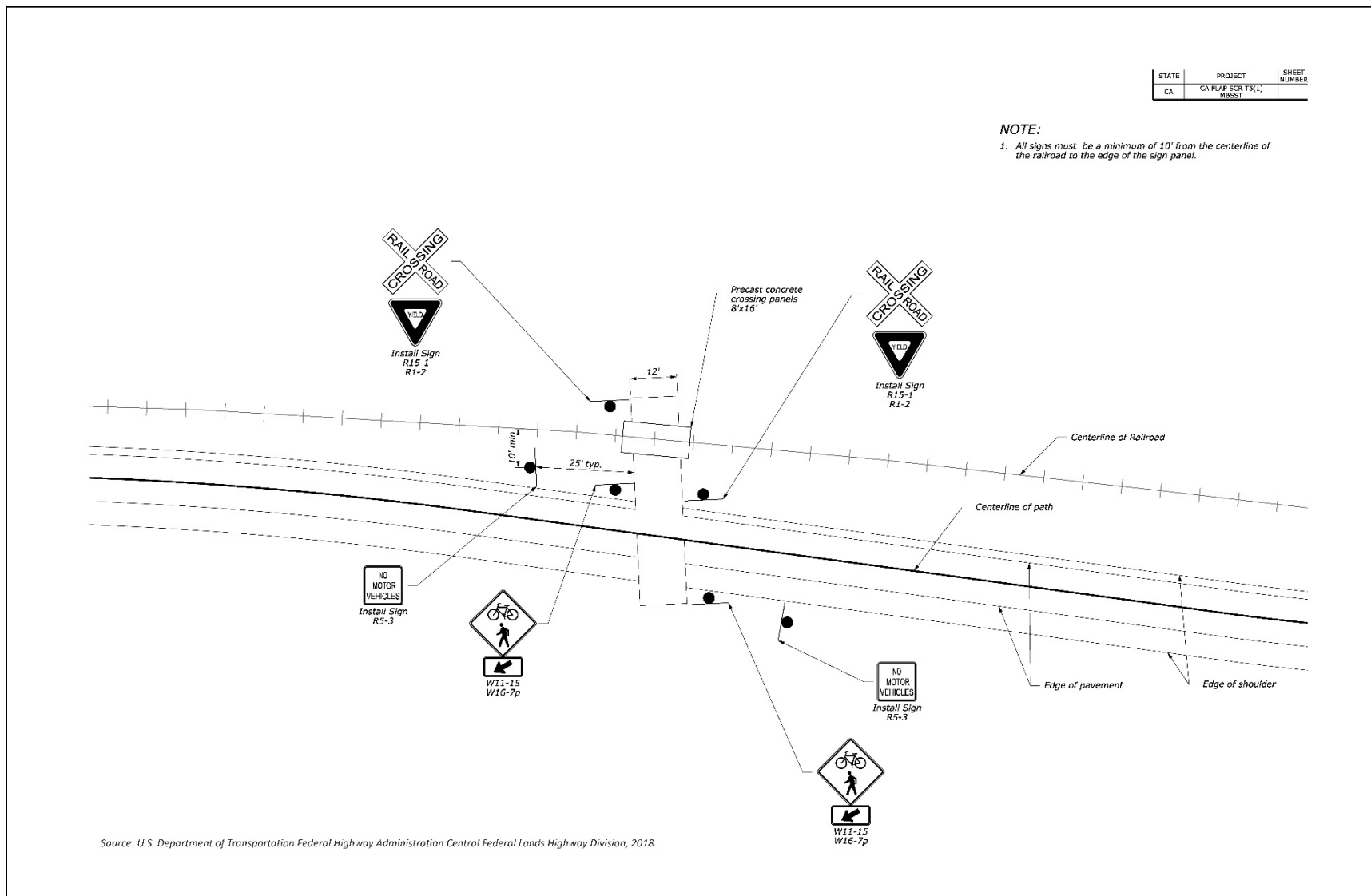
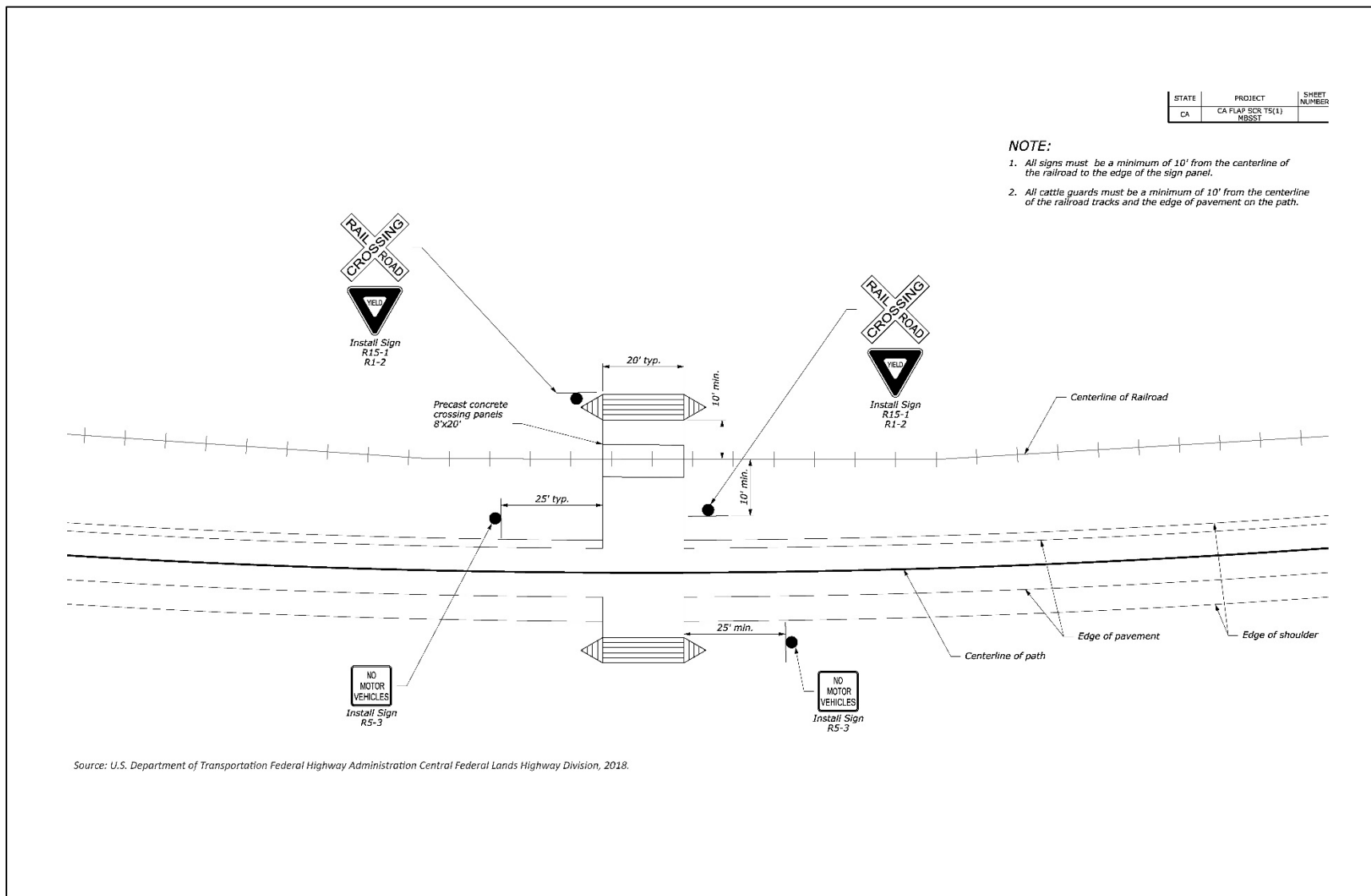


Figure 2-8 Typical Rail Crossing Private Road



be in the existing railway cut, and there is a physical barrier such as a slope and/or dense vegetation where pedestrians and bicyclists would not be able to exit the trail. In areas where a physical barrier exists, fencing would not be installed. In other locations where agricultural fields are no longer active and unobstructed views of the coast are possible, fencing may not be installed. Fencing may be installed along the trail edge for safety purposes in areas where there are steep slopes adjacent to the trail.

The Project would be designed to include fencing on the inland side of the trail to separate trail users and the railroad. In accordance with the Federal Railroad Administration guidelines, a 10-foot offset from the centerline of the railroad to the edge of the trail fencing would be placed where there is no natural or geographical barrier. The Federal Railroad Administration may allow an 8-foot-6-inch offset from the centerline of the railroad under some circumstances. In areas where a physical barrier exists, fencing would not be installed.

Fencing to separate trail users and the railroad would be implemented in a phased approach. Prior to operation of the rail line, and as part of the efforts to restore operation of the line, fencing would be installed where the topography allows for pedestrian access between the rail and the trail.

The fencing would be constructed using posts (4 feet 6 inches in height) and multiple (5-7) smooth wire strands, similar to what is shown in Figure 2-9. This fence type will accommodate wildlife passage.

2.1.2.1 Slope Stabilization

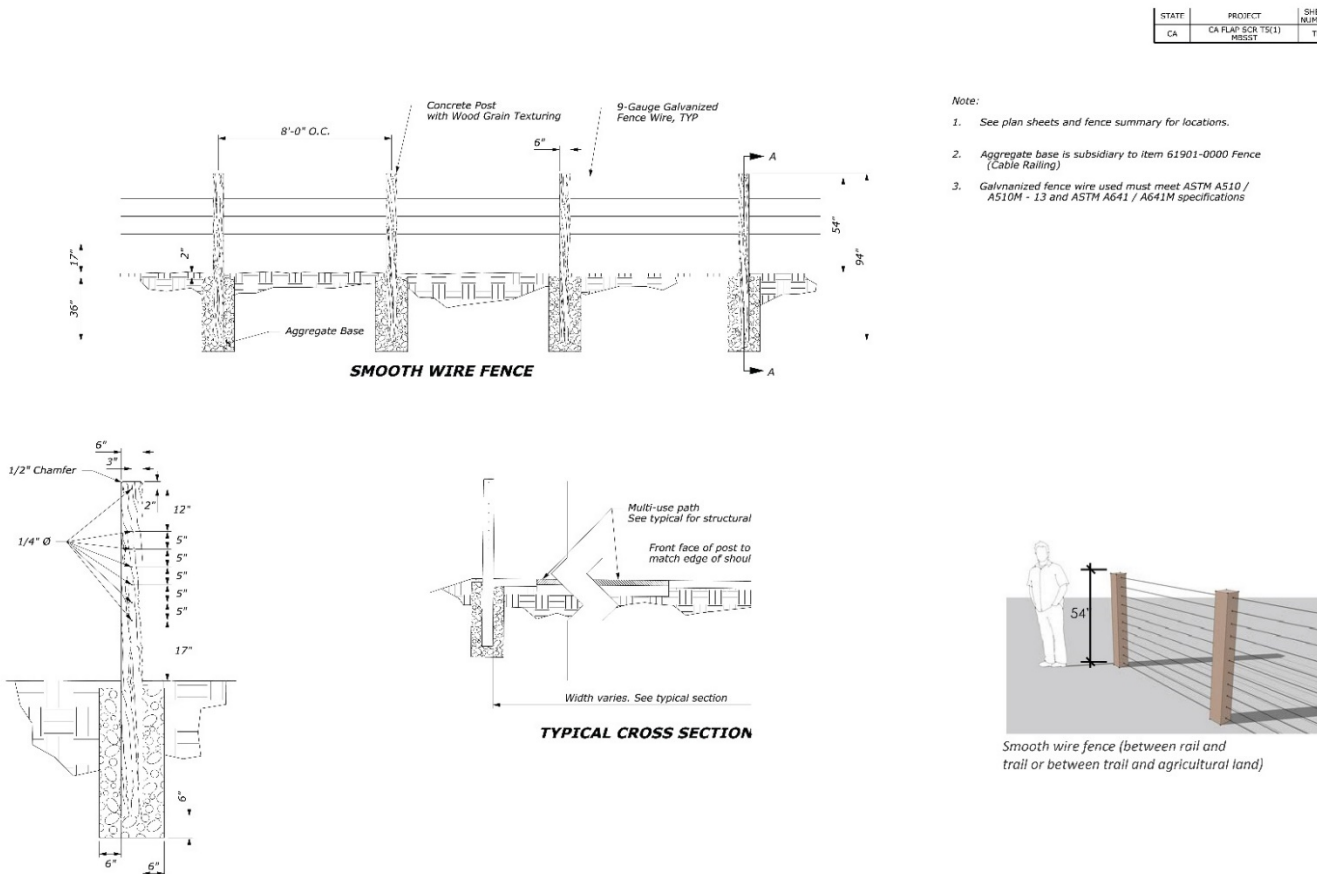
There are several locations where slope stabilization measures (e.g., a reinforced soil slope or other retaining structure) would be needed, as described below from north to south and shown in Figure 2-1.

The existing railway bench would need to be widened by cutting or filling where the bench is not wide enough to support the trail. In these locations, natural or reinforced soil fills or other retaining structures would be used, depending on the steepness of the existing slopes and any sensitive resources in the area. Where retaining structures are needed, walls may be constructed as soldier pile with timber lagging, mechanically stabilized earth, or segmental precast concrete wall systems with a façade with architectural treatments. Where walls or embankments can support it, native vegetation would be planted.

At the eroding bluff near Davenport (refer to Sheet 1 in Figure 2-1), three different construction techniques are being considered to support the trail: creating a slope using wire mesh baskets, constructing a retaining wall, or re-establishing the portion of the bluff that has eroded through the use of fill. For all three techniques, armoring with rip-rap or other erosion prevention techniques, would need to be established at the base of the slope to minimize or eliminate further erosion that would compromise the trail. For construction estimating purposes a large reinforced soil slope was assumed at this location. Total fill and excavation quantities for the entire project are shown in Table 2-2.

In the north portion of the alignment near Shark Fin Cove (refer to Sheets 1 and 2 in Figure 2-1), a combination of additional earthwork excavation, retaining walls, and embankment construction with fill to support the trail extending onto the adjacent farm road may be required.

Figure 2-9 Fencing Design



Source: U.S. Department of Transportation Federal Highway Administration Central Federal Lands Highway Division, 2017 & Monterey Bay Sanctuary Scenic Trail Network Master Plan, 2012.

At the cove on the north end of Panther/Yellowbank Beach (refer to Sheet 3 in Figure 2-1), the bench would need to be widened in an area of a very steep slope. Options being considered in this location include a retaining wall or building up the embankment with fill.

South of Bonny Doon Beach, a rail cut alignment is being considered that would require a rockery wall to retain the existing vegetated bluff for an approximate length of 125 feet. The exposed face of the wall would be a maximum of 8 feet.

2.1.2.2 Drainage

There are nine locations where the trail would cross an identified drainage. At these locations, a reinforced soil slope retaining structure would likely be constructed to support the trail (and, in some locations, the adjacent farm access road) and to avoid directly impacting the channels below. These locations are shown on the trail alignment graphics on Figure 2-1.

In general, stormwater would surface flow from the new paved trail to the adjacent unpaved pervious areas. To improve drainage along the proposed trail, culverts ranging in diameter from 18 inches to 30 inches would be installed and/or replaced at approximately 30 locations within ditches along the existing rail bench or placed perpendicular to the trail alignment to allow stormwater to pass beneath the trail bed.

2.1.2.3 Trail Amenities

The Proposed Project would include a variety of trail amenities in the form of benches, bike racks, informational and interpretative signs, restrooms, and trash/recycling containers.

Most of these trail amenities would be located in the three parking lots, as described above. Rest areas would be developed at strategic locations along the trail, approximately a half-mile to one mile apart depending on terrain and beach access locations. Rest areas would typically include a bench, bike rack, signage, and/or trash and recycling containers. There would be restroom facilities located at the Davenport Beach lot and the Panther/Yellowbank Beach lot, but not at the Bonny Doon Beach lot or along the trail.

The informational and educational signage would be placed at strategic locations along the trail and in the parking lots (e.g., near trail access points and crossings). In accordance with the MBSST Network Master Plan (RTC 2014), the exhibits would include information about the Monterey Bay National Marine Sanctuary, Natural Bridges State Marine Reserve, coastal resources and sensitive species (e.g., California red-legged frog); history of railroads and agriculture; and information related to trail use and stewardship (e.g., "leave no trace" education). Additionally, trail entrances would be posted with notices of ongoing agricultural activities stating that the trail user agrees to trail use at their own risk.

In order to retain the natural environment and to avoid light and glare impacts, there would be no lighting along the trail or at the parking lots. The two restroom facilities may have low level lighting. The highway crossing at Davenport would be lighted for safety, as described under Davenport Beach Lot and Highway 1 Crossing, above.

There would be no landscaping along the trail or in the parking lots. Areas disturbed by construction activities would be revegetated with native species.

Table 2-2 Preliminary Construction Estimates

Construction Information	Proposed Project
Construction Duration	12 months
Construction/Alignment Length ^b	7.31 miles
Estimated Total Disturbance Area	38 acres
Earthwork Quantities^c	
Excavation	44,000 cubic yards
Embankment Construction/Fill	30,550 cubic yards
Estimated Import^d	
Roadway Aggregate	12,000 cubic yards
Asphalt	3,150 cubic yards
Portland Concrete	290 cubic yards
Estimated Export/Waste ^e	4,000 cubic yards
Estimated Pavement	
Parking Lots ^f	5,400 square yards
Trail ^g	49,800 square yards
Excavation/Grading Depth	Up to 2 feet (typical)
Fence Posts	Up to 6,700

^a ^gEstimated quantities are based on preliminary design and subject to change.

^b The linear distance of the trail alignment varies slightly between the Proposed Project and Alternative 1, which has been reflected in these calculations. However, in general, the trail distance is identified as approximately 7.5 miles.

^c The excavation material would be used to construct embankment/fill, and no fill would be imported. For the Proposed Project, the current estimated earthwork quantities yield a volume of waste identified under “Estimated Export/Waste.”

^d The import materials would be used for paving the trail, parking lots, and access paths from the lots to the trail. These estimates are independent of and have no direct correlation to the Earthwork Quantities identified above.

^e This includes the remaining excavation material that is not used for embankment construction/fill.

^f The 5,400 square yards (sy) is the estimated new impervious surface for the new asphalt pavement at the Davenport Beach and Panther/Yellowbank Beach parking lots. There is no new pavement proposed at the Bonny Doon Beach lot.

^g The 49,800 square yards and 43,500 square yards are the estimated new impervious surface for the new paved (asphalt) trail, rounded to the nearest 100 square yard.

Source: The construction information is provided by Federal Highway Administration’s Central Federal Lands Highway Division based on current design and schedule.

2.1.3 Operation and Maintenance

2.1.3.1 Responsibility

The trail and parking lots would be operated and maintained by RTC, likely through a contract with a private firm, State Parks, County Public Works, County Parks and Recreation, or some combination thereof through formal agreements. Funding for maintenance is anticipated to be provided or secured by RTC, but may include other sources. Refer to Section 1.0, *Introduction*, of the North Coast Rail Trail EIR (RTC 2019) for additional detail. Once the operations and maintenance responsibility is determined, a Trail Manager would be identified and an Operations and Maintenance (O&M) Plan would be developed, based on the O&M Plan included in the MBSST Network Master Plan and additional mitigation measures identified herein. As such, the Project O&M Plan is anticipated to include components described herein.

2.1.3.2 Hours and Closures

Signs would be installed to indicate that the trail is closed at night to support existing agriculture adjacent to the trail and protect the public from pesticide spraying necessary for the continued viability of agricultural use, and to discourage illegal camping. It is anticipated the restrooms and parking lots at trail access points would also be closed at night, possibly from 12:00 a.m. to 5:00 a.m. or from sunset to 8:00 a.m. consistent with State Parks hours. No gates are proposed at the parking lots as part of the Project. The exact hours of parking lot, restroom, and trail closure would be determined through coordination with State Parks, the Coastal Commission, and Caltrans, as well as through consultation with other affected property owners.

2.1.3.3 Trail Use and Restrictions

Following are rules and restrictions for trail use, as identified in the MBSST Network Master Plan and by applicable regulations.

- The ADA-accessible trail is intended for pedestrians and bicyclists. Although electric bicycles with a rating limited to 20 miles per hour would be allowed in accordance with California law (Assembly Bill 1096), motorized vehicles would not be allowed. Electronic skateboards with a rating limited to 20 miles per hour would be allowed as well. Depending on the volume of users, other speed limits may be imposed and indicated on posted signage.
- Dogs would be prohibited on the trail, consistent with current California State Parks Rules and Regulations (State Parks 2018).
- Equestrian use would be prohibited in accordance with State Park regulations limiting equestrian use on State Parks land to the inland side of Highway 1 north of Wilder Ranch State Park Cultural Complex (State Parks 2018).

2.1.3.4 Trail and Agricultural Operation Interface

The 7.5-mile alignment is adjacent to agricultural land for approximately 4.7 miles. Following are the planned methods for minimizing conflicts, as identified in the MBSST Master Plan.

- Trail entrances would be posted with notices of ongoing agricultural activities stating that the trail user agrees to trail use at their own risk.
- Trail users would be advised that agricultural operations will be occurring and may include pesticide spraying, agricultural dust and debris, and burning activities in accordance with state and local laws and ordinances.

2.1.3.5 Routine Trail Maintenance

General maintenance activities for the trail and parking lots is based on those in the Master Plan. Examples activities include trash collection, restroom cleaning, fence repair, and pavement replacement. Any repairs, tree and shrub trimming, and other activities in State Parks property would be conducted in coordination with State Parks or with written agreement.

Additionally, the trail corridor would be inspected for damage and signs of excessive coastal erosion and potential inundation following major storm events. If necessary, appropriate actions would be taken to minimize the risk to trail users. Such actions could include trail segment closure, structural improvements, or trail relocation, for which appropriate environmental review would be conducted.

2.1.4 Construction

In general, construction activities for the Proposed Project would include excavation of material sources, clearing and grubbing, grading, placement of crushed aggregate base and paved surface, revegetation, installation of signs, and other safety related features necessary to meet current design practice. A summary of construction information and assumptions based on the current design and schedule is provided in Table 2-2.

In general, construction activities would be within the 16-foot wide trail alignment, but there could be temporary disturbance up to 10 feet on either side of the alignment. In constrained or environmentally sensitive areas, including areas with active farmland and biologically sensitive areas, construction activities outside the 16-foot-wide trail corridor would be minimized to the extent feasible.

2.1.4.1 Timing and Duration

It is anticipated that design for the project will be completed in 2021. Construction of the Proposed Project could begin as early as 2021. The actual start of construction will be dependent upon funding availability. The estimated construction length is approximately 12 months. This period would accommodate construction of the entire alignment, including the trail and parking lots.

If the trail is constructed in phases due to funding constraints, Phase 1, the southern portion from Wilder Ranch to Panther/Yellowbank Beach (5.4 miles) would be constructed first and require approximately eight months. Phase 2, the northern portion from Panther/Yellowbank Beach to Davenport (2.1 miles), would be constructed subsequently and require approximately four months.

2.1.4.2 Utility Relocations and Installations

There are existing gas, electric, telecommunication, water, and sanitary sewer utilities in some locations within the rail corridor and in the project vicinity, including the City of Santa Cruz raw water pipeline that generally parallels Highway 1. Project construction may require relocation of these utilities, but not the City's water supply system. The CFLHD and RTC would coordinate with utility providers during final design.

Furthermore, new utility facilities may be constructed to service toilets at the Davenport parking area. It is anticipated that relocated utilities would be similar in type, appearance, width, and height to existing facilities, or as amended to conform to latest industry standards. New utilities would also likely be similar in type, appearance, and dimensions.

2.1.4.3 Construction Staging

Construction, equipment staging, and stockpiling would take place on existing disturbed areas along the rail corridor or in areas on State Park lands.

All equipment and materials would be stored, maintained, and refueled in designated portions of the staging areas in accordance with permit requirements. As such, there would be no staging in areas with sensitive biological resources or adjacent to drainages or wetlands. Furthermore, there would be no staging in areas with productive agricultural land.

2.2 Preferred Alternative

The benefits and impacts of the No Action Alternative and Proposed Project Alternative, as further discussed in Chapter 3, were analyzed and considered in the identification of a preferred alternative. Based on this analysis and the ability of each alternative to meet the purpose and need of the project, CFLHD has identified the Proposed Project as the Preferred Alternative. This determination is subject to public review and final selection of a Preferred Alternative will occur following the public review and comment period.

After the 30-day public comment period, all comments will be considered and CFLHD will select a Preferred Alternative. A final determination of the project's effects on the environment will be identified at that time. If it is determined the proposed action would not significantly impact the environment, a Finding of No Significant Impact will be issued in accordance with NEPA.

2.3 Alternatives Considered but Dismissed from Evaluation

As discussed in Section 1.2, *Project Background*, three other alternative alignments for the trail were considered in the NCRT EIR (RTC 2019). These alternatives were eliminated from further analysis due to level of environmental impact and/or failure to meet project objectives.

During the EA process, additional alignment options for the trail within the rail corridor were considered to further reduce impacts to sensitive habitats.

Boardwalk through Dune Habitat: Trail options within coastal dune habitat near Bonny Doon Beach were further considered. In the NCRT EIR (RTC 2019), construction of a boardwalk was considered through the dune habitat. In evaluating how the boardwalk might be constructed through this dune area, concerns arose over the potential direct and cumulative impact to the dune. Construction of a boardwalk would result in approximately 0.181 acres of permanent impacts; however, additional impact to the dune would occur as a result of future rail use that would remove sand from the tracks. The combined impact to the dune from the construction of the boardwalk and railroad use would be approximately 0.259 acres. This option would result in greater long-term impacts to the dune compared to the Proposed Project, in which the alignment remains in the rail cut with construction of a retaining structure. Although, sand would be removed from the tracks under the Proposed Project when the rail line is active, the long-term permanent impacts would be less. Therefore the option of building a boardwalk on dune habitat was dismissed from further evaluation.

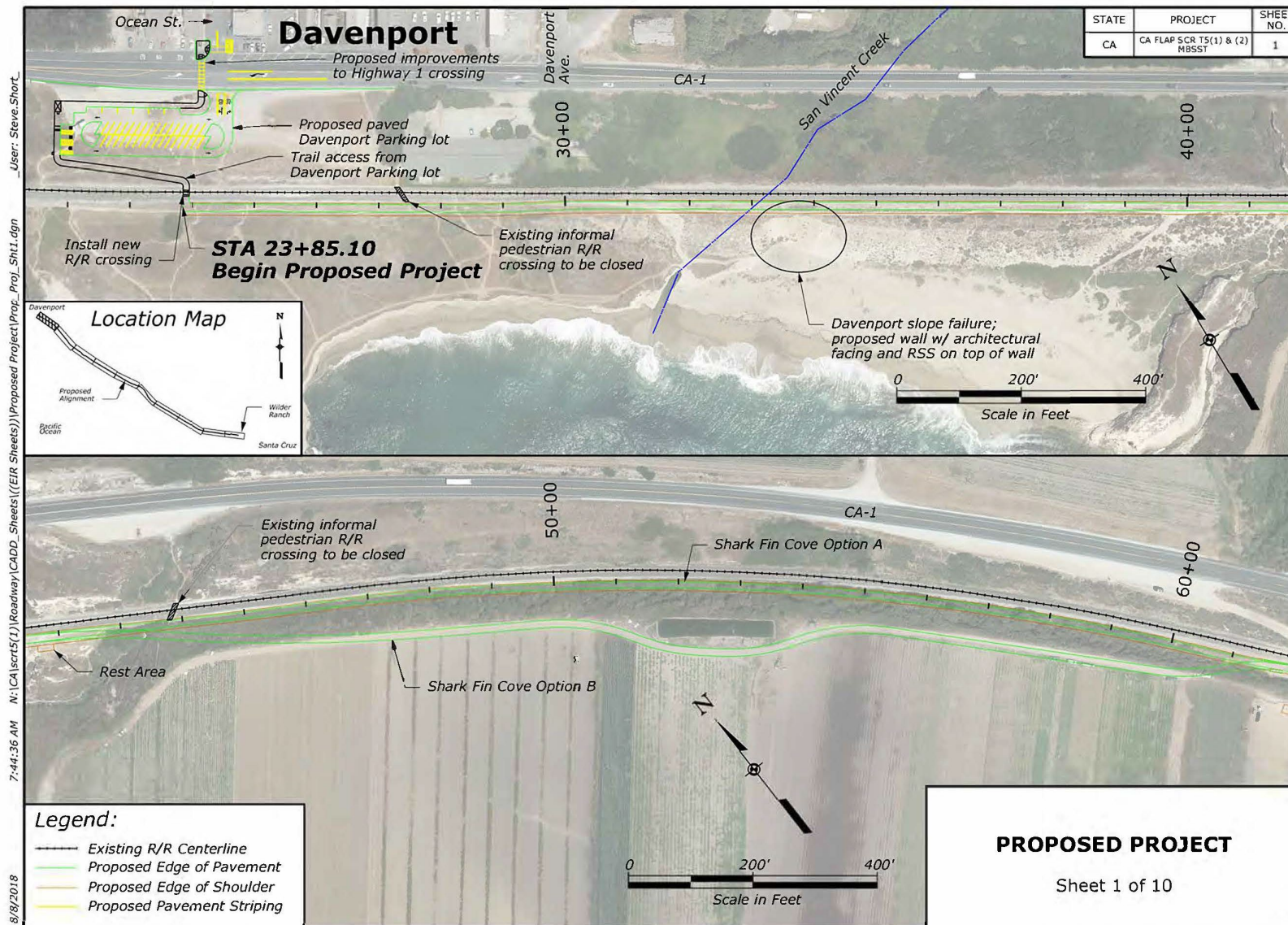
2.4 Permits and Approvals Needed

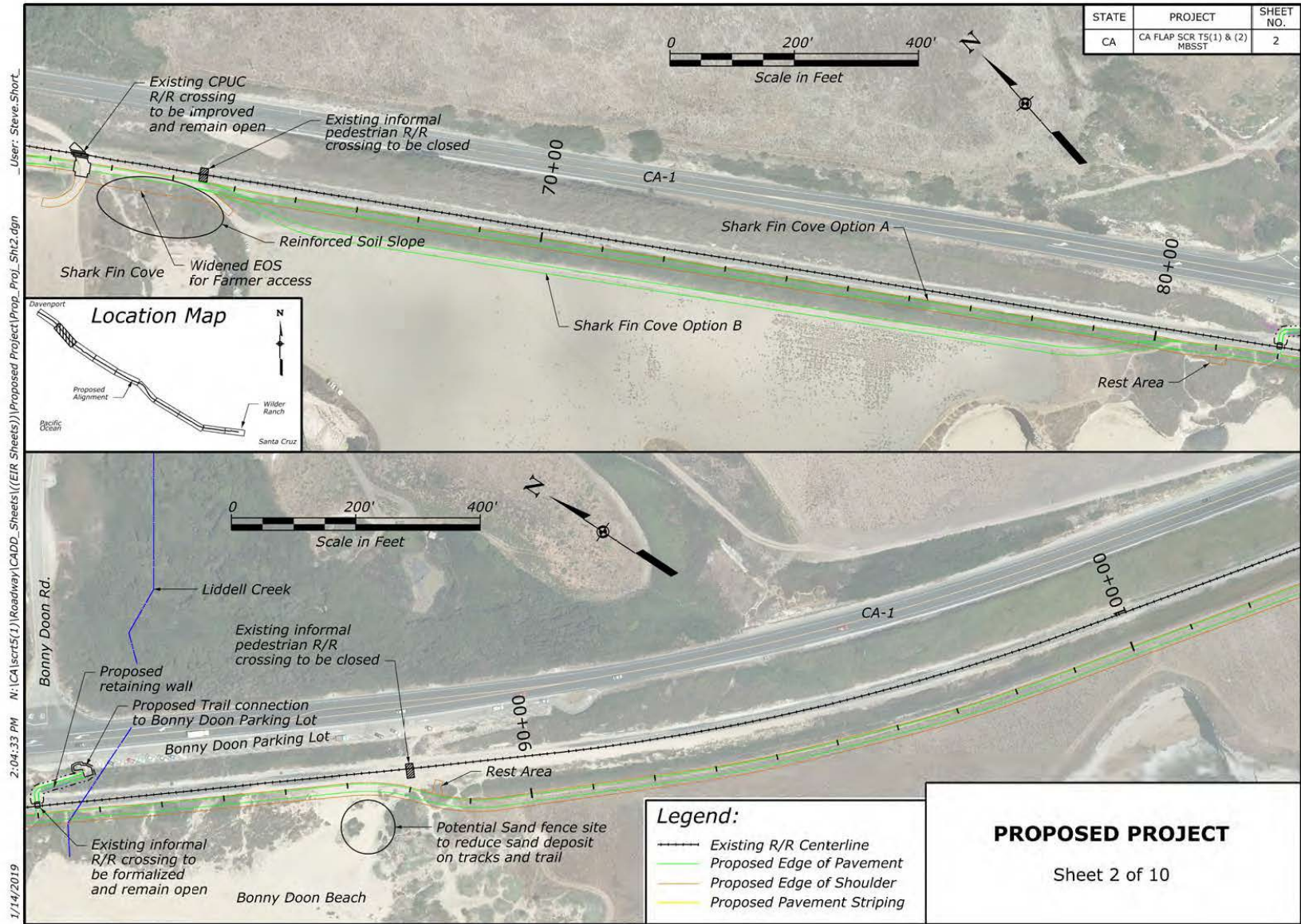
Table 3 summarizes the permits and approvals required prior to construction. The RTC will be responsible for obtaining state required permits in coordination with CFLHD. Federal permits will be acquired by CFLHD.

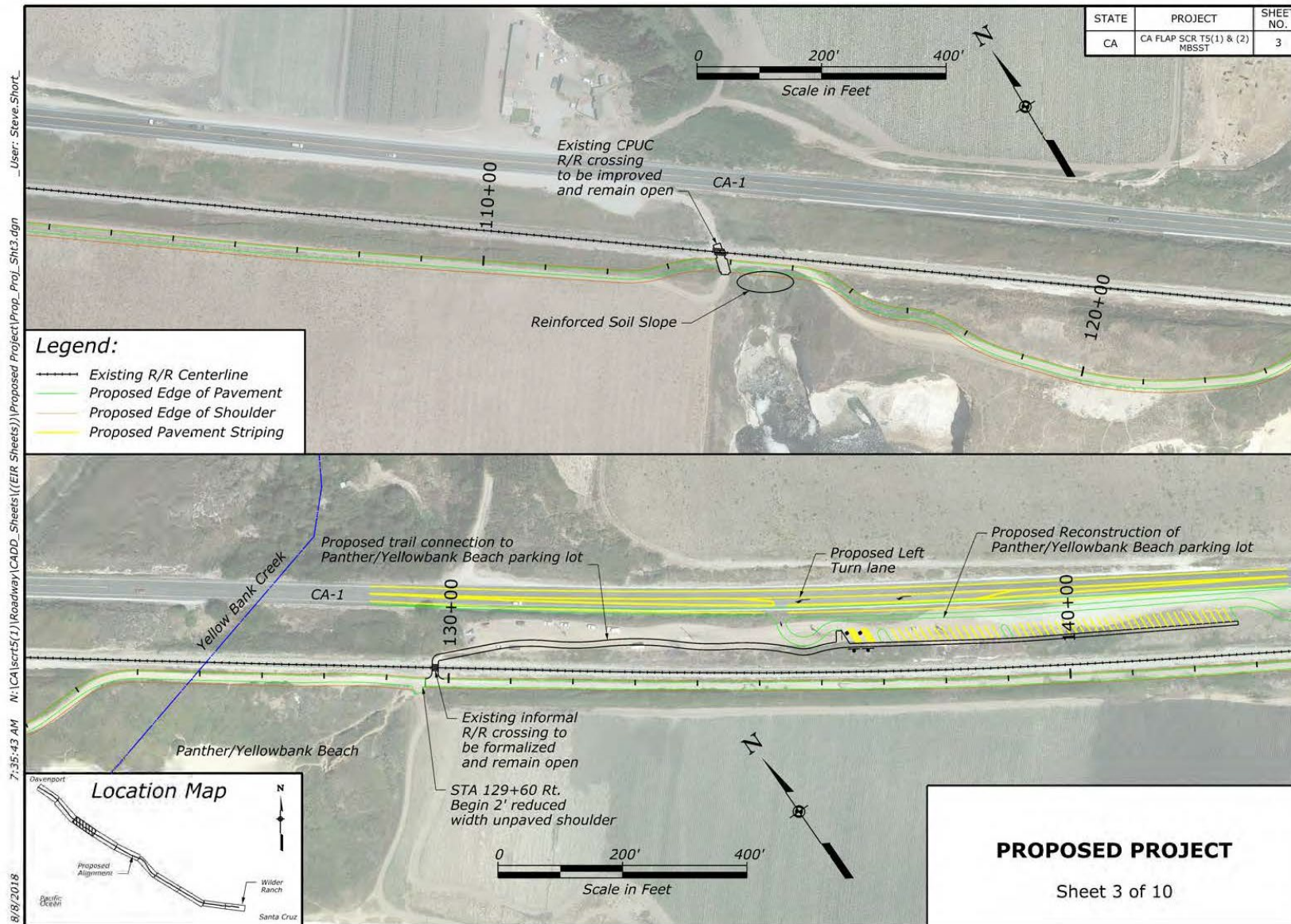
Table 2-3: Permits and Approvals

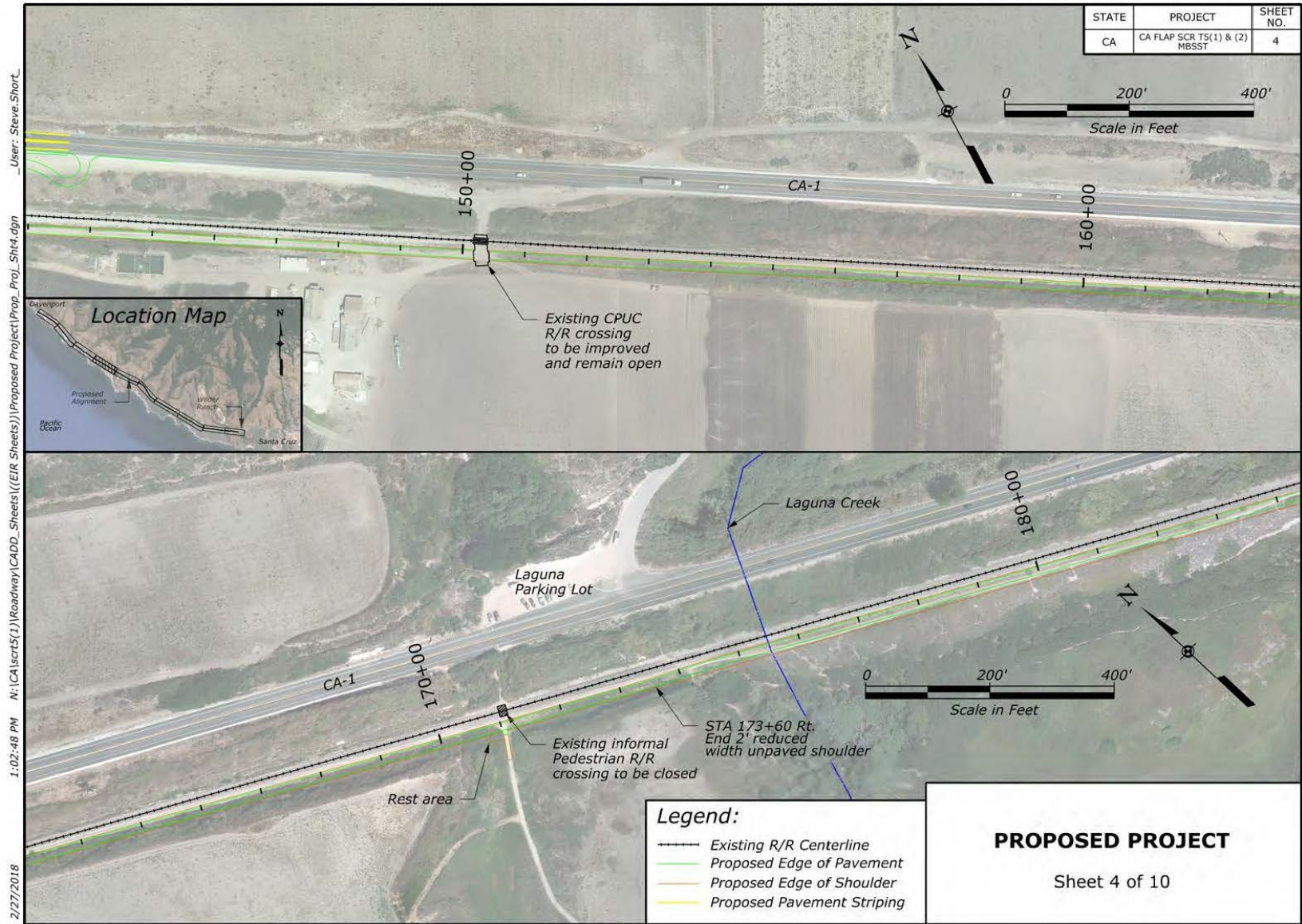
Agency	Permit/Approval
U.S. Army Corps of Engineers, San Francisco District	Nationwide 404 Permit for filling or dredging waters of the United States
U.S. Fish & Wildlife Service and National Marine Fisheries Service	Formal Endangered Species Act (ESA) Section 7 consultation for adverse effects to threatened and endangered species managed by the USFWS Informal ESA Section 7 consultation regarding effects to fish species managed by the National Marine Fisheries Service (NMFS)
California Coastal Commission	Consistency determination with the federally approved California Coastal Management Program, including the Coastal Act (PRC 30330, and 30400)
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement
California Office of Historic Preservation	Section 106 consultation for potential effects to historic resources
Central Coast Regional Water Quality Control Board	Section 401 Water Quality Certification for discharge of dredged or fill materials into waters of the United States Construction General Permit/Stormwater Pollution Prevention Plan for discharge of stormwater related to construction activities
California State Parks	Right of entry permit and possible easement or Operating Agreement
California Department of Transportation	Approval to construct in right-of-way and encroachment permit
California Public Utilities Commission Rail Crossing Engineering Section	New public rail crossing approval

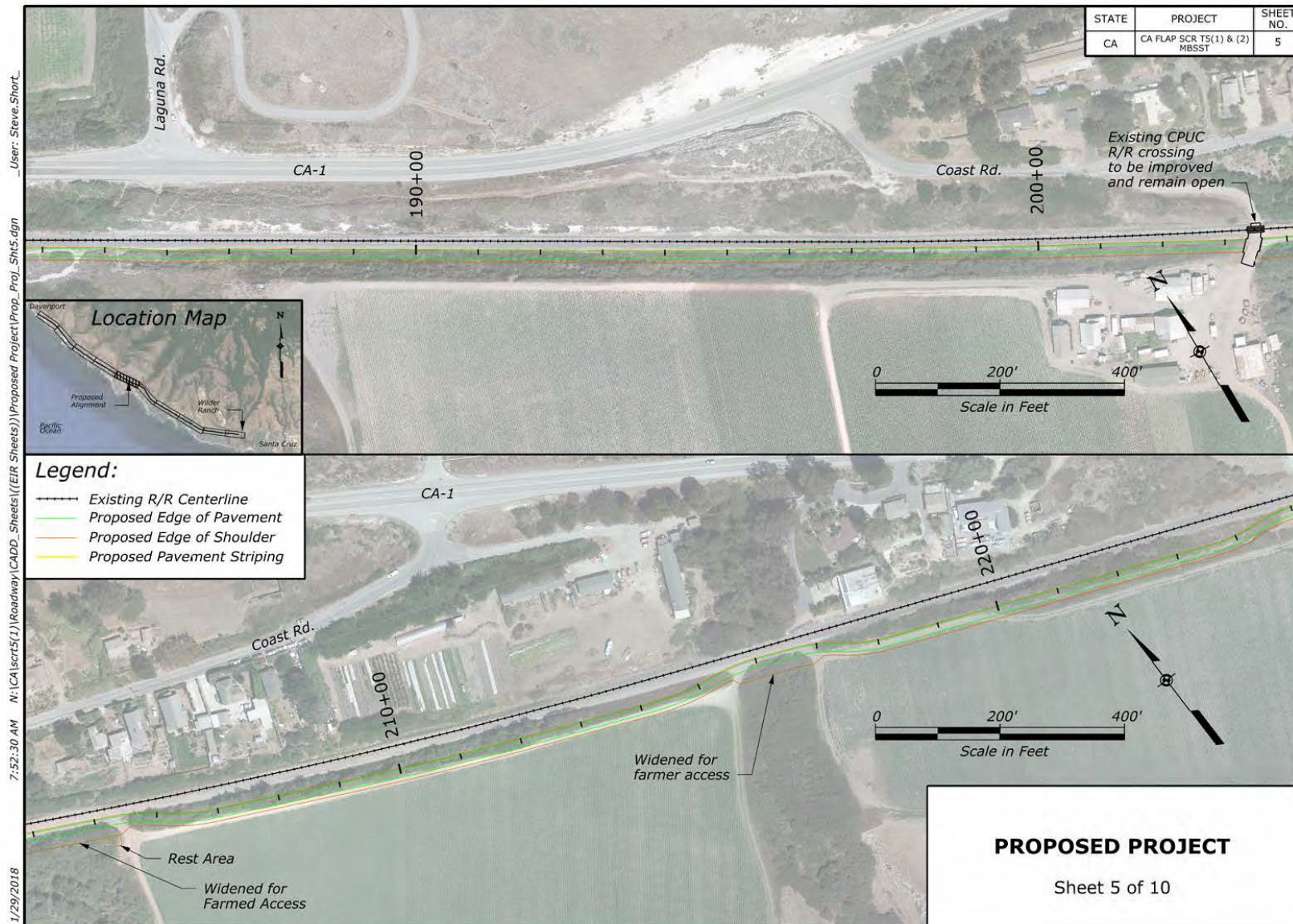
Figure 2-1 Proposed Project Alternative

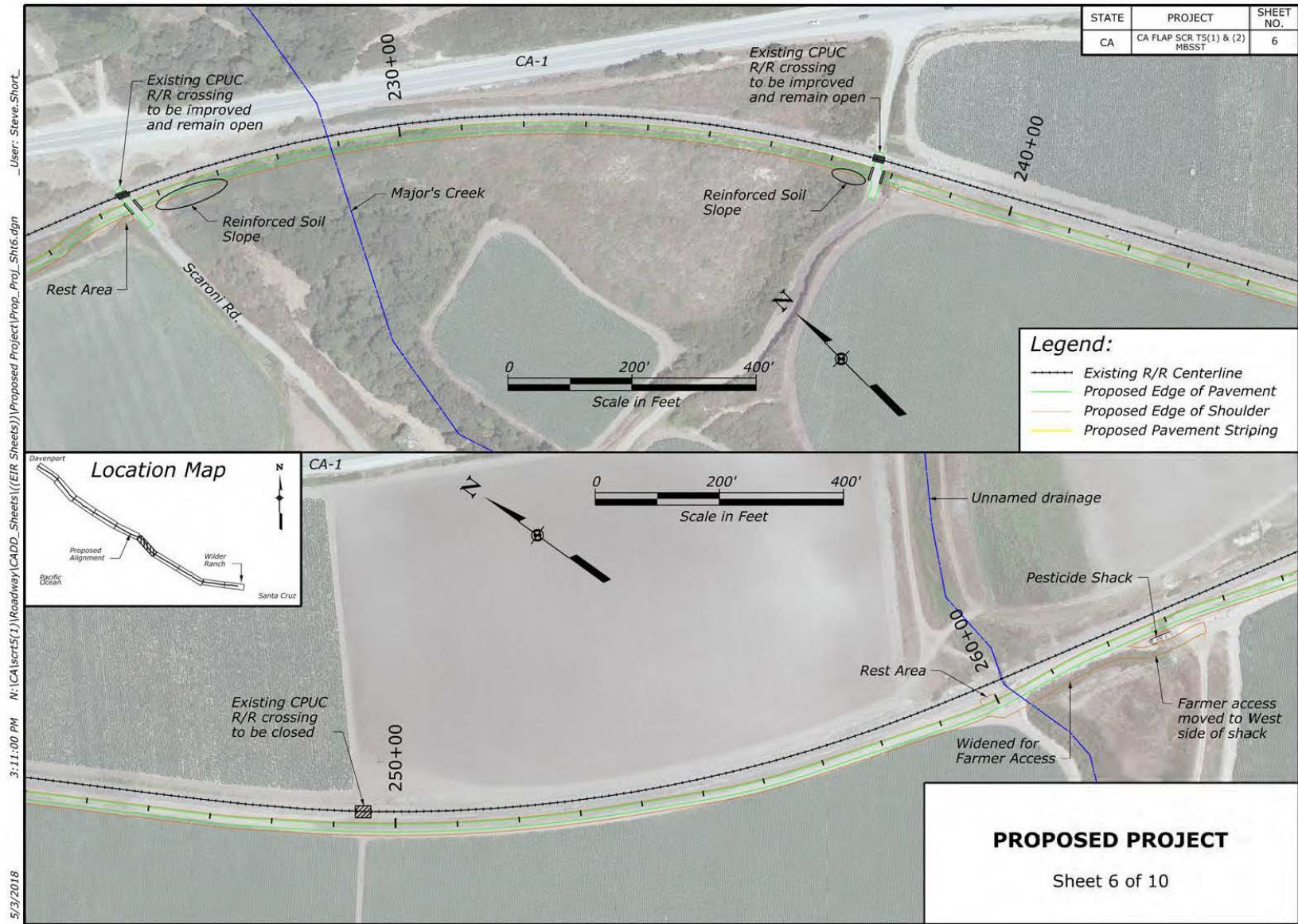


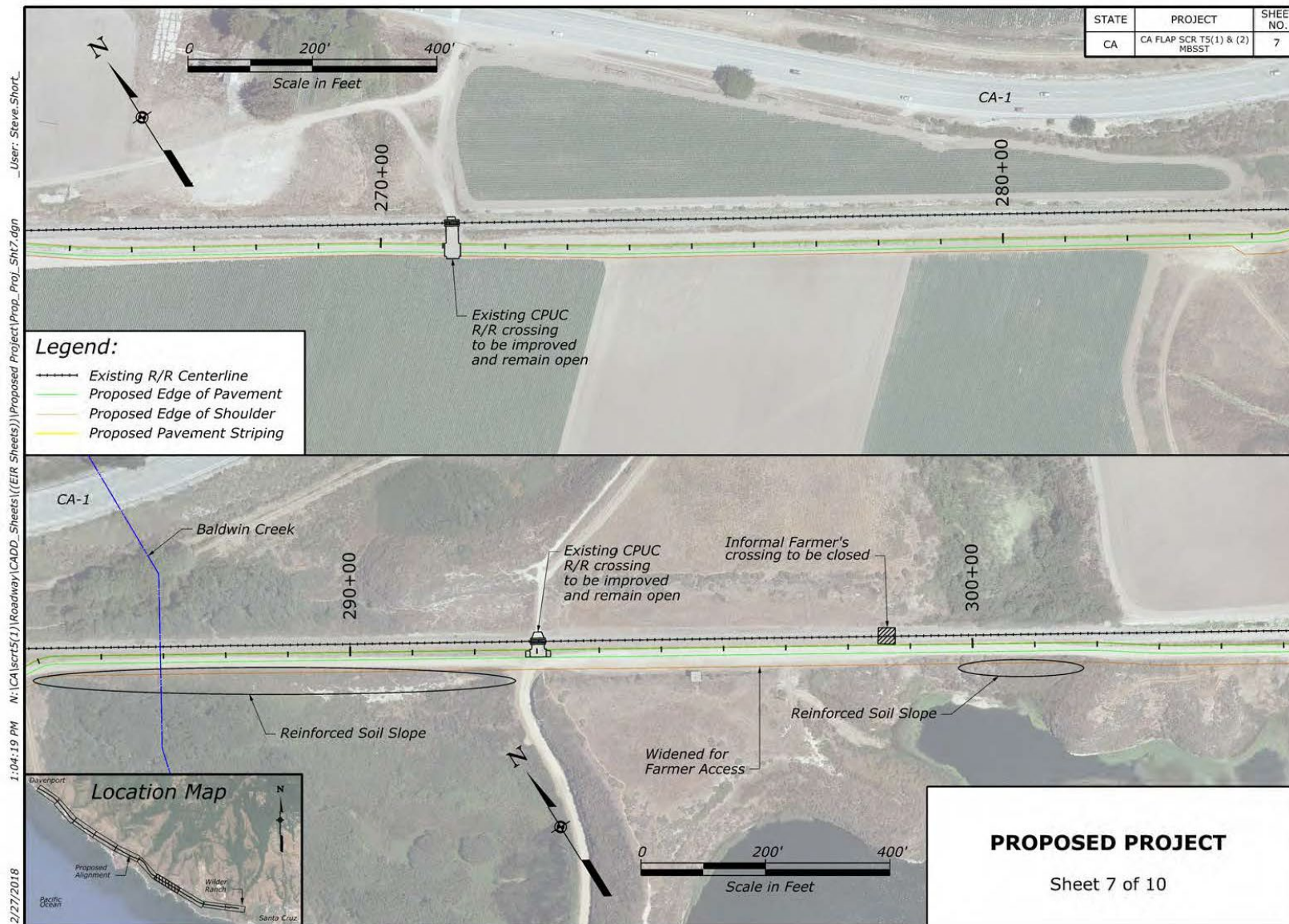


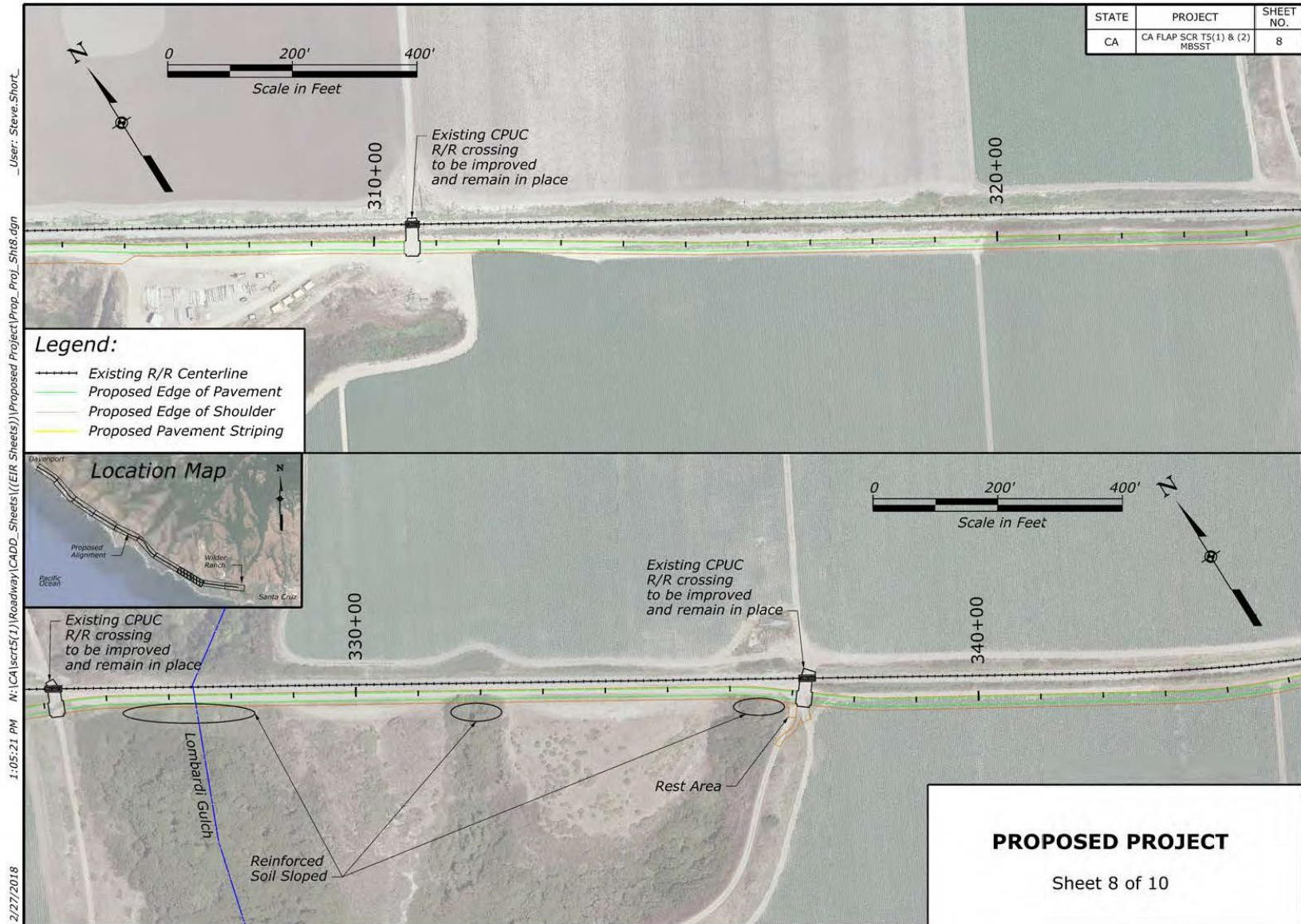


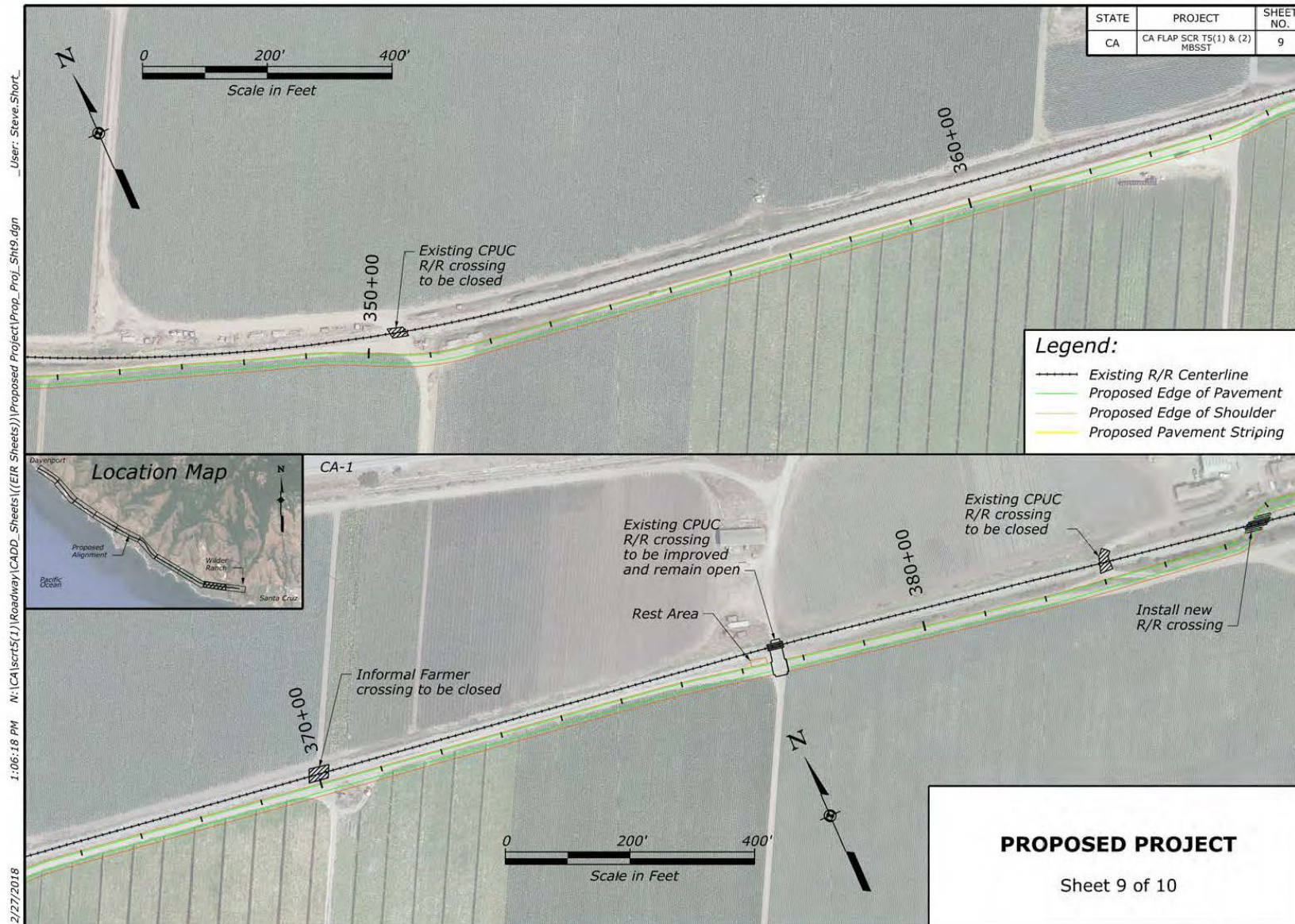


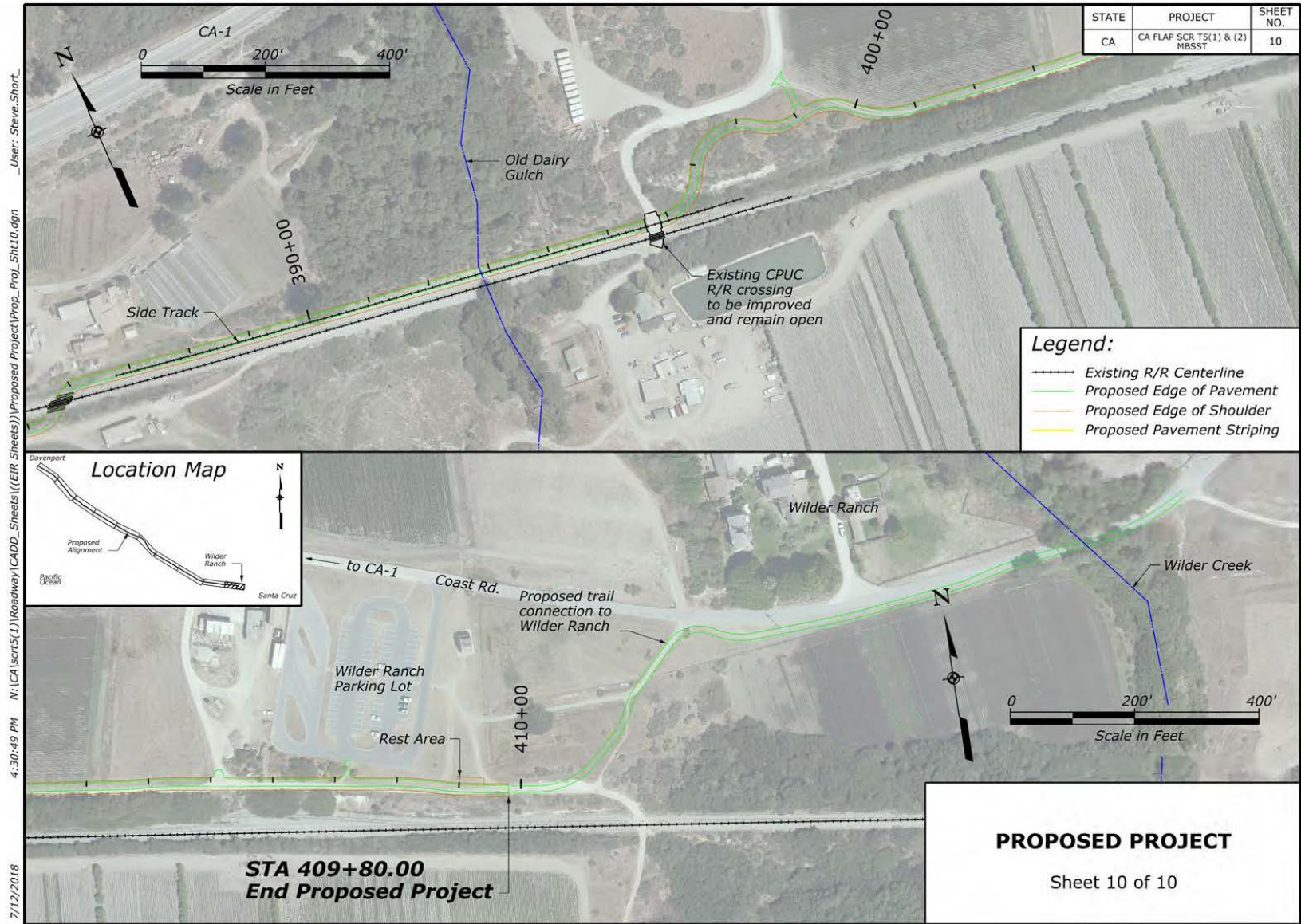












CHAPTER 3: ENVIRONMENTAL CONSEQUENCES

This chapter describes the resources that could be affected by the Action Alternative and an analysis of the impacts that are expected to result from its construction and implementation. The No Action Alternative is also analyzed as a baseline for comparison.

Under NEPA, an EA is used to determine if significant effects to the environment would result from the proposed actions. If yes, then an Environmental Impact Statement must be prepared; if no, then a Finding of No Significant Impact is prepared to document the decision of the NEPA lead agency. Under NEPA, significance is based on the context and intensity of an impact. Context refers to who and what would be affected by the action. Intensity refers to the severity of the impact. The Affected Environment sections prepared for each resource, below, describe the context. The Environmental Consequences sections analyze the intensity. Mitigation measures that may be necessary to reduce the level of impact for each resource are summarized in the resource section. Table 3-13.1 at the end of this chapter provides the detailed mitigation measures FHWA-CFLHD and the RTC have committed to implement. These measures are consistent with those identified in the North Coast Rail Trail Environmental Impact Report (NCRT EIR; RTC 2019) with the exception of BIO-8(b): Construct a Boardwalk in Coastal Dune Habitat. This measure has been removed as design changes to protect dune habitat have made it unnecessary (see Section 2.1.2.6 *Slope Stabilization*).

The analysis presented relies upon information and data presented in the NCRT EIR (RTC 2019). The analyses that follow incorporate a conservative worst-case scenario based on conceptual design of the Proposed Project. The level of impact reported in this EA is expected to decrease as design progresses.

A project area and individual study areas unique to each resource were defined in order to conduct the impact analyses that follow. For all resources, the project area is the construction limits of the Proposed Project, as described in Chapter 2 and depicted in Figure 2-1. Because the nature and extent of an impact differs by resource, individual study areas were defined to evaluate the existing condition and potential impact to each resource appropriately. For example, the study area for historic resources is a 50-foot wide corridor. The study area for recreation and visitor experience is defined by destinations that are served by the trail.

3.1 Resources with Negligible to No Impacts or Not Existing in the Project Area

The 1992 *Regulations for Implementing the Procedural Provisions of NEPA* direct federal agencies to “concentrate on the issues that are truly significant to the action in question” (40 Code of Federal Regulations [CFR] Part 1500.1(b)), “focus on significant environmental issues” (40 CFR Part 1502.1), and include “only brief discussion of other than significant issues” (40 CFR 1502.2(b)). Consideration and analysis was given to the resources listed below. The NCRT EIR (RTC 2019) impact evaluation was reviewed regarding the impact of the Proposed Project alignment on these resources. The resources either do not occur in the

project area or would have less than significant, negligible or no impacts as a result of the project. The EA includes a summary statement describing why impacts to these resources will not be analyzed further during the NEPA process.

3.1.1 Environmental Justice

FHWA projects must comply with Executive Order 12898 of February 11, 1994 titled *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. This executive order strives to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects on tribal governments, minority, or low-income populations. The actions proposed under this project are not expected to result in a disproportionately high adverse impact to any populations.

3.1.2 Air Quality

The Project corridor is located in the North Central Coast Air Basin, which is composed of Monterey, Santa Cruz, and San Benito counties. This air basin is in attainment or unclassifiable status for all federal ambient air quality standards (USEPA 2020). For state ambient air quality standards, the air basin is currently in nonattainment status for respirable particulate matter (PM₁₀), and transitional nonattainment status for ozone (CARB 2019). An area is designated transitional nonattainment if, during a single calendar year, the state standard is not exceeded more than three times at any monitoring location within the district.

Per the transportation conformity rule, trail projects are exempt from conformity with established air quality goals (40 CFR 93.126 exempt projects). Therefore, no further conformity analysis is required. No long-term air quality impacts are anticipated. The Proposed Project would not result in criteria pollutant emissions during construction or operation that would exceed Monterey Bay Area Resources District thresholds and violate any air quality standard or contribute substantially to an existing or projected air quality violation. Detailed analysis is presented in Section 3.3 of the NCRT EIR (RTC 2019).

Due to the linear nature of the Proposed Project and rural nature of the project area, very few existing receptors would be located within a few hundred feet of the active construction area or planned restroom facilities. The Proposed Project would maintain distance between planned construction activities and any sensitive receptors, and involve frequent cleaning of restroom tank facilities that would reduce potential emissions.

3.1.3 Floodplains

The Federal Emergency Management Agency (FEMA) establishes base flood heights for the 100-year flood zone. The 100-year flood zone is defined as the area that could be inundated by a flood that has a 1-percent probability of occurring in any given year, or once every 100 years. The proposed trail alignment is crossed by a 100-year flood hazard zone, referred to as Zone A, in five locations (FEMA 2018). Starting from the southern terminus of the Project alignment, the first two 100-year flood hazard zones are associated with unnamed streams, the third with Baldwin Creek, the fourth with Majors Creek, and the fifth with Laguna Creek. A very small area in the northernmost portion of the Project corridor is either directly adjacent to or slightly in a 100-year flood hazard zone, with defined base flood elevations ("Zone AE") associated with San Vicente Creek.

Proposed Project infrastructure with the potential to impede or redirect flood flows would be limited to the paved trail with associated trail bed fill material, where necessary, and stormwater culverts. These improvements would not substantially alter the drainage patterns in the 100-year floodplains. All of these 100-year floodplains are associated with drainages that are channeled into culverts beneath the Proposed Project alignment through tunnels drilled through the Santa Cruz Mudstone. All of the floodplains are already traversed by Highway 1 and the existing railroad bench. The addition of a paved trail with associated trail bed fill material, where necessary, would not substantially impede or redirect flood flows compared to existing conditions.

3.1.4 Land Use and Planning

The project alignment extends through agricultural, open space, and recreational lands owned and managed by the Santa Cruz RTC and California State Parks, with a small portion under private ownership. Although the Proposed Project is exempt from local land use planning policies and regulations because it is largely a Federally-funded and constructed project, implementation would generally support the goals, objectives, and policies identified in the Santa Cruz County General Plan and Local Coastal Plan (1994), Monterey Bay Sanctuary Scenic Trail Master Plan (RTC 2014), and Santa Cruz County North Coast Beaches Unified Plan (1990).

The Proposed Project would extend through open space and agricultural land, including dispersed rural residences, but it would not extend through nor physically divide an established community. The impacts that the Proposed Project would have on agricultural land use is discussed in Section 3.3, *Agricultural Resources*, of this EA.

3.1.5 Noise

23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects. FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project.

This project is considered a Type III project because it is a trail project that would not alter the vertical or horizontal alignment of the existing roadway, and no additional traffic lanes would be provided. Therefore, the Proposed Project would not result in significant traffic noise impacts, and no long-term operational noise abatement is considered.

Land uses in the project area and vicinity are predominantly rural supporting agricultural and recreation. The main sources of noise are from vehicular traffic along Highway 1 and agricultural activities. The Proposed Project involves the construction of a bike trail and would not increase the capacity of a roadway. Overall the impacts associated with noise associated with the Proposed Project would be less than significant.

During construction, noise would be generated from the short-term use of equipment such as excavators, compressors, generators, and trucks, and diesel-powered earth-moving equipment, such as dump trucks and bulldozers, and back-up alarms on certain equipment. Best management practices would be implemented to reduce construction noise, such as, construction work will be limited to daytime hours (one-half hour after sunrise to one-half hour before sunset) and muffling equipment.

Operation of the Proposed Project would not expose people to or generate excessive noise levels. Operational noise along the proposed trail alignment may include the sound of trail users talking and maintenance workers collecting garbage or maintaining project features, but would be minimal and intermittent.

The project would generate local traffic and trail users which could increase ambient noise levels. However, traffic noise modeling as presented in *Section 3.11* of the NCRT EIR (RTC 2019) indicated that project related traffic would not be substantial and noise generated from trail use would be minimal.

3.1.6 Right-of-Way

The majority of the Proposed Project is within lands owned by Santa Cruz RTC and California State Parks. The Proposed Project alignment could require an easement or transfer of lands from California State Parks to the RTC. The Proposed Project may also require the RTC to acquire additional property along the Proposed alignment. Technical experts continue to investigate the boundaries of RTC's property ownership in the Proposed alignment. The acquisition of right-of-way as needed to construct the Proposed trail would be completed prior to construction. It should be noted that obtaining property rights after the NEPA process is typical for government projects.

3.1.7 Section 6(f) Properties

Section 6(f) of the Land and Water Conservation Act requires that the conversion of lands or facilities acquired with Land and Water Conservation Act funds be coordinated with the Department of Interior. Usually replacement in kind is required. No lands that meet these criteria were identified within the study area.

3.1.8 Utilities

The Proposed Project would involve the construction of restrooms which would include either waterless vault toilets or flush toilets. However, wastewater generated by the Proposed Project would not exceed existing capacity of receiving wastewater treatment facilities. Assuming that the Davenport Beach parking lot restroom is connected to the existing Davenport County Sanitation District (DCSD) wastewater infrastructure, wastewater would ultimately be disposed of at the DCSD wastewater treatment plant in Davenport. According to the NCRT EIR (RTC 2019), the Proposed Project would not exceed the treatment capacity of the applicable receiving facility. See Section 3.16 of the NCRT EIR (RTC 2019) for additional details.

Existing surface and subsurface utilities in the project area include active and abandoned railroad communication cables, signal and communication boxes, fiber-optic cables, water and sewer lines, telephone lines, agricultural irrigation lines, and a natural gas line. Conflicts with existing utilities will be minimized in design to the extent practicable.

Disruption of infrastructure and facility operations would be avoided in large part because the Proposed Project would not require extensive excavation activities. Coordination will continue with farmers and utility providers to ensure all conflicts are identified in design and any necessary utility relocations are scheduled to minimize potential service disruptions.

3.1.9 Wild and Scenic Rivers

No rivers officially designated as wild, scenic, or recreational exist within the project study area.

3.2 Aesthetic and Visual Resources

This section describes impacts to visual and aesthetic resources expected from implementation of the No Action and Proposed Project. Visual or aesthetic resources are generally defined as the natural and built features of the landscape that can be seen. The features, or visual resources, contribute to the public's experience and appreciation of the environment. The NCRT EIR (RTC 2019) evaluated the impacts of the Proposed Project on Scenic Vistas and Scenic Resources and found impacts to be less than significant and therefore will not be discussed further. The reader is referred to Section 3.1 in the NCRT EIR for a discussion of those aspects of the resource. The evaluation in the EA focuses on the impacts to visual character.

3.2.1 Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, in its implementation of NEPA (23 USC 109[h]), FHWA directs that final decisions on projects are to be made in the best overall public interest, taking into account adverse environmental impacts, including the destruction or disruption of aesthetic values.

3.2.2 Affected Environment

3.2.2.1 Visual Character

The Project area is located in unincorporated northern Santa Cruz County along the Pacific Ocean coastline. The trail alignment is a part of a rural coastal plain, that extends northward from the City of Santa Cruz in Santa Cruz County to the City of Half Moon Bay in San Mateo County. The trail corridor setting is characterized by agricultural fields, natural open space, and small unincorporated communities interspersed along Highway 1.

The 7.5-mile Project area is part of the Santa Cruz Branch Rail Line corridor, which is parallel to and southwest of Highway 1 between the unincorporated community of Davenport on the north and Wilder Ranch State Park on the south. Both built and natural features are contributing elements to the corridor's visual character. The corridor setting is characterized by agricultural fields, natural open space and rural residential structures. These foreground features are backed by dramatic views of the Pacific Ocean to the south and forested ridgelines to the north of the corridor. **Figure 3.2-2** through **Figure 3.2-5**

include photographs taken in December 2017 of existing conditions in the corridor, including important built and natural features. Figure 3.2-1a and Figure 3.2-1b show the locations where these photographs were taken.

Built features and modifications to the natural environment near the corridor include the railroad line itself, the graded railroad corridor, agricultural structures, paved and unpaved parking areas, Highway 1, and unpaved trails between the highway and coastal bluffs (hereinafter called coastal bluff trails). As described in Section 3.9, *Recreation*, these California Coastal Trails are part of the Coast Dairies property, which is part of Wilder Ranch State Park.

Portions of the corridor are below-grade with steep embankments on either side, especially at the Davenport parking lot (refer to Photograph 2) and Panther/Yellowbank Beach. Other portions of the corridor are raised above-grade on an embankment, such as at Davenport Beach and Bonny Doon Beach (refer to Photograph 4). The southern portion of the corridor (south of Scaroni Road) is largely at-grade with surrounding agricultural fields and natural open space (refer to photographs 6 and 7). Embankments bounding the rail corridor are covered with shrubs and ruderal vegetation, with occasional rock outcroppings. In addition, industrial structures at the Davenport Cement Plant, as well as other residential and commercial structures in the Davenport community, are prominent background features in the northern section of the corridor (see background of Photograph 4).

Several parking areas on the coastal side of Highway 1 provide public access to unpaved trails that cross the corridor and lead to coastal recreation areas in Wilder Ranch State Park and the Coast Dairies property, especially at Davenport, Bonny Doon Beach, Panther/Yellowbank Beach, Four Mile Beach, and Wilder Ranch State Park. While the parking lots at Bonny Doon Beach and Wilder Ranch State Park are paved (refer to Photograph 4), the other parking areas have an unpaved, compacted dirt surfaces (refer to Photograph 1).

Highway 1, which generally has two lanes in the Project area, is located adjacent to the rail corridor for approximately three miles from Davenport to Coast Road, and within approximately 0.2 mile of the southern 2 miles of the corridor.

Natural features also strongly contribute to the corridor's visual character. The rail corridor is surrounded by a varied landscape of natural open space, coastal bluffs, beaches, and agricultural lands. The corridor has a high overall degree of visual quality because of its proximity to natural and agricultural resources.

3.2.3 Environmental Consequences

The assessment of impacts to scenic vistas, scenic resources, and visual character involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. Depending on the extent to which a project's presence would alter the perceived visual character and quality of the environment, a visual or aesthetic impact may occur.

Figure 3.2-1a Corridor Photo Locations: North (Davenport to Scaroni Road)



Imagery provided by ESRI and its licensors © 2020.

Fig 3.1-1a Photograph Locations North

Figure 3.2-1b Corridor Photo Locations: South (Scaroni Road to Wilder Ranch)



Imagery provided by ESRI and its licensors © 2020.

Fig 3.1-1b Photograph Locations South

Figure 3.2-2 Corridor Photos: Davenport Area

Photograph 1. Unpaved parking lot at northern end of the proposed trail in Davenport, looking northwest from the shoulder of Highway 1



Photograph 2. Northern end of rail corridor below steep embankment, looking northwest

Figure 3.2-3 Corridor Photos: Shark Fin Cove to Bonny Doon Beach



Photograph 3. Shark Fin Cove, looking southwest from rail corridor



Photograph 4. Bonny Doon Beach parking lot on Highway 1 looking northwest, with rail corridor above the embankment to the left

Figure 3.2-4 Corridor Photos: Scaroni Road toward Four Mile Beach



Photograph 5. Rail corridor adjacent to Highway 1 at Scaroni Road crossing, looking northwest



Photograph 6. Shoulder of Highway 1 southeast of Scaroni Road, looking west toward rail corridor

Figure 3.2-5 Corridor Photos: Four Mile Beach to Wilder Ranch State Park



Photograph 7. Rail corridor at crossing with unpaved trail to Four Mile Beach, looking northwest



Photograph 8. Southern end of Project alignment, looking south from parking lot at Wilder Ranch State Park

This analysis compares existing visual conditions in the vicinity of the Project area to those anticipated after implementation of the proposed trail. The Project area was observed and photographed along with its surrounding context.

To demonstrate the visual change caused by the Proposed Project, visual simulations were created at two viewpoints on the Project corridor: Bonny Doon Beach (Photograph 4 location on Figure 3.1-1a) and Highway 1 at Scaroni Road (Photograph 5 location on Figure 3.1-1b). The visual simulations are based on a computer-generated 3D model of the Proposed Project at each selected location.

The visual impact analysis also considers mitigating design guidelines in the MBSST Network Master Plan (RTC 2014) that would be incorporated into the trail alignments. Such design features include open visibility trail fencing; a uniform sign design and logo theme; and daily maintenance.

3.2.3.1 No Action Alternative

Under the No Action Alternative, the rail trail would not be constructed. The current visual character and quality of the rail corridor and surrounding lands, between Highway 1 and the coastline, would remain in current conditions. There would be no construction-related visual impacts. There would be no new trail or alterations to the parking areas that would alter scenic views. Thus, there would be no long-term impact to aesthetics within the study area under this alternative.

3.2.3.2 Proposed Project Alternative

During the anticipated 12-month construction period for the Proposed Project, activities associated with vegetation removal, grading, slope reinforcement, paving, and installation of trail amenities would affect visual character in the corridor. Temporary construction activities, where visible from public viewpoints, would degrade the scenic character of the Project corridor. Because of the temporary and short duration of construction, the impact on the visual character and quality of the rail corridor and surrounding area would be less than significant.

Visual Character and Quality

Once constructed and in use, the proposed parking lot improvements, trail, and slope stabilization would alter the visual character of the Project area over the long term.

The existing unpaved parking areas at Davenport Beach (Figure 3.1-2, Photograph 1) and Panther/Yellowbank Beach would be paved and include new trash/recycling containers, bike racks, benches, access path to the proposed trail, and restroom facility in a prefabricated structure. The asphalt pavement and restroom building in particular would change the visual character from an unpaved, informal/rustic parking area to a more formal lot with less rural character. These visual changes would be visible to users of the parking lot, motorists on the adjacent Highway 1, and residents, workers and visitors in Davenport. However, parking lot improvements would not substantially affect existing scenic views of coastal resources from Highway 1 at either location because new restroom facilities would minimally obstruct existing ocean views.

Installation of a new 7.5-mile trail on the coastal side of the rail line would have a minor effect on the visual character of the rail corridor and adjacent lands. The loss of vegetation in the corridor and addition of a paved trail would not substantially alter the corridor's appearance. In addition, as described in Section 2.1.2, *Action Alternative (Proposed Project)*, areas temporarily disturbed by construction activities would be revegetated with native species.

Fencing associated with the proposed trail would not substantially alter coastal and agricultural views across the Project corridor because of intervening topography and vegetation on the inland side of the existing rail line. In addition, fencing along the trail would be designed to allow open visibility of the surrounding landscape and designed to be context sensitive. Therefore, the proposed fencing would not substantially degrade visual quality.

Cut-and-fill and slope stabilization required for trail construction also would affect the corridor's visual character. The existing railway bench would need to be widened by cutting or filling to support the trail. In these locations, retaining walls or fill would be used, depending on the steepness of the existing slopes and any sensitive resources in the area. As described in Section 2.1.2, *Action Alternative (Proposed Project)*, walls would be designed to blend into the environment to the greatest extent feasible; and where walls or embankments are able to be vegetated, native vegetation would be planted. In some areas where the corridor extends through a cut (i.e., high slopes on either side), the trail would follow the higher grade on the coastal side when possible to minimize cutting into the slope and to provide coastal views. These design features for the rail bed and adjacent slopes would minimize visual changes from re-contouring of the existing grade.

At the eroding bluff near Davenport, slope stabilization would be visible from the coastal bluff trail in the area and from the beach itself. This stabilization would involve either a retaining wall or added fill on the embankment. The coastal armoring would introduce an artificial structure that alters the natural appearance of the bluffs facing Davenport Beach, which would be visible to beachgoers. Therefore, cut-and-fill and slope stabilization would have an adverse effect on visual character or quality.

The Proposed Project would also involve installation of trail amenities in the form of benches, bike racks, trash/recycling containers, and informational and interpretive signs. As described in Section 2.1.2, *Action Alternative (Proposed Project)*, most of these trail amenities would be located in the three parking lots. New signs would be installed both in the parking lots adjacent to Highway 1 and would not be large enough to obstruct existing scenic views of coastal resources or to substantially alter the existing visual character. Although trail users could deface trail amenities, temporarily degrading visual quality in the area, routine maintenance would reduce this impact. Therefore, trail amenities would not have a long-term adverse effect on visual character or quality.

The Proposed Project, including the new trail and relatively minor structural improvements, would in large part be visually compatible with the coastal bluff and agricultural character of the vicinity. However, armoring of the coastal bluff at Davenport Beach would alter its natural appearance. With mitigation, the impact of the Proposed Project would be less than significant.

3.2.4 Avoidance, Minimization, and/or Mitigation Measures

The following measure will be implemented to reduce the potential for aesthetic and visual resource impacts. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure AES-3: Minimize Artificial Appearance of Coastal Armoring

3.3 Agricultural Resources

This section describes agricultural resources within the study area. The study area includes the construction limits of the Proposed Project (i.e., the project area).

3.3.1 Regulatory Setting

3.3.1.1 FEDERAL

Farmland Protection Policy Act

NEPA and the Farmland Protection Policy Act (FPPA, 7 United States Code [USC] 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with NRCS if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland; it can be forestland, pastureland, or cropland. The California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP) defines and maps farmlands of statewide importance. Coordination with the NRCS for this project is on-going and will be completed prior to issuance of a decision document.

CFR Title 21 Part 112

There are numerous federal regulations outlining the responsibilities of agricultural producers to ensure food safety. The CFR Title 21 Part 112 outlines the standards for growing, harvesting, packing, and holding produce for human consumption. Key relevant provisions include the requirement that producers take appropriate measures to minimize the risk of serious adverse health consequences or death from the use of, or exposure to, covered produce (Section 112.11); that operators make visitors aware of policies and procedures to protect covered produce and food contact services from contamination by people and take all steps reasonably necessary to ensure that visitors comply with such policies and procedures, and make toilet and hand-washing facilities accessible to visitors (Section 112.33); and that operators provide personnel with adequate, readily accessible toilet facilities, including those readily accessible to growing areas during harvest activities, and that toilet facilities be designed, located, and maintained to prevent contamination of covered produce, food contact surfaces, and water distribution systems (Section 112.129).

Food Safety Modernization Act

The Food Safety Modernization Act (FSMA) of 2011 granted the Food and Drug Administration (FDA) new authorities to regulate the way foods are grown, harvested, and processed. Under FSMA, the FDA is mandated to establish science-based, minimum standards for the safe growing, harvesting, packing, and holding of produce on farms to minimize contamination that could cause serious adverse health consequences or death. On January 29, 2018, the United States Department of Agriculture (USDA) published Sect. 105 Standards for Produce Safety of the FSMA. This update to the FSMA sets standards for the food safety in production of ground crops. Farmers are required under this law to monitor water and soil quality, assess fields for the signs of domestic and wild animal intrusions, and take all necessary measures to identify and not harvest produce that is likely contaminated.

Organic Foods Production Act

The Organic Foods Production Act of 1990 authorized a National Organic Program to be housed within the USDA Agricultural Marketing Service (AMS). The National Organic Program is the regulatory program responsible for developing national standards for organically-produced agricultural products. The USDA organic seal is used to assure consumers that a product has met the organic standards established by the NOP.

3.3.1.2 STATE

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act, better known as the Williamson Act, provides incentives to landowners through reduced property taxes to protect agricultural and open space land from conversion to other uses (CA Department of Conservation 2014).

Participation in this program is voluntary, requiring 100 contiguous acres of agricultural land under one or more ownerships to file an application for agricultural preserve status. After an agricultural preserve has been established, the land in the preserve is automatically restricted to agricultural and agriculturally compatible uses, and the landowners may enter into a Williamson Act land use contract. The land may also be subject to agricultural rezoning.

Williamson Act lands in the vicinity are located east of Highway 1, and therefore do not overlap with the Proposed Project alignment.

California Right to Farm Act

The California Right to Farm Act (California Civil Code Section 3482.5) details that a farming activity cannot be a public nuisance if all of the following factors are met:

- The activity is in support of the production of an agricultural commodity
- The agricultural activity is commercial in nature
- The activity is conducted “in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality”
- The farming activity must have been in operation for at least three years
- The farming activity was not a nuisance at the time it began

The California Right to Farm Act does not require best management practices; rather it allows adherence to accepted customs and practices. In addition, the statute specifically states that the Act prevails over any contrary provision of a city or county ordinance or regulation, but does allow cities and counties to require disclosures be given to prospective home buyers that a dwelling is situated in near an agricultural operation.

California Organic Food and Farming Act

The California Organic Food and Farming Act (COFFA) was signed by the governor in 2016. COFFA updated California's State Organic Program (SOP) fee schedule and streamlined the organic registration process. The SOP supports the National Organic Program. COFFA ensures that SOP processes stay up to date and aligned with National Organic Program processes. By reducing the fees and paperwork associated with organic registration, COFFA supports organic farmers and facilitates growth of organic agriculture in California.

Pesticide Application

The California Department of Pesticide Regulation (DPR) is charged with protecting human health and the environment by regulating pesticide sales and use, and by fostering reduce-risk pest management. DPR regulates pesticides under a comprehensive program that encompasses enforcement of pesticide use in agricultural and urban environments. DPR oversees a multi-tiered enforcement infrastructure and is vested by the U.S. Environmental Protection Agency with primary responsibility to enforce federal pesticide laws in California. DPR directs and oversees the County Agricultural Commissioner's office, which carries out and enforces pesticide and environmental laws and regulations locally, including enforcement for the Department of Consumer Affairs' Structural Pest Control Board. Many DPR programs stress a least-toxic approach to pest management and promote risk reduction through information, encouragement, incentives, and community-based problem solving (DPR 2013).

California Code of Regulations (CCR) Title 3 Section 6762(c) (Field Work during Pesticide Application) prohibits any person, other than the persons making the pesticide application, to enter or remain in a treated area of field during pesticide application. Furthermore, this section defines "exclusion zones" for application.

The California Food and Agriculture Code requires documentation and reporting of pesticide use for agricultural and non-agricultural use. Section 12972 requires that the use of any pesticide by any person be in such a manner as to prevent substantial drift into non-target areas. Article 15 of the Pesticide Contamination Prevention Act prohibits use of pesticides known to contaminate groundwater supplies, and includes specific provisions allowing the DPR to monitor groundwater contamination in rural agricultural areas.

State Parks Agricultural Leases

The State of California, acting by and through the Department of Parks and Recreation (CDPR), leases land to farmers in Santa Cruz County. Such leases allow farmers to engage in specified agricultural activities over a number of years. Farmers pay rent and fees to CDPR and agree to various responsibilities and conditions related to stewardship of the

land. In addition to terms stipulated by the lease agreement, additional standard practices have developed over time. Several practices related to protecting the public from pesticide exposure have been informally agreed-upon by leasing farmers, including the following:

- Establishment of buffers between public trails and agricultural lease lands sufficient to protect trail users
- Timing pesticide applications to prevent impacts to the recreating public in accordance with Department of Pesticide Regulation
- Display of temporary signs when spraying within areas leased from CDPR

3.3.2 Affected Environment

3.3.2.1 Overview of Agriculture in Santa Cruz County

Agriculture has historically played an important role in Santa Cruz County, and it continues to continue as a major economic sector. In 2016, Santa Cruz County's gross agricultural production totaled \$637.3 million (Santa Cruz County Agricultural Commissioner 2016). In 2013, agricultural activities directly and indirectly provided approximately 11,000 jobs in Santa Cruz County (Santa Cruz County Agricultural Commissioner 2013). Direct employment in agriculture amounts to 4.5 percent of all jobs in the County.

The California Department of Conservation identifies and designates important farmlands throughout the state as part of its Farmland Mapping and Monitoring Program (FMMP). The FMMP rating system classifies farmland as prime farmland, unique land, land of statewide or local importance, grazing land, urban and built-up land, and other land.

With regards to Important Farmland, Santa Cruz County has approximately 13,688 acres of Prime Farmland, 2,404 acres of Farmland of Statewide Importance, and 3,554 acres of Unique Farmland (DOC 2014). The majority of this Important Farmland is located in the southeast portion of the county, in the Pajaro River Valley surrounding Watsonville.

Santa Cruz County has a large concentration of organic farms. There are more than 100 organic growers in Santa Cruz County with over 4,000 acres in organic crops. These crops represent approximately 18 percent (6,859 acres) of total agricultural land and have an estimated value of over \$115.5 million (Santa Cruz County Agricultural Commissioner 2016).

3.3.2.2 Existing Farmland

The Proposed trail alignment runs adjacent to agricultural land for approximately 4.7 miles of the 7.5-mile length of the trail, or approximately 62.7 percent of the alignment. Crops produced along the alignment include pumpkins, berries, kiwis, artichokes, broccoli, cauliflower, peas, Brussels sprouts, celery, beets, leeks, citrus, radicchio, herbs and edible flowers (Swanton Berry Farm 2018; Jacobs Farm 2018; Rodoni Farms 2015). Farming occurs primarily on State Parks land under agricultural ground leases between the Department of Parks and Recreation and agricultural operators. Some farming also occurs within the RTC-owned rail corridor right-of-way (ROW) without agreement between the RTC and agricultural operators. Figure 3.3-1a and Figure 3.3-1b depicting the FMMP classifications near the Project corridor). Table 3.3-1 lists the acreage of each FMMP designation in the Proposed Project alignment. These demonstrate that land adjacent to the alignment is

primarily made up of FMMP- designated Other Land, followed by Farmland of Statewide Importance, Prime Farmland, and Grazing Land.

Some of these areas are within RTC-owned ROW and being farmed without a formal agreement by the RTC; the RTC, via the MBSST Master Plan and other agreements, intends to utilize this corridor for public benefit. Therefore, even portions of the Important Farmland that are actively farmed may not be feasibly farmed in the future.

Based on the analysis presented above, direct conversion of Important Farmland – whether including all designated Important Farmland or only those areas actively farmed – would not be considered substantial. Therefore, the impact of the Proposed Project would be **less than significant**.

Under NEPA, there is no mitigation required when an impact is found to be less than significant. In the NCRT EIR (RTC 2019), the RTC committed to mitigation due to the importance of this resource to the community. Mitigation Measure AG-1 would be implemented to offset the loss of Important Farmland that is actively farmed within the Proposed Project footprint. RTC would be responsible for implementing this mitigation measure.

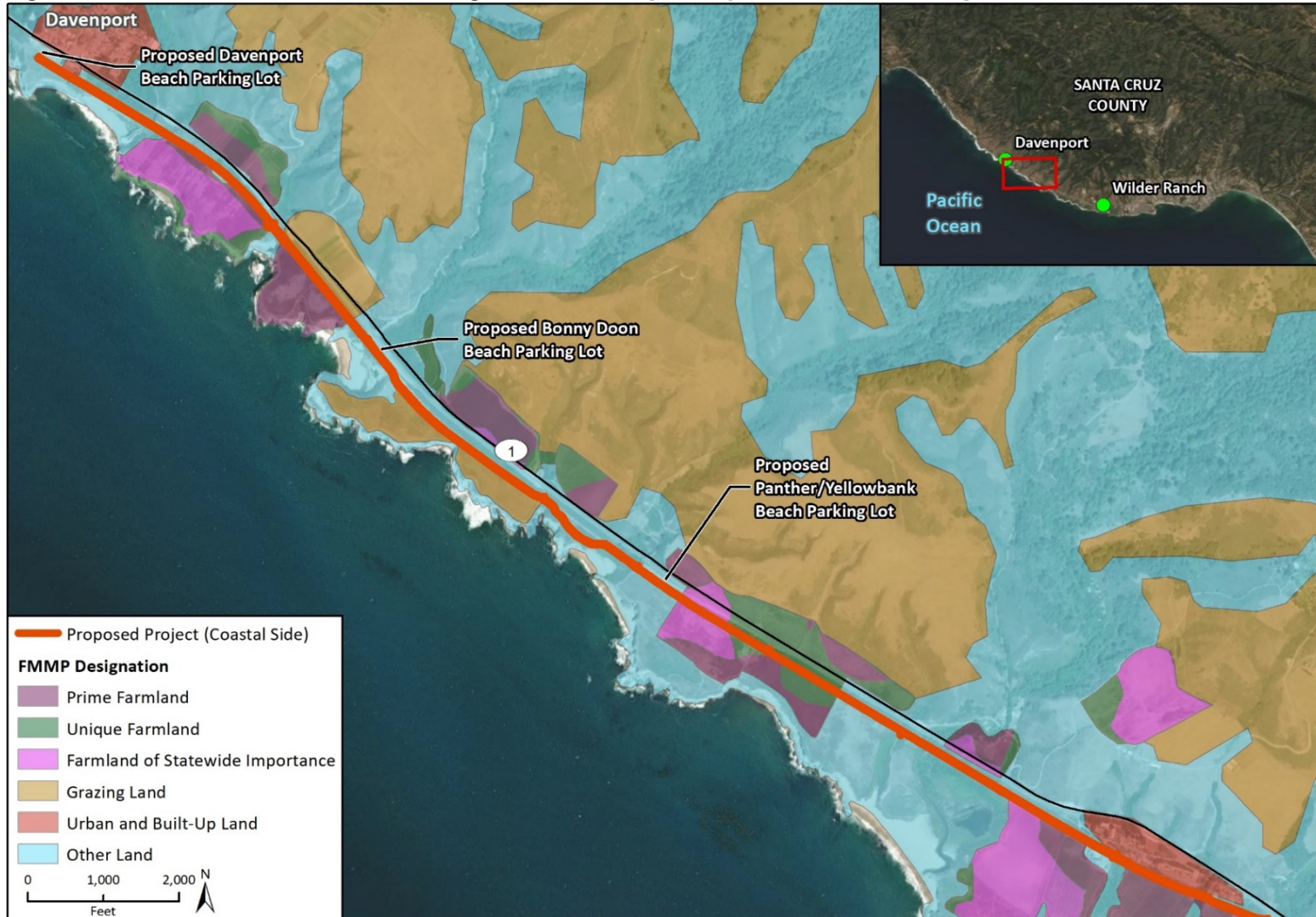
Conflicts on Agricultural Operations

The Proposed Project alignment contains a total of 7.3 acres of Important Farmland.

Table 3.3-1 FMMP Designations in the Project Corridor

Designation	Acres
	Proposed Project
Prime Farmland	2.3
Farmland of Statewide Importance	4.4
Unique Farmland	0.6
Farmland of Local Importance	0.0
Grazing Land	2.1
Urban and Built-Up Land	0.2
Other Land	8.8
Total	18.4
Important Farmland Total	7.3

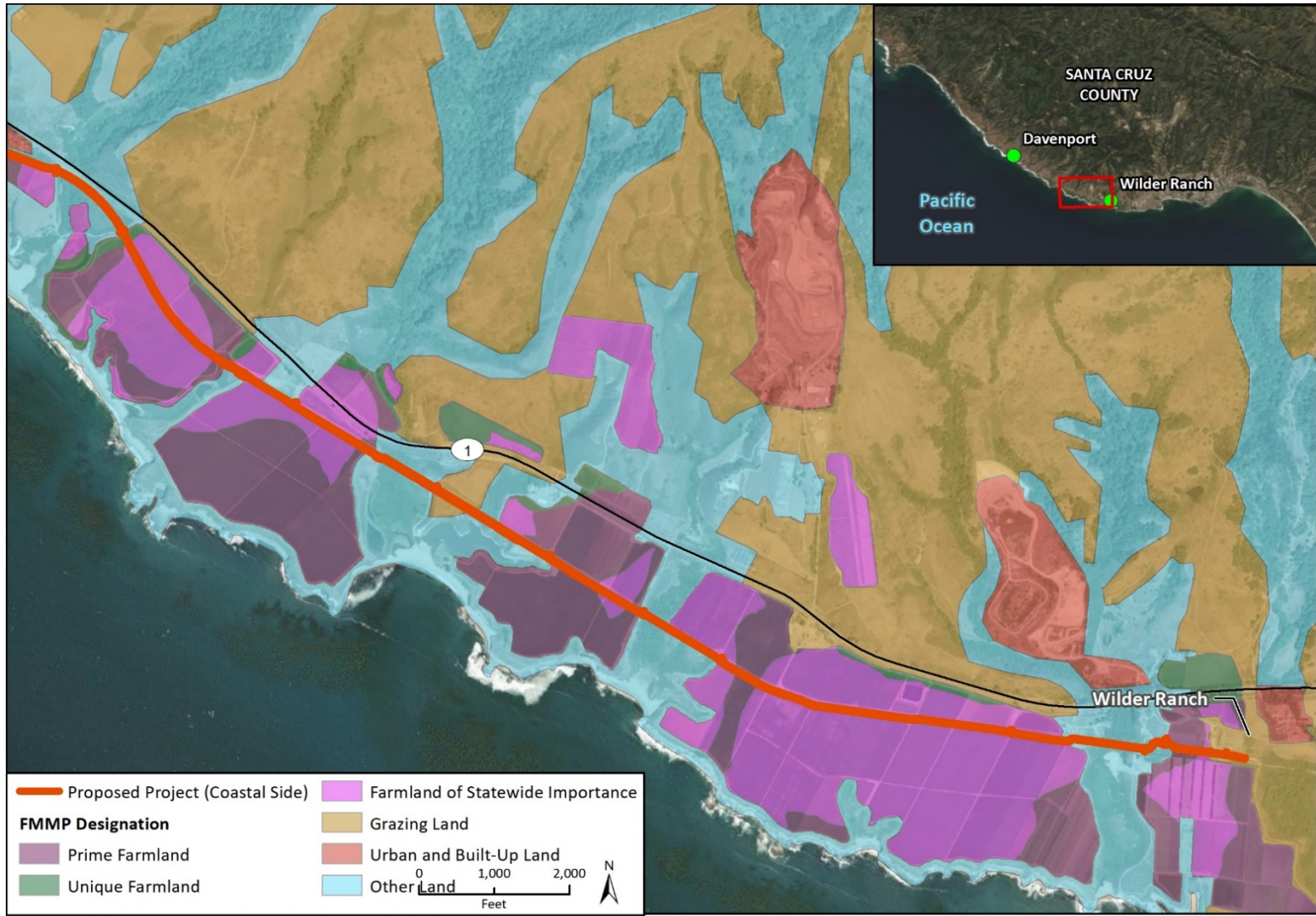
Figure 3.3-1a North Coast FMMP Designations: North (Davenport to Scaroni Road)



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Fig 3.2-1a FMMP North Coast rail Trail Alignments North

Figure 3.3-1b North Coast FMMP Designations: South (Scaroni Road to Wilder Ranch)



Imagery provided by ESRI and its licensors © 2020. Additional data provided by FMMP, 2014.

Fig 3.2-1b FMMP North Coast rail Trail Alignments South

3.3.2.3 Farm Infrastructure

Farm infrastructure typically includes irrigation and drainage systems, farm access roads that often surround the farmed parcels, storage structures such as silos and barns, power distribution systems, and residences. Agricultural land adjacent to the Project corridor include all of these types of infrastructure, while some irrigation systems components (water lines and pump houses), farm access roads, and power lines are located in or immediately adjacent to the Project alignment itself.

Approximately 3.4 miles (47 percent) of the Proposed Project alignment is along existing farm roads adjacent to the rail line. In addition, numerous farm roads in the North Coast area cross the existing rail line. Existing agricultural roads in the Project vicinity are used by large farm equipment (ring rollers, land planes, plows, tractors, and pesticide trailers), farm trucks, and personal vehicles. According to the North Coast Farmers, farm vehicle trips at some existing rail crossings can exceed 300 trips per day (North Coast Farmers 2017).

3.3.2.4 Pesticide Use

Pesticides are an important component of integrated pest management programs used by agricultural operations, for both organic and conventional farming. The term pesticide covers a wide range of compounds including insecticides, fungicides, herbicides, rodenticides, plant growth regulators, and others. Properly applied, pesticides contribute to higher agricultural yields and improved product quality by controlling weeds, insects, and plant pathogens. All pesticides must be applied in accordance with the pesticide label. Specific regulations pertaining to pesticide application are provided in the NCRT EIR Section 3.2.1, *Regulatory Setting*.

Pesticide Use Records (PUR) for the North Coast area from November 2012 to November 2017 were obtained from the Agricultural Commissioner's office and are included in the NCRT EIR Appendix E (RTC 2019; Santa Cruz County Agricultural Commissioner 2017a). These records show that pesticides were applied 4,242 times over this five-year period, with approximately 95 percent of these being ground applications. Over half of pesticide applications between 2012 and 2017 occurred during the three-month period of July, August, and September, and 88 percent occurred between May and October. Over 140 different pesticides were applied during this period.

The only fumigant applied in the North Coast area during this period was Telone II, which comprises approximately 4.8 percent of the area's pesticide application between 2012 and 2017. Telone II is a multi-purpose liquid fumigant for pre-plant treatment of soil to control plant parasites and to help manage certain soil borne diseases in cropland (Dow AgroSciences 2012). Telone II's active ingredient is 1,3-dichloropropene (1,3-D), a restricted use pesticide due to high acute inhalation toxicity and carcinogenicity. Telone II is applied to brussels sprouts along the Project corridor during the late spring and early summer, March through June. The potential health effects of 1,3-D are discussed in Section 3.6, *Hazards and Hazardous Materials*, of this EA.

Pesticide exposure occurs through ingestion, inhalation, and dermal contact. Volatilization is the process in which a substance evaporates and disperses in vapor. Pesticide volatilization, or pesticide drift, is the movement of pesticide vapors through air. The extent of volatilization that occurs following application of a pesticide is influenced by the

properties of the pesticide, the properties of the soil, meteorological conditions, and agricultural methods (EPA 2017).

Pesticide drift can transfer pesticides off-site as droplets, dust, or vapors, leading to accidental exposure to people, animals, plants, and property. It is recommended that pesticide application be avoided during fog conditions (National Pesticide Information Center 2017). Fog conditions are conducive to pesticide drift, as vapor with pesticide can move offsite like fog or with fog and be deposited offsite (North Dakota State University 2017).

3.3.3 Environmental Consequences

3.3.3.1 No Action Alternative

Under the No Action Alternative, current agricultural practices along and adjacent to the rail corridor would continue, with no conversion of Important Farmland from active agriculture to non-agricultural use and thus no net loss of Important Farmland. Additionally, there would be no disruption to farm-related infrastructure from construction and no new or additional conflicts between agricultural operations and trail users. Any ongoing conflicts, between agricultural operations and people crossing the rail corridor and using the existing trails to access the beaches and coastal bluffs, are expected to continue similar to existing conditions. The impact to agricultural resources would be less than significant.

3.3.3.2 Proposed Project Alternative

Conversion of Farmland

The Proposed Project would include land clearing, grading, and construction of a 7.5-mile multi-use trail made up of a 12-foot wide paved path with a parallel unpaved path and shoulder. These improvements would directly convert 7.3 acres of Important Farmland in the Proposed Project alignment to a non-agricultural use.

In locations where the alignment would follow existing farm roads, construction of the proposed multi-use trail may necessitate the widening of an existing farm road or creation of a new farm road adjacent to the trail to provide continued access for farming equipment. While construction of new farm roads would reduce the land area available for planted crops, farm access roads are considered an agricultural use as they directly support agricultural operations. Therefore, conversion of planted crops to farm roads outside of the Proposed Project alignment would not constitute a conversion to non-agricultural use.

Indirect conversion of farmland could occur as a result of compliance with pesticide regulations. As a result of increased public access and the need to maintain applicable exclusion zones, some farmers may voluntarily avoid spraying pesticides or even cultivating the portions of their property closest to the trail. However, reduced crop yield and/or fallowing of a portion of the cropland would not be considered a conversion to non-agricultural use. For these reasons, secondary effects of farm road construction and pesticide exclusion zones are not included in the calculation of Important Farmland conversion.

While there is no identified numeric threshold for what is considered a substantial conversion of Important Farmland, 7.3 acres of conversion over 7.5 miles of total project disturbance would not meet the definition of substantial. The minimum mapping unit size for the FMMP is 10 acres. The Important Farmland within the Proposed Project footprint is therefore too small to be mapped by the FMMP if it was part of a single property or ownership. Furthermore, this amount of Important Farmland represents approximately 0.04 percent of Important Farmland in Santa Cruz County.

Due to the linear nature of the Proposed Project, the areas designated as Important Farmland are non-contiguous and widely dispersed along a 7.5-mile corridor. Specifically, the Important Farmland that is actively farmed (totaling 1.4 to 1.5 acres, as discussed below) is spread over five different parcels and RTC-owned public ROW. Approximately two thirds of this land is within RTC-owned ROW, with the remaining 0.5 acre dispersed among five different parcels. The most actively farmed land that would be converted on any single parcel is 0.3 acre. Thus, conversion of any single area of Important Farmland along this corridor would be insubstantial and would not create a financial hardship resulting in the loss of the entire operation.

Lastly, the intent of preserving Important Farmland is to retain areas with a soil quality, growing season, and moisture supply to allow for ongoing agricultural production. One consideration for the feasibility of new or ongoing agricultural production is current and future planned use of the land. Despite the FMMP-Important Farmland designation, the areas that would be converted to non-agricultural use are within an existing rail corridor and portions of the areas contain existing rail facilities, infrastructure, or agricultural access roads, and are therefore unlikely to be cultivated in the near future. Areas within the Proposed Project footprint that are both designated as Important Farmland and actively farmed are limited. Only 1.4 to 1.5 acres of the trail alignment designated as Important Farmland would be located where crops currently exist. The Proposed Project would therefore convert a maximum of 1.5 acres of land that is both used for agricultural production and designated Important Farmland.

Trail Users Effect on Agricultural Operations

The interface of trail users and agricultural operations could result in several types of land use conflicts, affecting both agricultural resources and trail users.

Construction-Related Conflicts

During construction of the Proposed Project, construction equipment and activities may disrupt agricultural operations. For example, construction vehicles and equipment staging could restrict access to farmland, if placed in or adjacent to existing farm access roads along the existing rail line. Particularly during harvest periods, when agricultural activity is at its peak, construction vehicles and personnel within or adjacent to active cropland may hamper these activities.

Mitigation is required to limit the extent of these construction phase conflicts.

Trespassing

Development adjacent to farmland can induce a range of adverse impacts on continued farm operations. Direct physical impacts could include vandalism to farm equipment and

theft of products, as well as soil compaction which can damage crop potential. Trespassing by trail users could occur.

The Proposed Project would include the installation of fencing along the coastal side of the trail, where there is no existing natural barrier between active agricultural fields and the multi-use trail. This would deter many would-be trespassers from entering farmland. However, some trespassing would occur. Nevertheless, given the presence of fencing, trespassing and associated direct impacts to farmland would be a relatively infrequent occurrence. Therefore, mitigation is required, to further reduce potential trespassing.

Littering

The Proposed Project could result in litter, particularly where insufficient numbers of trash/recycling receptacles are provided along the trail. Unintentional littering could occur if litter deposited by trail users in trash or recycling receptacles is carried by winds onto adjacent lands.

The Proposed Project would include trash and recycling containers at each of the three proposed parking lots, at both restroom facilities, and at each rest area, each of which would be emptied regularly in accordance with the required Operations and Maintenance (O&M) Plan. The presence of trash and recycling containers would limit littering to some extent. However, some litter, whether intentionally or unintentionally released, could enter adjacent farmland. Therefore, mitigation is required to remove litter released onto adjacent properties.

Food Safety

Dog and human waste entering agricultural lands is a concern. Both canine and human waste would have the potential to contaminate crops, resulting in safety and liability concerns. Although dogs are prohibited on the trail and fencing would be installed to prevent trespassing, there is a potential for defecation in areas with crops. Exposure of crops to fecal matter could result in contamination with foodborne pathogens such as *E. coli*, *Listeria*, and *Salmonella*. Specific growers linked to an outbreak of *E. coli* or other diseases could be held liable. This could lead to substantial economic hardship for farming operations that could lead to ending of a farm operation or shutting down a farm or portions of a farm due to regulatory violations (North Coast Farmers 2017). Therefore, mitigation is required to food safety-related impacts to the extent feasible.

Nuisance Complaints

Urban development adjacent to agriculture commonly results in nuisance-related complaints about existing farming operations. Typical nuisance complaints relate to dust, odors, noise, and pesticide spraying, and are most common from residential development adjacent to farmland. Given the extent of agriculture along the Proposed Project alignment (approximately 62.7 percent of the trail) and the potentially large number of trail users (described in Section 3.10, *Transportation and Circulation*), some nuisance complaints would be expected.

Because nuisance complaints are expected to occur due to the Proposed Project alignment adjacent to active agriculture, mitigation is required to limit complaints against North Coast farming operations.

Mitigating Project Design Features

As discussed above and in Section 2.1.2, *Action Alternative (Proposed Project)*, the Proposed Project contains several design features that would help minimize conflicts between trail users and agricultural operations. These include placement of fencing between active farmland and the multi-use trail where natural barriers do not exist, placement of trash/recycling receptacles along the trail alignment including in parking areas, and the prohibition of dogs and horses. In addition, the Proposed Project would include signage at trail entrances with notices of ongoing agricultural activities, stating that the trail user agrees to trail use at his or her own risk. Agricultural-themed displays would serve to educate the public about potential nuisances associated with active farming operations.

Finally, a Trail Manager would be identified by the RTC for this segment of the trail. The Trail Manager would be responsible for trash/recycling disposal, fence/barrier repair and replacement, and repair and replacement of signage. Funding for the Trail Manager and associated operations would be provided or secured by the RTC.

Disruption of Utilities and Relocation of Farm-Related Infrastructure

Each farm in the North Coast area maintains a system of on-site utilities needed for operations, such as irrigation systems (e.g., ditches, drains, pipelines, and wells) and power supplies. The Proposed Project could temporarily disrupt these utilities during construction activities, and may require the permanent relocation of utility infrastructure in some areas. Utility disruptions could adversely impact farm productivity.

Farm access roads also may be impacted by the Proposed Project. Approximately 3.4 miles of the Proposed Project alignment extends along existing farm roads. Another approximately 2.0 miles of the trail would be located in areas that are too narrow to accommodate both large farm equipment and the Proposed Project (North Coast Farmers 2017). In these areas, construction of a multi-use trail would eliminate existing farm access roads, thereby necessitating the creation of a new farm road adjacent to the trail to provide continued access for farming equipment. If new roads are not developed in a timely fashion, farm operators would have trouble accessing and tending to their crops.

There are many existing rail line crossings along the Proposed Project corridor that are used by farmers. Up to 10 crossings would be closed, six are informal crossings created by farmers to access operations or by pedestrians and bicyclists in order to access beaches, and four are formal CPUC crossings (see Table 2-1 in Chapter 2). The elimination of crossings would represent an inconvenience for farm workers, sometimes requiring longer travel distances to access property on the other side of the trail, and lengthening the time of each crossing as workers stop to look for pedestrians and bicyclists. In addition, some of the farm equipment crossing at these locations is wide and cumbersome, and would need adequate width to successfully cross in these areas. Increased travel times for farm workers and alterations to the width of trail crossings would be considered an adverse impact. This impact of the Proposed Project would be **less than significant with mitigation**.

Agriculture Operations Impact on Trail Users

The interface of trail users and agricultural operations could result in several types of land use conflicts, affecting both agricultural resources and trail users. The analysis below is focused on the potential impact of adjacent agricultural operations on trail users.

The Santa Cruz County Agricultural Commissioner's office is responsible for issuing pesticide spraying permits and regulating the use of pesticides and other agricultural chemicals. The existing regulations require a 100-foot exclusion zone between most pesticide applications and all persons other than appropriately trained and equipped pesticide handlers (CCR Title 3 Section 6762(c)). For the fumigant Telone II, application is prohibited within 100 feet of any occupied structure, and this buffer zone must be maintained for seven days following application (Santa Cruz County Agricultural Commissioner 2017b). The exclusion zones would ensure that pesticides used adjacent to the Proposed Project alignment not be applied within 100 feet of trail users.

Where the Proposed Project runs adjacent to active agricultural operations, the distance between the edge of the trail and active cropland would range between 0.0 feet where the trail directly abuts or would convert active farmland, to approximately 140 feet where the trail deviates from the rail line near Wilder Ranch State Park. For the purpose of this analysis, it is assumed that the smallest buffer distance between the edge of the trail and planted cropland would be 10 feet. At this distance, regardless of whether agricultural operators follow all restrictions on the pesticide label, trail users may be exposed to pesticides. The potential for exposure would increase in instances where trail users may trespass onto adjacent agricultural property after pesticides have been applied. The health effects of pesticide exposure are further discussed in Section 3.6, *Hazards and Hazardous Materials*.

Under the Proposed Project fencing would be installed between the trail and active agricultural areas (where natural barriers do not already exist). In addition, trail entrances would be posted with notices of ongoing agricultural activities stating that the trail user agrees to trail use at his/her own risk. These notices would advise trail users that agricultural operations will be occurring and may include pesticide spraying, agricultural dust and debris, and burning activities in accordance with state and local laws and ordinances. Mitigation measures would restrict access to agricultural areas and inform trail users of the likelihood of pesticide application on adjacent crops. In so doing, these measures would reduce pesticide exposure by restricting access and educating trail users about the need to perform typical agricultural functions. This impact of the Proposed Project would be less than significant with mitigation.

3.3.4 Avoidance, Minimization, and/or Mitigation Measures

The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure AG- 1: Implement Agricultural Land Conservation Measures

Mitigation Measure AG-3(a): Implement Measures to Reduce Construction-Related Conflicts with Agricultural Operations

Mitigation Measure AG-3(b): Install No Trespassing Signs Prior to Operation

Mitigation Measure AG-3(c): Regularly Remove Solid Waste and Litter during Operation

Mitigation Measure AG-3(d): Post Notices to Promote Food Safety prior to Operation

Mitigation Measure AG-3(e): Install Agricultural Interpretive Exhibits prior to Operation

Mitigation Measure AG-4(a): Relocate Farm Utilities Affected by Trail Construction

Mitigation Measure AG-4(b): Design and Maintain Trail Crossings to Accommodate Farm Equipment and Restrict Access

Mitigation Measure AG-5: Establish Pesticide Spray Notification Procedures and Install Temporary Warning Signage along Trail

3.4 Biological Resources

This section evaluates potential impacts relating to biological resources in and around the project biological study area. The Monterey Bay Sanctuary Scenic Trail study area is home to many special status species, as well as sensitive natural communities, federally designated critical habitat, and essential fish habitat all of which are discussed in this section. For purposes of this EA, special status species are considered the following:

- State species of special concern
- State rare, endangered, or watch list species
- State native plants, as designated and ranked by the California Native Plant Society
- State Fully Protected species
- Migratory birds
- Bald and golden eagles
- Marine mammals
- Species listed, proposed for listing, or candidates for listing under the state or federal Endangered Species Acts

This section includes an analysis of impacts to sensitive habitats, sensitive plants and wildlife and their associated habitats that may be impacted by the Proposed Project. The resources considered in this section were compiled through detailed review of available documentation of the project vicinity, outreach to regulatory agencies such as the USFWS and NMFS, field observations, and professional expertise.

3.4.1 Regulatory Setting

3.4.1.1 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668–668c) prohibits the take of bald or golden eagles, including their parts, nests, or eggs. In terms of the act, “take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

3.4.1.2 Federal Endangered Species Act

In 1973, the federal Endangered Species Act (FESA) was established for the protection of threatened and endangered species and their habitats. Under Section 7 of this act, federal

agencies are required to consult with the USFWS and NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. Section 9 of the FESA prohibits the take of threatened or endangered species, which is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

3.4.1.3 Magnuson-Stevens Fisheries Conservation and Management Act

The Magnuson-Stevens Fisheries Conservation Management Act requires the identification and conservation of Essential Fish Habitat. The Essential Fish Habitat provisions of the act require heightened consideration of habitat for commercial fish species in resource management decisions. Essential Fish Habitat is defined as “those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 U.S.C. 1802(10)). Federal and state agencies, NMFS, and regional Fishery Management Councils work together to identify Essential Fish Habitat for each federally managed fish species and develop conservation measures to protect and enhance these habitats.

Under the act, fisheries management plans are also developed which can include identification of Habitat Areas of Particular Concern (HAPC). HAPCs are subsets of Essential Fish Habitat that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. However, designated HAPC are not afforded additional regulatory protection under the act.

3.4.1.4 Migratory Bird Treaty Act

Pursuant to the Migratory Bird Treaty Act (MBTA) of 1918, federal law prohibits the taking of migratory birds, their nests, or their eggs (16 U.S.C., Section 703). In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). The USFWS enforces the MBTA (16 U.S.C. 703-711).

3.4.1.5 California Coastal Management Act

Article 5, Section 30240, of the California Coastal Management Act sets forth requirements for protection of environmentally sensitive habitats. Such habitats are to “be protected against any significant disruption of habitat values,” and the use of such areas is limited to only those dependent on the resources. Any development in areas adjacent to environmentally sensitive habitat areas must be designed to avoid substantial degradation and be compatible with continuance of the habitat. For purposes of this section of the EA, environmentally sensitive habitats include those federally designated as critical habitat under the FESA, Essential Fish Habitat as defined by NMFS, and sensitive natural communities as defined by the California Department of Fish and Wildlife (CDFW).

3.4.1.6 California Endangered Species Act

The California Endangered Species Act (CESA) states that “all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or

preserved” (CDFW 2014). Section 2081 of the CESA addresses the issuance of Incidental Take Permits from CDFW, which is required for projects that could result in the “take” of a state-listed threatened or endangered species. Under the CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species. A Section 2081 permit is issued when a project determination is consistent with the issued Biological Opinion – an opinion issued by the USFWS or NMFS during formal Section 7 consultation under the FESA. The CDFW is responsible for all state-listed plant and animal species under the CESA (Fish and Game Code Sections 2050–2116).

3.4.1.7 California Environmental Quality Act

CEQA Section 15380 independently defines “endangered” species as those whose survival and reproduction in the wild are in immediate jeopardy, and “rare” as species that could become endangered in the future if their habitat is degraded. A project that would substantially impact rare or endangered species, or their habitat, would be considered a significant effect on the environment under CEQA.

3.4.1.8 California Fish and Game Code 3511, 4700, 5050, and 5515

The State of California attempted to protect species considered rare or facing possible extinction by enacting California Fish and Game Code Sections 3511, 4700, 5050, and 5515 in the 1960s. This legislation designated fish, mammal, amphibian, and reptile species as “Fully Protected” by the state. The taking or possessing of fully protected species is prohibited under the regulations unless a license or permit is obtained for research or relocation.

3.4.1.9 Native Plant Protection Act

The Native Plant Protection Act (CFGF Section 1900–1913) was enacted by the State of California in 1977. The act defines native plants and ranks species based on each species vulnerability, assigning a California Native Plant Society (CNPS) rank as follows:

- 1A—Presumed extirpated in California and either rare or extinct elsewhere
- 1b—Rare, threatened, or endangered in California or elsewhere
- 2a—Presumed extirpated in California, but common elsewhere
- 2b—Rare, threatened, or endangered in California, but common elsewhere
- 3—Plants where more information is required (Review List)
- 4—Limited distribution (Watch List)

3.4.1.10 Unlawful Take or Destruction of Nest or Eggs

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code specifically protect nests and eggs of birds of prey. The code prohibits the “take, possession, or destruction of birds, their nests, or eggs.” Any disturbance that provokes birds to abandon their nests or interferes with reproductive behavior is considered a “take.” Birds protected include all migratory, non-game birds except for English sparrows or starlings. Section 3513 of the California Fish and Game Code duplicates the federal protection of migratory birds and prohibits taking and possession of any migratory nongame bird as designated in the Migratory Bird Treaty Act.

3.4.2 Affected Environment

3.4.2.1 Existing Biological and Physical Conditions

The proposed project is located on the California Pacific coast, and traverses rural, agricultural land, natural coastal mesas, and coastal bluffs. The action area is located in the Central California Foothills and Coastal Mountains and the Coastal Range ecoregions (Griffith, G.E., et. al., 2016). The action area is bounded to the north by the San Mateo Coastal Hills, the Santa Cruz Mountains to the east, the Monterey Bay Plains and Terraces to the south, and the Pacific Ocean to the west. The primary distinguishing characteristic of this ecoregion is its Mediterranean climate of hot dry summers and cool moist winters. The action area is characterized by coastal scrub vegetation, containing high and low marine terraces, cropland, sand dunes, and beaches.

Within the action area, the study area used for evaluation of biological resources encompasses approximately 344 acres of variable habitats ranging from undisturbed natural communities to highly disturbed ruderal communities. Fifteen predominant habitat types were identified in the study area and are summarized in Table 3-4.1.

The Project study area is situated along a series of flattened terraces abutting the Pacific Ocean at the base of the coastal foothills making up the Santa Cruz Hydrologic Area (HA) and Davenport Hydrologic Sub-Area (HSA) of the Big Basin Watershed (Refer to Section 3.7, *Hydrology and Water Quality*, and 3.11, *Wetlands and Other Waters of the U.S.*). This portion of the Pacific Ocean is part of the Monterey Bay National Marine Sanctuary, as well as the Natural Bridges State Marine Reserve south of Four Mile Beach.

The North Coast area is characterized by rural residential development, agriculture, and open space with areas of naturalized vegetation typical of the northern Santa Cruz County coastline. A series of named and unnamed streams originate in the immediate coastal foothills and support dense riparian vegetation in wide arroyos and coastal canyons. Other significant natural vegetation communities of the region include coastal scrub, willow scrub, emergent wetlands, coast live oak forest, coniferous forest, coastal dune, coastal prairie, and non-native grassland.

The project area supports a mosaic of unique habitat types and biological resources. The Project corridor traverses elevated coastal terraces and bluffs, extending between a series of sandy beaches and rocky, and intertidal landforms defined by sheer mudstone cliffs, sea stacks, and exposed reef.

The steep slopes and naturalized areas along the edges of coastal terraces primarily support native coastal scrub, and the nearly vertical embankments along the rail corridor contain a patchwork of dense, arroyo willow and poison oak scrub. As the Project corridor extends south of Davenport, many coastal terraces formerly in agricultural production are fallow currently and have developed naturalized vegetation types similar to surrounding undisturbed coastal bluffs, open space, and the steep vegetated embankments forming the rail corridor.

The action area is located in the greater San Francisco Coastal South watershed (Hydrologic Unit Code [HUC] 18050006), and the San Vicente Creek-Frontal Pacific Ocean subwatershed

(HUC 180500060304). Numerous streams cross the study area in densely vegetated arroyos supporting coastal lagoons, anadromous fisheries, and valuable wildlife movement corridors. These include several perennial named creeks such as San Vicente, Liddell, Laguna, Majors, Baldwin, and Wilder Creeks. Surface waters within the watershed also include unnamed, intermittent streams. All of which flow from the Santa Cruz Mountains westerly towards the Pacific Ocean. Surface hydrology within the action area is influenced by direct precipitation, stream and river flows, sheet flows, and surface runoff from surrounding areas.

Approaching Wilder Ranch State Park at the southern terminus of the study area, the Project corridor moves further inland from the coast and the surrounding landscape divides into expansive agricultural parcels.

Research of the study area and project vicinity revealed the potential for four federal-listed plant species to occur in the vicinity of the action area. Additionally, two federal-listed animal species were determined to have the potential to be affected by the proposed action, California red-legged frog (*Rana draytonii*), listed as threatened, and the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), listed as endangered. The action area is also located within California red-legged frog designated critical habitat as part of the Santa Cruz Unit (SCZ-1). Finally, two federal-listed marine and anadromous species were determined to have the potential to be affected by the proposed action, the Central California Coast (CCC) coho salmon (*Oncorhynchus kisutch*), listed as endangered and the CCC steelhead (*Oncorhynchus mykiss*), listed as endangered. Critical habitat for both species is also located in the action area.

3.4.2.2 Desktop Research and Field Surveys

To obtain baseline knowledge of the biological resources along the Project corridor, qualified biologists reviewed existing information and conducted field surveys of the study area. An official species list was received through USFWS's Information for Planning and Consultation (IPaC) online system on April 15, 2016. Technical assistance with the NMFS occurred on July 14, 2016, through a phone call with Bill Stevens, Acting Central Coast Supervisor for NOAA, to discuss the threatened or endangered species that may occur in the project vicinity. To further obtain species information, study methods consisted of a reviewing agency recovery plans, agency websites, species distribution data, Geographic Information Systems (GIS) USFWS critical habitat data, as well as a site visit. Biologists also reviewed the California Natural Diversity Database (CNDDDB) for the Santa Cruz USGS 7.5-minute quadrangle.

The initial project site visits were conducted on May 31 to June 2, 2016, and June 27 to 28, 2016, by Jacobs's biologists. The purpose of the field surveys included an overall assessment of habitat conditions for federal ESA-listed species and special status species, wetland delineations, and California Native Plant Society plant surveys. The results of these surveys were documented within the *Biological Assessments for the Monterey Bay Sanctuary Scenic Trail CA FLAP SCR T5 (1) Santa Cruz County, California* (FHWA-CFLHD 2020a and 2020b) and the *Biological Evaluation for the Monterey Bay Sanctuary Scenic Trail CA FLAP SCR T5 (1) Santa Cruz County, California* (FHWA-CFLHD 2020c) reports. Subsequently, during the NCRT EIR process, additional field surveys of the study area were completed during winter 2017 and spring 2018 by biologists with Ecosystems West Consulting Group. These biologists reviewed these previous studies and information

sources for the project area prior to conducting their winter 2017 and spring 2018 field surveys. The biologists also reviewed available scientific and technical literature regarding natural resources in and near the survey area and action area. Finally, a review of available geospatial data, aerial photographs, and topographic maps of the survey area and action area was completed.

The biologists walked the Project corridor and examined both the Proposed Project and alternative trail alignments, utilizing the intuitive control method for rare plant surveys, and focusing on known and potential habitat for sensitive wildlife resources. The biologists noted the presence of sensitive natural resources, potential habitat and habitat features, and wildlife sign in field journals and documented occurrences using resource-grade GPS with sub-meter accuracy and with photo-documentation.

During the May and June 2018 surveys, a qualified plant ecologist identified all vascular plant species in identifiable condition to species or infraspecific taxon, regardless of their regulatory status. The timing of the assessment was adequate for identification of the special-status plant species listed in Appendix G.2a of the NCRT EIR (RTC 2019).

Following the field surveys, the biologists characterized and mapped all habitat types occurring on the site. Classification of the habitat types on the site is based on field observations and the generalized plant community classification schemes (Sawyer and Keeler-Wolf 2009, CDFW 2018, Holland 1986).

Vegetation and Habitats

The associated vegetative cover in this region is primarily comprised of chaparral and oak woodlands; while grasslands occur in some low elevations and patches of pine are found at high elevations (Griffith, et al., 2016). Dominant vegetation communities and land cover types within the action area include the following: willow thickets, disturbed agriculture fields, coastal scrub, and coast live oak forest. The dense stands of willow, predominantly arroyo willow (*Salix lasiolepis*), dominate approximately 40 percent of the action area. The understory varies between wetlands dominated by cattails (*Typha latifolia*) and upland areas dominated by Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobum*), nasturtium (*Tropaeolum majus*), and miscellaneous forbs. Other trees and shrubs include wax myrtle (*Morella californica*), red willow (*Salix laevigata*), elderberry (*Sambucus sp.*), and Monterey cypress (*Hesperocyparis macrocarpa*). Much of the ground in the project area is also void of vegetation due to the presence of the existing railroad as well as roads used for agricultural access.

Agricultural lands also make up approximately 40 percent of the action area. This land cover type is extremely disturbed, altered or denuded. Species present on agricultural lands included row crops, and predominantly weedy species such as mustards (*Brassica sp.*), oat grass (*Avena sp.*), velvet grass (*Holcus lanatus*), bristly ox-tongue (*Helminthotheca echioides*), and burclover (*Medicago polymorpha*). During field surveys, some agricultural fields were freshly tilled and herbicides had recently been applied.

The coastal scrub community makes up less than 10 percent of the vegetation in the action area and is heavily dominated by poison oak and coyote brush (*Baccharis pilularis*). In many locations, the poison oak and blackberry communities are so dense they create an

impenetrable wall. In areas not dominated by poison oak and blackberry, species composition was similar to coastal shrub communities. Species observed in these areas included coastal sage scrub (*Artemisia californica*), coyote brush, lizard tail (*Eriophyllum staechadifolium*), and bush lupine (*Lupinus arboreus*). Coast live oak (*Quercus agrifolia*) stands were located in a few draws along the action area, but do not make up a significant portion of the vegetation community.

Research of the study area and project vicinity revealed the potential for four federal-listed plant species to occur in the vicinity of the action area. However, no special-status plant species were observed in 2018 during focused rare plant surveys.

Vegetation classification was based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and Preliminary Descriptions of the Terrestrial Communities of California (Holland 1986); but has been modified as needed to accurately describe the existing habitats observed on-site, including habitat types not presented in the literature (e.g., ruderal) and areas not supporting naturally occurring vegetation (e.g., sandy beach, developed/landscaped). A total of 208 species of vascular plants were observed within the Study Area. A complete species list of plants encountered during the focused special-status plant surveys is presented in Appendix A. Of these species, 94 are identified as native to the Study Area, while the remaining 114 species are considered either introduced or naturalized. No special-status plant species were observed in 2018 during focused rare plant surveys.

Fifteen predominant habitat types were identified in the study area (Table 3.4-1). Appendix B contains Figures 3.4-1a through 3.4-1f that illustrate the extent of habitat types and terrestrial vegetation communities in the study area. Table 3.4-1 shows acreages for each of these communities within the study area. A detailed description of each habitat type is provided in Section 3.4 of the NCRT EIR (RTC 2019).

Table 3.4-1 Habitat Types in the North Coast Rail Trail Study Area

Habitat Type	Study Area (acres)
Coastal Scrub ^a	61.02
Coast Live Oak Forest	1.58
Arroyo Willow Scrub	15.54
Arroyo Willow Riparian Forest	23.84
Palustrine Emergent Wetland	5.15
Aquatic	1.30
Coastal Dune	1.71
Sandy Beach/Mudstone	7.50
Non-native Grassland	8.93
Non-native Forest	2.71
Iceplant	0.73
Agriculture	77.65
Fallow Agriculture	32.98
Developed/Landscaped	59.85
Ruderal	43.59

Habitat Type	Study Area (acres)
Total	344.08

^aThere are five distinct vegetation alliances within this habitat type.

Wildlife and Special Status Wildlife Species

Wildlife species that are known or have the potential to occur within or near the study area are summarized below. Details on occurrence information, life history, and in-depth details are provided within this project’s detailed BA for USFWS regulated species (FHWA-CFLHD 2020a), NMFS regulated species (FHWA-CFLHD 2020b) and the BE for special status species (FHWA-CFLHD 2020c) as well as the NCRT EIR (RTC 2019) documentation referenced within this EA.

Consultation with the USFWS and NMFS identified 22 federally listed species that may occur in the action area. See Appendix C for a description of these species and their habitats. Based on current distribution, habitat requirements and detailed analysis of the study area, it was determined that four of these 22 species – the California red-legged frog (*Rana draytonii*), the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), the CCC Coho Salmon (*Oncorhynchus kisutch*), and the CCC Steelhead (*Oncorhynchus mykiss*) – have the potential to use the habitat of the study area or be affected by the proposed action. Table 3.4-2 provides a summary of the four federally protected species that were identified as potentially occurring in the action area along with their habitat requirements.

Table 3.4-2: Federal ESA Listed Species with Potential to Occur within the Study Area

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
Amphibians				
California red-legged frog <i>Rana draytonii</i>	Threatened	Found at elevations up to 1,500 feet in Mediterranean climatic zones. Requires aquatic, riparian, and upland habitat areas for different life events. Breeds primarily in aquatic habitat deeper than 2 feet with shrubby riparian or emergent vegetation; specifically found in deep pools, backwaters in streams and creeks, ponds, marshes, sag ponds, dune ponds, and lagoons. ^{1,2} The species has been documented within the action area.	The entire action area is within critical habitat	Yes. Suitable habitat is present and this species is known to occur within the action area.

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
Fish				
CCC Coho Salmon, ESU <i>Oncorhynchus kisutch</i>	Endangered	CCC coho salmon spend the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Spawning habitat includes small streams with stable gravel substrates. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean.	Yes. Critical habitat within the action area includes accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda and San Lorenzo River in California.	Yes. The species has been identified in San Vincent Creek.
CCC Steelhead, DPS <i>Oncorhynchus mykiss</i>	Threatened	CCC steelhead are found along the entire Pacific Coast. Deep low-velocity pools in streams are important wintering habitats. Spawning habitat consists of gravel substrates free of excessive silt.	Yes. Critical habitat within the action area includes San Vicente Creek, Liddell Creek, Laguna Creek, Majors Creek, and Baldwin Creek.	Yes. Species has been identified in San Vicente Creek, Liddell Creek, Laguna Creek, Majors Creek, and Baldwin Creek.
Reptiles				
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	Endangered	Most commonly occur in the vicinity of persistent water (mainly ponds, lakes, marshes, and sloughs), although they may also occur along temporary ponds and seasonal waterbodies. Areas with dense emergent vegetation adjacent to these waterbodies are preferred. ³	Critical habitat has not been designated for the species.	Yes. Suitable habitat may exist along project area in aquatic habitats. Records indicate the closest species occurrence is approximately 6 miles north of the northern end of the project area limits.

References:

Marine fish and invertebrate species will be addressed in a separate National Marine Fisheries Services Biological Assessment, along with any marine mammals and reptiles. ¹ (USFWS, 2002), ² (USFWS, 2010b), ³ (USFWS, 1985).

Additionally, based on the desktop review, which included a review of recorded occurrences, known range, and habitat requirements of each species, it was determined that eight State of California species subject to the CESA have potential to occur in the project area and were further evaluated for the project.

State of California Listed Species

- American Peregrine Falcon (*Falco peregrinus anatum*) – CDFW Fully Protected Species

- Bank Swallow (*Riparia riparia*) – California State Threatened
- Coho Salmon, Central California Coast evolutionarily significant unit (ESU) (*Oncorhynchus kisutch*) – Federally Endangered, California State Endangered¹
- Golden Eagle (*Aquila chrysaetos*) – CDFW Fully Protected Species and Watch List
- San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*) – Federally Endangered, California State Endangered²
- Townsend’s Big-eared Bat (*Corynorhinus townsendii*) – California State Candidate Threatened, CDFW Species of Special Concern
- Tricolored Blackbird (*Agelaius tricolor*) – California State Candidate, CDFW Species of Special Concern
- White-tailed Kite (*Elanus leucurus*) – CDFW Fully Protected Species

Finally, in addition to the Federally and state of California listed species described above, nine CDFW and fifteen CNPS special-status species have potential to occur in the project area. These species and the potential effects from the proposed project are described in the Biological Evaluation (CNPS 2018, FHWA-CFLHD 2020c).

CDFW Species

- American Badger (*Taxidea taxus*) – CDFW Species of Special Concern
- Black Swift (*Cypseloides niger*) – CDFW Species of Special Concern
- Burrowing Owl (*Athene cunicularia*) – CDFW Species of Special Concern
- Cooper’s Hawk (*Accipiter cooperii*) – CDFW Watch List
- Foothill Yellow-legged Frog (*Rana boylei*) – CDFW Species of Special Concern
- Monterey Dusky-footed Woodrat (*Neotoma macrotis luciana*) – CDFW Species of Special Concern
- Osprey (*Pandion haliaetus*) – CDFW Watch List
- Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*) – CDFW Species of Special Concern
- Western Pond Turtle (*Emys marmorata*) – CDFW Species of Special Concern

CNPS Species

- Brewer’s calandrinia (*Calandrinia breweri*) – 4.2
- California bottle-brush grass (*Elymus californicus*)
- Choris’ popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) – 1B.2
- Johnny-nip (*Castilleja ambigua* var. *ambigua*) – 4.2
- Kellogg’s horkelia (*Horkelia cuneata* var. *sericea*) – 1B.1

¹ This species is briefly addressed in this document due to its CESA listing, but is analyzed further in a separate BA prepared and submitted to the NMFs due to its federal ESA listing.

² This species is briefly addressed in this document due to its CESA listing, but is analyzed further in a separate BA prepared and submitted to the USFWS due to its federal ESA listing.

- Marsh microseris (*Microseris paludosa*) – 1B.2
- Northern curly-leaved monardella (*Monardella sinuate ssp. nigrescens*) – 1B.2
- Point Reyes horkelia (*Horkelia marinensis*) – 1B.2
- San Francisco campion (*Silene verecunda ssp. verecunda*) - 1B.2
- Santa Cruz microseris (*Stebbinsoseris decipiens*) – 1B.2
- Vernal pool bent grass (*Agrostis lacuna-vernalis*) – 1B.1

To document potential invertebrates that may occur in the study area, the biologists identified potential habitat, if present, in, or immediately adjacent to the trail alignments during the reconnaissance surveys. On March 18, 2018, Dr. Richard Arnold, entomologist, visited three locations, identified during the earlier surveys, to survey for Ohlone tiger beetle (*Cicindela ohlone*). Dirt roads and trails, grassy areas, and areas with sparse brush cover were surveyed by hiking and visual observation to search for both adults and larvae of the Ohlone tiger beetle. The survey was conducted when both life stages were active at a nearby known occurrence location (Moore Creek Open Space).

To document potential fish species that may occur in the study area, based on distribution information of tidewater goby, coho salmon and steelhead, a fisheries biologist evaluated the occupied creeks that intersect the trail alignments to determine if the project had the potential to impact these species or their habitat. Potential and known sensitive amphibian and reptile habitat was evaluated to determine if suitable habitat features were present.

For CRLF, the biologists identified and mapped known and potential aquatic features near the trail alignments, evaluated the surroundings for upland and dispersal habitat, and documented observations of all CRLF life stages.

For bird species, avian biologists conducted a bird survey to determine which birds might utilize the Project corridor, made a bird list of all bird species observed (Appendix G.4 of the NCRT EIR (RTC 2019)), noted breeding behavior, and documented nest sites. Additionally, the trail alignments were assessed for potential burrowing owl (*Athene cunicularia*) and bank swallow (*Riparia riparia*) habitat, and the 2016 nest site of American peregrine falcon (*Falco peregrinus anatum*) (FHWA-CFLHD 2020c) was evaluated for nest fidelity. For the western snowy plover (*Charadrius nivosus nivosus*), biologists spoke with C. Eyester, avian ecologist, to obtain up to date occurrence and breeding information (Eyester 2018). A comprehensive breeding bird survey was not conducted because nest sites for most avian species are dynamic and nest locations vary from year to year.

Finally, the assessment included an evaluation of potential habitat for sensitive mammals. For San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), the trail alignments examined for houses, woodrat sign, and activity; and all observations were documented using GPS. With regard to bat roost habitat, trees were examined and documented for bat roost features, such as senescent limbs, hollows, crevices, holes, and furrowed bark or sign, such as guano. Biologists consulted P. Heady, bat biologist, to determine which species would be likely to occur within potential habitat along the alignments (Pers. Comm. 2018). Wildlife movement along the alignment was assessed by looking for and documenting observations of individuals and sign including trails, tracks, and/or scat.

Critical Habitat and Essential Fish Habitat

Critical habitat is designated for the following species within the study area:

CCC Coho Salmon

Critical habitat for CCC coho salmon has been designated as accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda and San Lorenzo River in California including two San Francisco Bay streams: Arroyo Corte Madera del Presidio and Corte Madera Creek (64 FR 24049) (NMFS 1999). These areas include coho habitat necessary for growth and development to adulthood (NMFS 1999). The essential features of coho salmon critical habitat include: adequate; (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions (NMFS 1999).

All the coastal streams within the action area are considered critical habitat for CCC coho salmon. Table 3.4-3 provides the critical habitat segments and habitat quality for streams within the study area.

CCC Steelhead

In designating critical habitat, NMFS considers the following requirements of the species: (1) Space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, or rearing offspring; and, generally, (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of this species. NMFS designated critical habitat for the CCC steelhead DPS in 2005, which includes approximately 1,465 miles of stream habitat in central coastal California, and an additional 386 square miles of estuarine habitat in San Pablo and San Francisco Bays (70 FR 52488) (NMFS 2011).

Table 3.4-3: CCC Coho and Steelhead Critical Habitat Segment Locations and Quality in the Action Area

Stream Name	Stream Segment Number	Stream Segment Length*	Known Occurrence	Spawning Habitat	Rearing Habitat	Migration Habitat
San Vicente Creek	1	2.69 mi	Yes	Yes; good	Yes; good	Yes; good
Liddell Creek	1	0.37 mi	Yes	Yes; fair	Yes; poor	Yes; good
Laguna Creek	1	0.69 mi	Yes	No	Yes; good	Yes; good
Majors Creek	1	0.50 mi	Yes	Yes; poor	Yes; fair	Yes; good
Baldwin Creek	2	0.94 mi	Yes	Yes; poor	Yes; poor	Yes; good
Wilder Creek	1	4.58 mi	Yes	Yes; good	Yes; good	Yes; good

CalFish, 2012

* The stream segment length applies to stream segments traversing the action area, and does not reflect the length of the stream segment within the project action area.

California Red-Legged Frog (CRLF)

The USFWS designated critical habitat for the CRLF on April 13, 2006 (71 FR 19244), and a revised designation to the critical habitat was published on March 17, 2010 (75 FR 12816) (USFWS, 2010). Overall, approximately 1,636,609 acres of land within 48 geographical units was designated as critical habitat for the species (USFWS 2010). The entire action area lies within designated critical habitat for CRLF (SCZ-1, Santa Cruz, 6,712 acres). Appendix D provides figures displaying the known and potential habitat for CRLF in the vicinity of the action area.

The physical or biological features defined for the CRLF were derived from its biological needs. The area designated as revised critical habitat provides aquatic habitat for breeding and nonbreeding activities and upland habitat for shelter, foraging, predator avoidance, and dispersal across its range.

According to the USFWS *Revised Designation of Critical Habitat for the California Red-Legged Frog* (USFWS 2010h):

SCZ-1 contains the features that are essential for the conservation of the species. The unit also contains aquatic habitat for breeding and nonbreeding activities (PCE 1 and PCE 2), and upland habitat for foraging and dispersal activities (PCE 3 and PCE 4). SCZ-1 provides connectivity between occupied sites along the coast and farther inland. In addition, it contains high-quality habitat, indicated by high density of extant occurrences, permanent and ephemeral aquatic habitat suitable for breeding, and accessible upland areas for dispersal, shelter, and food. The unit represents one of two areas designated for critical habitat in Santa Cruz County and is the northern extent of the central coast recovery unit. The unit consists of Federal (226 ac (92 ha)), State (20,562 ac (8,321 ha)), and private (51,460 ac (20,825 ha)) lands.

Essential Fish Habitat

The MSA (P.L. 94-256 or 10 U.S.C. 1801 et seq.) and the implementing regulations (50 CFR § 600.92(j)) defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The Pacific Fisheries Management Council (PFMC) has designated EFH for the Pacific salmon fishery, federally managed ground fishes, and coastal pelagic fisheries. Small portions of the action area include delineated EFH for the Pacific salmon fishery, including the coho salmon. The geographic extent of EFH for the Pacific salmon fishery includes all habitats historically and currently occupied by stocks of salmon in and off the coast of Washington, Oregon and California, and the marine waters off of Alaska (PFMC, 2016a).

Small portions of the action area include Pacific coastline waters, designated as EFH for the Pacific coast groundfish (PCG), coastal pelagic species, (CPS) and highly migratory species (HMS) (NMFS, 2016b; NMFS, 2016c; NMFS, 2016d). EFH for the Pacific coast groundfish includes approximately 90 species, and is defined in Amendment 19 to the Pacific Coast Groundfish Fishery Management Plan (PFMC 2016c). Based on the EFH definition for the PCG, small portions of the action area may encompass PCG EFH. CPS and HMS are primarily associated with deeper waters near coastal areas, and open ocean waters, and are

not likely to occur in the action area, or be impacted by the proposed project (PFMC 2016b; PFMC 2016d).

3.4.3 Environmental Consequences

This discussion is organized to first address general elements of the Proposed Project that could directly and indirectly affect all special status species permanently and/or during construction. Species-specific effects analyses are then addressed based on species categories. For example, all anadromous / marine species would be affected by the project in a similar manner and therefore are discussed together.

The Proposed Action Alternative effects discussed below are a summary of the analysis completed for this project including technical reports, the NCRT EIR analysis as well as the wildlife biological assessments (FHWA-CFLHD 2020a and 2020b) and the biological evaluation (FHWA-CFLHD 2020c) prepared for this project. For a more detailed analysis of impacts and effects, refer to these reports.

3.4.3.1 No Action Alternative

Under the No Action Alternative, the trail would not be constructed in or adjacent to sensitive natural communities such as Coastal Act Environmentally Sensitive Habitat Areas (ESHA, palustrine emergent wetlands, or aquatic/riverine habitats). Thus, there would be no construction-related impacts or direct adverse effects from use of the new trail to listed species and their habitat. There would also be no impact to wildlife movement. However, there would be continued use of the parking areas and existing trails located near and extending through the Project corridor, as well as the corridor itself, to access the coastal bluffs and beaches. This continued use could result in minor adverse effects to habitat, wetlands, and species therein, which would be similar to existing conditions. Thus, the impact to biological resources would be less than significant.

3.4.3.2 Proposed Project Alternative

Vegetation and Habitats

Implementation of the Proposed Project would result in removal and trimming of plants and habitat in the project area. Much of these impacts would be short-term as temporarily impacted areas would be revegetated with non-invasive plant species appropriate for the project area. Temporary BMPs would be installed as discussed below to minimize erosion and protect receiving waters from sedimentation and pollutant introduction. Any necessary BMPs would remain in place until sufficient vegetation cover has established and permanent stabilization of temporarily impacted areas occurs. The utilization of a Stormwater Pollution Prevention Plan and associated stormwater BMPs, would protect freshwater, estuarine, and marine communities from the erosion and sediment potential that exists from vegetation removal and ground-disturbing activities when soil is exposed and subject to erosive forces. Impacts to these communities would also further be minimized by the maintenance of unimpeded flow during construction activities, to allow passage of aquatic species during construction. Proposed construction does not include in-water work within streams and these waters would remain separated from the construction limits at all times to protect both water quality and aquatic species within these habitats.

The short-term loss of vegetation would constitute a temporary habitat loss to those that may use that habitat for nesting or foraging. Permanent impacts would constitute a permanent habitat loss and would result from placement of the permanent trail, roadway crossings, parking areas and associated features. Because the new trail would be constructed to closely match the existing alignment of the railroad, a majority of impacts occur in landscaped/developed, ruderal, and agriculture (active and fallow) lands. Sensitive habitats have been identified and impacts to these habitats were avoided and minimized to the greatest extent possible. For purposes of analysis in this EA, the entire project construction limits were assumed to be temporarily impacted because specific contractor means and methods and location of material staging are not known in preliminary design. Actual impacts would likely be less. Impacts would be highly localized within the construction limits. The anticipated permanent and temporary impacts by habitat type is summarized in Table 3.4-4, below.

Wildlife and Special Status Wildlife Species

In addition to above discussed vegetation removal and associated habitat impacts, short-term impacts may also be associated with noise and disturbance during construction activities as some wildlife may be deterred from utilizing the project area. This could include reduction in nesting, foraging/hunting, roosting, or breeding in or near the project area, and the presence of noise may affect some species in adjacent habitats or in overflight. Specific discussions on special status species and the effects of the Proposed Action Alternative are provided below.

In accordance with Section 7 of the ESA, the FHWA-CFLHD prepared two Biological Assessments (BA), an Essential Fish Habitat Assessment (EFH-A), and a Biological Evaluation (BE) dated February 2020. The BA's and EFH-A were submitted to the USFWS and NMFS to initiate consultation with these agencies for anticipated impacts to species under their purview. Concurrence with the effect determinations was provided by the NMFS in a letter dated March 11, 2020. Consultation with the USFWS is ongoing. Copies of this agency correspondence is saved in Appendix F. Based on the Proposed Project impacts and effects, the effect determination for each species is included in the Table 3.4-5 below.

CCC Coho Salmon and CCC Steelhead and Critical Habitat

Potential direct effects are not anticipated since construction of the proposed project would not occur in flowing intermittent or perennial streams. However, construction activities would occur in the vicinity of these streams that provide habitat for CCC coho salmon and steelhead. Construction of the multi-use trail and other improvements would result in vegetation removal and soil disturbance.

The direct release of sediment or chemical-laden runoff into areas that are occupied by CCC coho salmon and steelhead may create displacement or degrade available habitats. Sediment and increased turbidity from construction activities could increase the concentration of fine sediments in spawning streams which could impede egg hatching, feeding, migration, or general use. Hazardous materials and chemicals in the form of gasoline, engine oil, lubricants, or other fluids used during construction activities could also potentially enter these creeks as a result of seepage or accidental spills. Accidental discharge of hazardous materials and chemicals could potentially affect fish that may be

present in the Action Area by increasing physiological stress, altering primary and secondary production, disrupting prey, and causing direct mortality. To avoid these

Table 3.4-4: Project impacts by habitat type from the proposed action.

Habitat Type	Permanent Disturbance (acres), includes existing disturbed areas	Temporary Disturbance Estimate (acres)
Coastal Scrub	4.619	1.574
Coast Live Oak Forest	0.362	0.055
Arroyo Willow Scrub	2.848	0.582
Arroyo Willow Riparian Forest	0.621	0.304
Palustrine Emergent Wetland	0.333	0.194
Aquatics	0	0
Iceplant	0	0
Coastal Dune ¹	0.230	0.022
Sandy Beach/Mudstone	0.011	0.196
Non-native Grassland	0.679	0.169
Non-native Forest	0.001	0.004
Agriculture	1.366	0.532
Fallow Agriculture	0.956	0.233
Developed/Landscaped	14.770	4.546
Ruderal	3.330	0.558
Total	30.126	8.879

¹Impacts to Dune Habitat were proposed in the NCRT EIR to be mitigated through implementation of Mitigation Measure BIO-8(b): Construct a Boardwalk in Coastal Dune Habitat. However subsequent design iterations have realigned the trail alignment so it remains in the rail cut rather than above the rail cut on the coastal side (between Stations 86+00 and 90+00, as shown in Figure 2-1, Sheet 2 of 10, bottom). This change in alignment negates the requirement for Mitigation Measure BIO-8(b). The trail realignment would permanently affect the same total acreage of coastal dune (0.08 acres), while reducing impacts to coastal scrub (*Toxicodendron diversilobum* Alliance) from 0.06 acres to 0.05 acres. Moreover, the majority of coastal dune habitat identified within the rail corridor adjacent to the tracks is comprised of unconsolidated, aeolian sand deposits lacking vegetation. These un-vegetated areas do not meet the CDFW sensitive habitat requirement because they lack cover by dominant vegetation Alliances and/or Associations. In addition, keeping the trail in the rail cut would not require construction of a boardwalk which could prove difficult due to unpredictable dune morphology. Overall, the change in impacts would be negligible or slightly less than the initial trail alignment.

Table 3.4-5: Federal ESA-Listed Species that May Occur within Study Area and Anticipated Effect Determination

Species Name	Status	Effect Determination
Central California Coast Coho Salmon <i>Oncorhynchus kisutch</i>	Endangered Critical habitat present	May affect but is not likely to adversely affect May affect but is not likely to adversely affect critical habitat.
Central California Coast Steelhead <i>Oncorhynchus mykiss</i>	Threatened Critical habitat present	May affect but is not likely to adversely affect May affect but is not likely to adversely affect critical habitat.
California red-legged frog <i>Rana draytonii</i>	Threatened Critical habitat (Santa Cruz Unit-1).	May affect, is likely to adversely affect May affect, is likely to adversely affect
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	Endangered	May affect but is not likely to adversely affect

potential impacts to aquatic habitats during construction, best management practices (BMPs) will be installed and maintained to reduce sediment and chemical-laden runoff introductions, properly manage the storage and handling of construction materials, and maintain good housekeeping of the construction site. All BMPs would be managed in accordance with the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SWPPP) prepared in accordance with the Construction General Permit issued for the state of California. Stormwater BMPs would help to minimize potential effects to aquatic species, and associated suitable habitat, that may be present in the project vicinity. Therefore, the overall effects of potential increased sediment and turbidity as well as potential chemical introductions from construction equipment are anticipated to be discountable and would not modify the habitat characteristics within the action area.

Additionally, due to the distance between planned construction activities and intermittent or perennial streams where coho or steelhead may occur, the dense riparian vegetation surrounding the streams, as well as halting work adjacent to streams between November 1 and May 1, direct effects resulting from discharges are highly unlikely and therefore discountable.

Table 3.4-6 shows the difference in elevation between the existing named, perennial creek outlets, and the proposed trail surface. In most locations, the difference between the proposed trail surface and the creek outlet is greater than 50 feet.

Table 3.4-6: Difference Between Elevation of Existing Stream Outlet and Proposed Trail Elevation

Road Stationing	Creek Name	Creek Outlet Elevation (Feet)	Trail Elevation (Feet)	Elevation Difference (Feet)
32+50	San Vicente Creek	10	67	57
82+00	Liddell Creek	16	75	59
126+00	Yellow Bank Creek	13	73	60
175+50	Laguna Creek	15*	68	53
226+50	Majors Creek	25*	81	56
286+00	Baldwin Creek	20*	54	34

* Outlet locations were estimated based on aerial imagery and outlet elevations were taken from google earth and/or extrapolated from available survey.

The project may result in indirect effects to water quality and stream habitat due to chemical runoff, erosion, and sedimentation from vegetation removal, trail construction, earth disturbing activities, paving operations, temporary road diversion construction and removal, roadway embankment stabilization, and channel/ floodplain restoration efforts. The project may result in indirect effects to water quality and stream habitat due to erosion and sedimentation from soil and ground disturbance. Sedimentation can fill deep pool habitats in streams and decrease invertebrate prey base. Sediment also affects primary productivity and invertebrate production that may affect salmonid fry growth, survival, and dispersal. Excessive sediment can also reduce egg development and survival.

Indirect effects may also occur due to vegetation removal within the project area. Removal of riparian vegetation increases erosion rates and subsequently causes sedimentation to downstream receiving waters. Loosening soils from trail construction and placing fills has the potential to introduce sediment into waterways. Removal of vegetation and construction-related ground disturbance in the project area may increase sediment transport to streams and rivers following construction if vegetation is not restored or the disturbed areas are not stabilized with BMPs. BMPs such as temporary soil stabilization and hydroseeding will be implemented to stabilize constructed cut and fill slopes.

The proposed project would increase impervious surfaces within the action area by approximately 11 acres. An increase of impervious surfaces, along with associated soil disturbance can result in the following effects: reduced water infiltration, increased runoff,

erosion, loss of riparian vegetation, undercut banks, and stream channel widening during a flash discharge pattern (e.g., rapid increase in flows during storm events). Increases in impervious surfaces may also lead to greater erosion of adjacent paved trail slopes, or outflow points, thereby increasing sediment discharge into waterways after completion of the project. Impervious surfaces can also collect pollutants such as pesticides, herbicides, fertilizers, gasoline, and other petroleum products, which may discharge into adjacent drainages, wetlands, and riparian areas. These chemicals can contaminate waters and impact aquatic conditions necessary for steelhead and salmon survival.

Changes in water infiltration, runoff effects, stream bank undercutting and channel widening are expected to be minimal due to the distance between the trail construction and intermittent or perennial streams where coho or steelhead may occur. Additionally, a majority of the surrounding lands are vegetated and therefore the increase to runoff rates should be negligible. Additionally, these effects will be minimized through adherence to required sediment control measures, any project permits requirements, and revegetating impacted areas as stipulated in the project specific SWPPP.

The removal of riparian vegetation may increase water temperature, decrease invertebrate forage abundance, decrease stream bank stability, and degrade potential habitat. However, revegetation of disturbed vegetation would reduce the severity of these effects in the long-term. Overall, the indirect effects of the proposed project would be localized and temporary and would not permanently modify the habitat characteristics within the action area.

Based on the above analysis, the proposed project may affect, but is not likely to adversely affect the CCC coho salmon and the CCC steelhead.

While the proposed project could result in temporary impacts to water quality, adherence to the project avoidance and minimization measures would minimize these effects. Therefore, the proposed project may affect, but is not likely to adversely affect critical habitat for the CCC coho salmon and the CCC steelhead. Additionally, EFH within the action area may experience short-term effects, however, the project is not anticipated to modify or degrade any EFH components.

California Red-Legged Frog (CRLF)

Based on the information that CRLFs have been documented in the action area, construction activities could cause direct effects to CRLFs. Direct effects to CRLFs include take from construction activities through harm and harassment from construction equipment and personnel, runoff and sediment introduction, degradation or loss of habitat and associated displacement, and harassment due to increased noise, vibration, and visual disturbances. The proposed project may result in impacts to CRLFs and critical habitat from the construction of the trail and repair and installation of culverts.

An increased presence of personnel and construction equipment would increase the likelihood that CRLFs, that may be present in the project limits, would incur injury from people or equipment. CRLFs found within the action area will be relocated according to project-specific avoidance and minimization measures. Relocation efforts aim to reduce potential direct take of individuals discovered by moving them off site, but may result in direct impacts to individuals by causing stress from being handled.

The loss or degradation of CRLF habitat may occur due to vegetation removal and the installation of the trail which would likely alter existing conditions and habitats. Wetlands, riparian areas, and uplands in the action area that provide habitat for CRLF would be permanently and temporarily impacted by trail construction and culvert replacement. While the replacement of culverts would create temporary habitat disturbance, this work would restore the function of the culverts and remove potential barriers to CRLF passage and dispersal. These improvements would also increase the potential that various habitats or microhabitats are linked and are more easily accessible.

Avoidance and minimization measures, mitigation efforts, and best management practices (BMPs) that aim to reduce habitat degradation and loss are discussed in detail in Section 3.4.4, *Avoidance, Minimization, and/or Mitigation Measures*. These measures would reduce potential of direct effects to the species and help to mitigate the loss of habitat. However, CRLFs are still expected to incur impacts from vegetation removal and habitat alteration activities.

CRLFs may also be impacted from the direct introduction of chemical-laden runoff and sediment into wetland habitats from construction. CRLFs are extremely sensitive to chemicals, and could incur impacts from hazardous construction materials directly released into occupied wetlands or aquatic habitats. Additionally, introduced sediment from construction erosion could affect water quality of CRLF habitat and encourage relocation or result in direct harm or mortality to individuals present. Avoidance and minimization measures will aim to reduce sediment and chemical runoff impacts to the species. With these measures in place, impacts from sediment and chemical-laden runoff are expected to be negligible and insignificant.

Construction would result in increased noise, vibration, and visual disturbances due to the presence of construction equipment and personnel. These disturbances could encourage CRLFs to leave habitat within the action area. Important life events, such as migration, dispersal, foraging, breeding, and egg-laying may be altered from these disturbances. CRLFs are expected to incur impacts from these disturbances. However, to help minimize the potential for take, the project will adhere to numerous avoidance and minimization measures which are outlined in Section 3.4.4, *Avoidance, Minimization, and/or Mitigation Measures*.

CRLFs may be indirectly impacted within wetland or aquatic habitats downgradient of project activities from the introduction of chemical-laden runoff and/or sediment after construction is completed. CRLFs are extremely sensitive to chemicals, and could incur impacts from materials released into waterways that carry runoff into habitat areas. The addition of impervious surfaces from the trail construction could affect water quality of CRLF habitat and encourage relocation or result in harm to individuals present. Additional impervious surfaces can increase stormwater flow into adjacent habitats and lead to greater sedimentation and increased discharges.

Because the proposed project has the potential to result in take to CRLFs, it is anticipated that the project may affect, and is likely to adversely affect the CRLF.

Based on the scope of the proposed project, permanent and temporary impacts to CRLF critical habitat are unavoidable. Implementation of mitigation and minimization measures reduce the severity of these impacts. Because the project would permanently and temporarily affect physical and biological features of CRLF critical habitat, it is anticipated that the project may affect, and is likely to adversely affect CRLF critical habitat.

San Francisco Garter Snake

While it is unlikely that the SFGS occurs within the action area, potentially suitable habitat is present and the species has been documented approximately six miles north of the Project Area. The Proposed Project could cause direct effects to SFGSs through harm and harassment from construction equipment, runoff and sediment introduction, degradation or loss of habitat and associated displacement, and harassment due to increased noise, vibrational, and visual disturbances.

Habitat loss and a reduction in habitat quality are the primary threats to SFGS' and its recovery (USFWS 2006). The loss or degradation of potential SFGS habitat may occur due to vegetation removal and the installation of the trail which would likely alter existing conditions and habitats. If present, construction activity in wetland or aquatic habitats would cause the species to disperse from these areas and potentially seek out less desirable habitats. Increased human activity and the use of construction equipment would create noise, visual, and vibratory impacts which could directly impact the species through harassment, harm, and displacement. However, any loss of potential habitat is expected to be insignificant due to the action area being located south of the species historical range. Although suitable habitat may be present within the action area, it is not likely occupied by the species.

Mortality or displacement of prey species related to construction can additionally affect the species. As was previously discussed, CRLFs have been documented in the action area and the species would likely be affected by the proposed project. Because CRLFs are the primary prey for SFGSs, direct effects to CRLFs could also affect SFGSs if they are present.

SFGSs may also be indirectly impacted within wetland or aquatic habitats downgradient of project activities from the introduction of chemical-laden runoff and/or sediment after construction is completed. The species may also be indirectly affected through the temporal loss of habitat. To help mitigate for the loss, temporarily impacted areas will be restored and reclaimed with native vegetation. Additionally, avoidance and minimization measures that aim to reduce sediment and chemical runoff impacts to wetland habitat will be implemented and maintained post-construction. With these measures in place, indirect impacts from sediment and chemical-laden runoff are expected to be negligible.

Based on the available information, it is inferred that the likelihood of occurrence for the SFGS in the action area is low and consequently, potential effects to the SFGS are considered to be discountable. As a result, it is anticipated that the project may affect, but is not likely to adversely affect the SFGS.

State of California Listed Species

Data from USFWS, the California Natural Diversity Database (CNDDDB), and the California Native Plant Society (CNPS) were reviewed and evaluated to identify CESA listed and CDFW special-status plant and wildlife species that occur or have the potential to occur in

the Project Area (CDFW CNDDDB 2018, FHWA-CFLHD 2020c). As a result of the data searches, a total of 24 wildlife species, 63 plant species, and six natural communities were considered for analysis. These species were evaluated for presence of required habitat (including soils, climate, disturbance, plant communities, etc.) within the project area, as well as reported location occurrences within the project vicinity and region. Appendix E provides a summary of these species including a description of the species habitat requirement, the presence of suitable habitat, closest occurrence, potential to be impacted by the project, and a determination finding. For species that are CESA listed and CDFW special-status species the analysis indicates that there may be project related affects, however, the project is not anticipated to result in any take of a species. Overall, the impacts to state-listed species would be less than significant with mitigation measures.

3.4.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to biological resources. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure AG-3(c): Regularly Remove Solid Waste and Litter during Operation

Mitigation Measure BIO-9(b): Develop and Implement Wetland Mitigation and Monitoring Plan

Mitigation Measure BIO-2: Conduct Biological Monitoring for CRLF and Other Sensitive Wildlife Species

Mitigation Measure BIO-4: Conduct Breeding Bird Survey and Identify Protective Buffers prior to Construction

Mitigation Measure BIO-5: Implement Measures to Protect Roosting Bats during Construction

Mitigation Measure BIO-6: Implement Dusky-Footed Woodrat Protection Measures During Construction

Mitigation Measure BIO-8(a): Minimize Construction in Sensitive Habitats

Mitigation Measure BIO-8(c): Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-8(d): Implement Best Management Practices during Construction

Mitigation Measure BIO-9(a): Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

3.5 Cultural Resources

This section describes impacts expected to cultural resources, including historical, archeological, and paleontological resources. Historic built-environment resources may include engineering structures, buildings, objects, and monuments. Archaeological sites include prehistoric and historic evidence of past human occupation of the landscape,

including village sites, shell middens, tool and food processing sites, privies, and refuse deposits. If a project would result in the alteration or destruction any of these resources, impacts to cultural resource may result.

3.5.1 Regulatory Setting

3.5.1.1 Federal

National Environmental Policy Act

NEPA establishes that the federal government use all practicable means to “assure for all Americans . . . culturally pleasing surroundings,” and “preserve important historic, cultural, and natural aspects of our national heritage . . .” (42 United States Code [USC] 4331[b][2]).

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended (54 USC 300101 - 307108), and its implementing regulations, Protection of Historic Properties (36 CFR 800), requires federal agencies to take into account the effects of their actions on historic properties for any federal undertaking. Historic properties are defined as those that are included in the National Register of Historic Places (NRHP) or that meet specific criteria (are “eligible”) for listing in the NRHP, which is the official list of America’s historic places worthy of preservation. An effect on a historic property is “an alteration to the characteristics of a historic property qualifying it for inclusion or eligibility for the NRHP” (36 CFR 800.16).

3.5.2 Affected Environment

3.5.2.1 History

Prehistory

Santa Cruz County is in the Monterey Bay area, a cultural-historical geographic region that spans the central California coastline from Big Sur northward to just south of San Francisco Bay. This region generally corresponds to southern Costanoan language groups.

Archaeological sites dating to the Paleoindian and Millingstone periods (3500 B.C. or earlier) in the Monterey Bay area are rare and the components are poorly defined. Sites from these periods have been identified, however, north of Santa Cruz in Scotts Valley and at Elkhorn Slough, and include crescent-shaped flaked tools, long-stemmed projectile points, cobble/core tools, and milling slabs and handstones. Archaeological evidence of the Late and Protohistoric periods (A.D. 1200-1769) is poorly represented in the Monterey Bay area, although sites dating to this period have been identified in the Santa Cruz Mountains and inside Santa Cruz city limits. Sites dating to these periods include schist, clamshell, and abalone disc beads; small side-notched projectile points; hopper and bedrock mortars; milling slabs; pestles; and handstones.

For over a quarter century, Native American settlement and subsistence patterns in the Monterey Bay area have been understood in terms of a forager-collector model, which suggests that small mobile foraging groups characterized Monterey Bay area settlement before 2,000 years ago. Foragers were eventually displaced by “collectors,” who occupied year-round or semi-permanent residential sites and did not relocate residential sites to seasonal resource patches. More recently, however, the validity of the forager-collector

model for understanding the subsistence and settlement practices from the Monterey Bay Area has been questioned, and Native American settlement-subsistence patterns in the region are a research issue that future archaeological research may help to clarify (Jones 2014).

History

The current project site is located in what was once known as Rancho de Matadero, owned by Mission Santa Cruz until secularization. Sometime in the 1830s, the ranch was split into several smaller ranchos, including Rancho Refugio, which encompassed the southern end of the current project site. Rancho Refugio came under the control of Jose Bolcoff, who was the first to begin dairy ranching on Refugio lands. After Alta California came under the control of the United States, the Bolcoff family began selling off portions of the rancho to American immigrants and had sold the entire rancho by 1859. The Wilder family began buying portions of the rancho and became the sole owners by the mid-1870s. The Wilder family owned the ranch until 1969 when it was transferred to the California State Parks System (Allen et al. 2012).

Santa Cruz's early economy was centered largely on logging, lime production, and tanneries. In response to these growing industries, the City's population grew quickly in the latter half of the 19th century (City of Santa Cruz 2011 2018). In the latter half of the century, Santa Cruz's economy shifted to tourism, a result of railroad access to the area beginning in the 1870s (City of Santa Cruz 2011). One of these early systems was the Santa Cruz Railroad, organized by a group of businessmen from Santa Cruz, Soquel, and Aptos in 1873. The rail line was developed to connect to the Southern Pacific's railhead in Pajaro, after the larger company refused to develop a connecting line to Santa Cruz (Lehmann 2000). The Santa Cruz Railroad was one of three early lines developed in Santa Cruz County in the 1870s, all of which were narrow gauge and subject to the same environmental factors that affected roadways through the region, including flooding and landslides.

Between 1905 and 1907, a subsidiary of the Southern Pacific Railroad known as the Coast Line Railway developed the Davenport Branch Line. This 12-mile long line was developed primarily to deprive the competing Ocean Shore Railway Company of freight traffic from the recently developed Santa Cruz Portland Cement Company in Davenport, approximately nine miles north of Santa Cruz (Robertson 1998). The Ocean Shore Railway Company envisioned a railway connecting San Francisco and Santa Cruz and began construction of the North Coast Railway in 1905. In developing their lines between Santa Cruz and Davenport, the Ocean Shore and Coast Line companies collaborated to design and build trestles that crossed the numerous streams. Understanding that cement was going to be the primary freight source for the railroads, engineers determined wood trestles alone could not handle the weight, and "decided to build temporary trestles at each stream crossing and then immediately fill them in. The fill material was readily available from the huge cuts necessary to level out the grade on either side of each valley" (Lydon 2018). Two sets of tracks (one for each railway) were then set atop the earthen embankments, or ramparts, and tunnels were created on the north side of each valley that allowed water to be conveyed around the trestles and out to sea.

The 1906 San Francisco earthquake resulted in substantial damage to the northern segment of the North Coast Railway and delayed its completion and Ocean Shore Railway was sold in 1923. The Coast Line Railway completed their line in 1907, executing a contract to transport cement from the Santa Cruz Portland Cement Company's Davenport plant. The Santa Cruz Portland Cement Company purportedly provided upwards of 10,000 barrels of cement per day towards the rebuilding effort following the earthquake (Leachman and Prybylski 2017). In addition to supporting the reconstruction of the San Francisco Bay Area, the Davenport Cement Plant contributed some 750 million barrels of cement toward the development of the Panama Canal (Robertson 1998). By 1910, the Davenport Cement Plant was the largest in California and the second largest in the country, producing as much as 1.4 million barrels that year alone (Leachman and Prybylski 2017). Although the Coast Line Railway provided some passenger service between Davenport and Santa Cruz, its primary purpose was the transport of freight from the Davenport Cement Plant (Hunter 2004:8).

Supported by the Davenport Branch Line, the Davenport Cement Plant remained extremely productive throughout the twentieth century. Leachman and Prybylski note that it "contributed cement to the building of prominent structures like the Golden Gate Bridge across San Francisco Bay and the O'Shaughnessy Dam that created the Hetch Hetchy reservoir; it helped rebuild the dry docks at Pearl Harbor after they were attacked in 1941; it utilized a special blend of cement to construct California's aqueducts, the largest system of its kind in the world; and it was awarded the Pan American Exposition gold medal for its part in the construction of the Panama Canal" (Leachman and Prybylski 2017). Rail remained the primary means of transporting this freight throughout this period.

In 1917, the Coast Line Railway was transferred to the Southern Pacific Railroad Company, which operated the Davenport Branch Line until the Southern Pacific merged with Union Pacific Railroad in 1996. The line continued to transfer freight from the Davenport Cement Plant, with three freight trains per week traversing between Davenport and Watsonville, until the Davenport Cement Plant was eventually decommissioned in 2010 (RTC 1997, 2012).

In 2012, the RTC acquired the 32-mile Santa Cruz Branch Lines, which collectively include the Davenport Branch Line (from Davenport to Santa Cruz) and the Santa Cruz Branch Line (from Santa Cruz to Watsonville). The line has not had regular use since the Davenport Cement Plant closed in 2010. The line has been used for rail car storage and special event excursions. The substantially decreased use has resulted in portions of the line becoming covered by sand, water, and vegetation in areas. In June 2018, the RTC entered into an agreement with a new operator to provide rail operations on the Santa Cruz Branch Rail Line and to serve as the common carrier on this line as designated by the Surface Transportation Board (STB). Based on the 2018 Unified Corridor Study, the Santa Cruz Branch Rail Line will remain in public ownership for public transit use by maintaining the rail way tracks and allowing freight and excursion service (RTC 2018).

3.5.2.2 Current Conditions

The cultural resources identified in this section are based on existing literature and information, including Phase I Cultural Resources Study (Jacobs 2017), records search from the Northwest Information Center (NWIC) at Sonoma State University, additional field survey in 2018, and information provided by the California Department of Parks and Recreation.

This resulted in the identification of six resources within the Project corridor: three prehistoric archaeological sites (CA-SCR-10, CA-SCR-56, and CA-SCR-58), and four historic-era built-environment resources, including Town of Davenport (P-44-000379), a historic-era pump house (MT-1), the former Davenport Branch Line, and Wilder Ranch Old Coast Road (FHWA 2017; Treffers 2018; California Department of Parks and Recreation 2020). The Proposed Project trail alignment is located next to one additional cultural resource, the Wilder Ranch cultural preserve (P-44-000480), but does not extend into the boundaries of the resource. The historic-era pump house (MT-1) was evaluated for listing in the National Register of Historic Place (NRHP) and recommended not eligible (Jacobs 2017). The remaining cultural resources within the Project corridor are discussed further below.

Prehistoric Archaeological Sites (CA-SCR-10, CA-SCR-56, and CA-SCR-58)

Archaeological sites CA-SCR-56 and CA-SCR-58 within the Project corridor have not been evaluated for listing in the NRHP but are assumed to be eligible. Archaeological site CA-SCR-10 has been previously identified as occurring within the Project corridor. Further evaluation of this site however has determined that this resource does not to extend into the Project area (Jacobs 2017), and therefore is not discussed further.

Town of Davenport (P-44-000379)

The recorded boundary of the Town of Davenport (P-44-000379) is intersected by the Project corridor. However, although the resource boundary extends southwest of Highway 1, the Town is located northeast of Highway 1, outside of the Project corridor. According to documentation on file with NWIC, the town is potentially a historic district that includes some buildings along the northeast side of Highway 1 (Jacobs 2017). Therefore, for the purposes of this project, the Town of Davenport has been assumed to be eligible for listing in the NRHP based on the NWIC documentation and its association with the nearby Santa Cruz Portland Cement Company.

Davenport Branch Line

The former Davenport Branch Line, which extends through the Project corridor, was identified as an historic-era built-environment resource. Therefore, an Historic Resources Evaluation was conducted to determine eligibility for listing in the NRHP and CRHR (Treffers 2018). As a result of the historic resources evaluation, described below, the Davenport Branch Line was determined eligible for listing, and was recorded and evaluated on California Department of Parks and Recreation 523 series forms. The Davenport Branch Line name is used herein to refer to this built-environment resource. The rail line was developed independently of the Santa Cruz Branch Line, which operated between Watsonville and Santa Cruz. Although the Union Pacific eventually dropped the Davenport Branch Line and only used the Santa Cruz Branch Line to refer to the entire rail line between Davenport and Watsonville, the Davenport Branch Line name more accurately describes this resource within its historic context.

The recorded segment of the Davenport Branch Line runs the length of the Project corridor and follows an approximate northwest-southwest alignment from Davenport at its northern end to a point approximately 1.0 mile west of the corporate boundary on the western edge of the City of Santa Cruz.

The segment of the Davenport Branch Line in the Project corridor appears eligible for listing by NRHP under Criteria A and C for its direct association with the Santa Cruz Portland Cement Company in Davenport and its embodiment of a unique construction method relating to its earthen trestle embankments (Treffers 2018). The Davenport Branch Line was specifically developed by a subsidiary of the Southern Pacific Company to serve the then-recently developed Davenport Cement Plant. It was the primary transportation method for moving freight from the plant, which provided cement for the rebuilding of San Francisco following the 1906 earthquake, the Panama Canal, the Golden Gate Bridge, and many other notable projects. In addition, the construction of the trestles and earthen embankments represents a unique method of construction that is characteristic of the early twentieth century.

Although the Davenport Branch Line has been subject to regular maintenance that has resulted in the replacement of original ties, rails, and ballast, these changes appear to be in kind and have not resulted in a loss of integrity. The segment still retains its original alignment, grading, and many other features such as the earthen embankments. It also retains integrity of location, design, setting, workmanship, feeling, and association. Those features that are considered and convey the historical significance of the segment include its alignment, grading, ballast, ties, rail, earthen embankments and overall setting, including limited adjacent agricultural development and unobstructed views of the Pacific Ocean. The Historic Resources Evaluation, North Coast Rail Trail Project, concluded that the approximately 7.5-mile segment of the Davenport Branch Line is eligible for federal register listing (Treffers 2018) (Refer to NCRT EIR 2019, Appendix H).

Wilder Ranch Old Coast Road

The Wilder Ranch Old Coast Road is a linear historic feature newly recorded by State Parks. The feature is found within the Project area at the terminus of the Project alignment at Wilder Ranch and passes in front of the Wilder Ranch Cultural Preserve. The road is still in use by State Parks staff for maintenance vehicles and by bicyclists and pedestrians.

The coast road in the first half of the last century started as a wagon road and has been gradually paved over time. During times when ranching and agriculture were introduced to the northern portion of Santa Cruz County, Old Coast Road was used by residents and travelers similar to its use today. The following is an excerpt from the Santa Cruz Sentinel by Gary Griggs, January 1, 2011.

Mission Street extension marks the beginning of the Old Coast Road. It headed north from Swift Street past the packing sheds and the old Wrigley's building to Moore Creek, where it angled uphill and crossed over the creek. It continued inland a ways and then turned north and essentially followed the present Highway 1 path for about half a mile. At this point, just past the horse stables, there is a driveway that turns off on the right side. This was the old highway, which then swung north and ran along the base of the hill. The old road then turned towards the coast and crossed the present Highway 1 right where the bike path enters Wilder Ranch today. As you pass around the gate and start down toward the ranch buildings you are on the Old Coast Road with the white center line still visible. You can follow the original route as it crosses Wilder Creek and then goes right in front of the old ranch houses. The road heads back up the hill to join Highway 1 where vehicles enter the state park today. It then turned north to follow the present highway alignment.

The portion of the historic road that is within Wilder Ranch State Park, south of Highway 1, appears to be on the original alignment and is now paved. The bridge that crosses Wilder Creek is also noted as a component of the Old Coast Road. The road has been paved and maintained over time and as such, the integrity of the design, materials, and workmanship on the road has been compromised over time, but the road retains integrity of location, setting, some aspects of workmanship, feeling, and association. Therefore, for the purposes of this project, the Old Coast Road has been assumed to be eligible for listing in the NRHP.

3.5.3 Environmental Consequences

3.5.3.1 No Action Alternative

Under the No Action Alternative, there would be no construction-related ground disturbance that could result in adverse effects to undiscovered buried archaeological, historical, or human remains. There would be no adverse effects from introducing fencing and trail use adjacent to a known historical resource, including the Davenport Branch Rail Line and the Town of Davenport. The resource would continue to convey the reasons for its significance for its direct association with the Santa Cruz Portland Cement Company in Davenport and its embodiment of a unique construction method. Therefore, the impacts to cultural resources would be less than significant.

3.5.3.2 Proposed Project Alternative

The Proposed Project could adversely affect historic structures and archeological sites within the Project corridor.

Historic Structures

Town of Davenport (P-44-000379)

Although the resource boundary on file with NWIC extends into the Project corridor, all of the buildings and structures associated with the town are located on the northeast (inland) side of Highway 1. None of these buildings would be directly altered in any way as part of the Proposed Project. Improvements associated with the Proposed Project in the immediate vicinity of the town would be limited to one crossing and parking lot improvements on the southwest (coastal) side of Highway 1. Therefore, the Proposed Project would not result in a change of setting, and would not result in an adverse impact to the Town of Davenport.

Davenport Branch Line

The approximately 7.5-mile segment of the Davenport Branch Line is eligible for federal, state, and local designation (Treffers 2018). Although the segment has been subject to regular maintenance that has resulted in the replacement of original ties, rails, and ballast, these changes appear to be in-kind and have not resulted in a loss of integrity. The resource continues to convey the reasons for its significance for its direct association with the Santa Cruz Portland Cement Company in Davenport and its embodiment of a unique construction method.

Within the Project corridor, the Proposed Project would include the installation of fencing between the trail and agricultural lands at some locations where a natural or geographic

barrier does not exist to prevent trail users from exiting the trail and entering agricultural land. Fence would also be installed in location where steep slopes exist for the protection of trail users. Fencing between the trail and the rail line would also be installed in a phased approach, when the rail line becomes active. The placement of a trail and fencing within the Project corridor introduce a new visual feature and use that would alter the setting of the Davenport Branch Line.

The prominence of the new trail and fencing would be limited due to their size, scale, and materials and it is not anticipated that their installation would visually obscure or directly demolish or remove the physical elements of the Davenport Branch Line. However, the introduction of these new features would be a clearly modern intervention to the rural and largely undeveloped landscape, a character defining feature of the historical resource.

The Proposed Project would also install historic and educational interpretive exhibits along the trail at strategic locations offering a variety of information. The intent of these exhibits is to educate visitors and residents about current issues and stewardship, and to take advantage of the unique opportunity offered by the trail network to physically connect the communities in Santa Cruz County to one another and create ties to its culture and history (RTC 2014). The installation of these exhibits would similarly introduce an additional modern element to the setting.

More importantly, though, the interpretive exhibits would highlight and reinforce the historical significance of the rail line, as experienced by trail users, as the exhibits would provide insight into the history of the rail line, its construction and design, and association with the Santa Cruz Portland Cement Company - historical associations that are not inherently conveyed through the physical features of the Davenport Branch Line.

The Proposed Project has been designed in a manner that avoids altering to a large degree the attributes of the rail line that convey its historical significance and that justify its eligibility for inclusion in the NRHP. Minor improvements to the rail line would be made at proposed rail crossings (see Table 2.1) that would include installation of concrete panels with potential for some work along the rail embankment to stabilize rail ties. The actions under the Proposed Project would negligibly affect the rail line and alter the immediate surroundings of the resource but would not alter the NRHP eligibility of the resource. The physical features that convey the historical significance of the Davenport Branch Line would remain intact, including the alignment, grading, ballast, ties, rail, and earthen embankments.

Wilder Ranch Old Coast Road

The Proposed multi-use trail would be constructed adjacent to and lower than the Old Coast Road for approximately 460 feet (See Figure 2-1 Sheet 10). At the terminus of the Proposed trail alignment, the trail would transition from being adjacent to the agricultural field to the road. There will be no alteration of the road except an asphalt apron would be placed to allow for trail users to exit or enter the trail near the entrance to the Wilder Ranch Cultural Preserve. In addition, signage may be placed at the bridge crossing Wilder Creek to direct bicyclists entering Wilder Ranch from the south along the Coast Road to exit the roadway and use Proposed trail. The Proposed Project would not diminish the feeling or setting that the resource occurs within or the character defining features of the Old Coast

Road. Therefore, the Proposed Project would not result in an adverse impact to the Old Coast Road.

Archeological Resources

Two prehistoric archaeological sites (CA-SCR-56, and CA-SCR-58) are located in or directly adjacent to the Project alignment and are assumed eligible for listing on the NRHP. Based on the NWIC records search results, CA-SCR-58 is within the footprint of the Proposed Project, and CA-SCR-56 is directly adjacent to the Proposed Project alignment.

Construction of the Proposed Project would result in ground disturbance that could disturb buried archaeological sites. Once constructed and in use, there would be increased traffic and human activity that could result in ground disturbance at each archaeological site. The Proposed Project construction limits are outside of the boundary of CA-SCR-58, therefore there will be no impact to this resource. Construction in the vicinity of CA-SCR-56 has limited potential to impact the resource. Based on information from State Parks archeologist, the artifacts in this area are dispersed and unlikely to be disturbed by the Proposed Project (Hyklema, 2019).

The impact of the Proposed Project would be less than significant. Implementation of Mitigation Measures described below, would reduce the impact to unknown potential subsurface historical resources or unique archaeological resources. Any archaeological work conducted in accordance with the mitigation below on State Parks Lands would require an Archaeological Investigation Permit and will be done in consultation with the State Parks archaeologist.

It is anticipated that the Proposed Project would have no adverse effect to the historic properties including archeological sites, the Town of Davenport, the Davenport Branch Rail Line; and Wilder Ranch Old Coast Road, therefore, impacts to historic properties would be **less than significant with mitigation**.

3.5.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to historic properties. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1. Mitigation measure CR-3 relates to paleontological resources and is included in Section 3.8, *Paleontological Resources*, of this EA.

Mitigation Measure CR-1(a): Install Historical Interpretive Exhibits prior to Trail Use

Mitigation Measure CR-2(a): Archaeological Capping at the existing prehistoric archaeological sites prior to Project Construction

Mitigation Measure CR-2(b): Conduct Archaeological Monitoring During Construction

Mitigation Measure CR-4: Stop Work if Unanticipated Discovery of Human Remains

Mitigation Measure TCR-1: Conduct Native American Monitoring During Construction

3.5.5 SHPO Concurrence

The request for concurrence on eligibility and effect determinations will be submitted to the California State Historic Preservation Office along with copies of cultural reports prepared for this Project. Coordination with SHPO is ongoing and will be completed prior to initiation of construction.

3.6 Hazards and Hazardous Materials

This section analyzes the impacts associated with exposure to hazards and hazardous materials, including those related to hazardous materials use and development on contaminated sites. The potential risks of roadway accidents involving hazardous materials related to the project and the risk of increased recreational use in wildland fire hazard areas were found to be less than significant in the NCRT EIR (RTC 2019). Therefore, these issues are not discussed further in this environmental assessment.

3.6.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, transport and disposal of hazardous materials, substances, and waste, as well as the investigation and mitigation of waste releases, air and water quality, human health and land use.

3.6.1.1 Federal

United States Environmental Protection Agency

USEPA is responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Federal regulations are codified primarily in Title 40 of the Federal Code of Regulations. The primary legislation includes the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) and the Emergency Planning and Community Right-to-Know (SARA Title III). These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, transport, or dispose of hazardous materials.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947 assigned responsibility for regulating pesticides to the United States Department of Agriculture, but the Federal Environmental Pesticide Control Act (FEPCA) was passed in 1972 and transferred this responsibility to USEPA. FIFRA established registration requirements for all pesticides and initiated a rigorous testing procedure that all pesticides must undergo in order to be permitted for use. FIFRA ensures that the use of a permitted pesticide “will not generally cause unreasonable adverse effects on the environment.” FIFRA defines the term ‘unreasonable adverse effects on the environment’ to, in part, mean “any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide” (USEPA 2017b).

Other federal Laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act

- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Toxic Substance Control Act (TSCA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

3.6.1.2 State

Primary state agencies with jurisdiction over hazardous chemical materials management are the California Environmental Protection Agency (CalEPA), Department of Toxic Substances Control (DTSC), and the State Water Resources Control Board (SWRCB). DTSC and SWRCB are departments under CalEPA. Other state agencies involved in hazardous materials management include Department of Industrial Relations (state OSHA implementation), CalOES, DPR, and Caltrans. The CHP and Caltrans are the enforcement agencies for hazardous materials transportation regulations. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations.

California Environmental Protection Agency

CalEPA has broad jurisdiction over hazardous materials management in the state. Under CalEPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Along with the DTSC, the SWRCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. SWRCB regulations are contained in Title 27 of the California Code of Regulations (CCR). Title 22 of the CCR contains additional state regulations applicable to hazardous materials. Title 26 of the CCR compiles those sections or titles of the CCR applicable to hazardous materials.

In January 1996, CalEPA adopted regulations implementing a “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste on-site treatment, underground storage tanks, above-ground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans (HMMP) and inventories. The program is implemented at the local level by a local agency – the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. The CUPA that has jurisdiction over the Project site is the Santa Cruz County Environmental Health Services.

California Department of Toxic Substances Control (DTSC)

DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA, and the California Health and Safety Code. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. As such,

management of hazardous waste in the County is regulated by the DTSC, and enforced by the County Environmental Health Services, to ensure compliance with state and federal requirements pertaining to hazardous waste.

California law provides the general framework for regulation of hazardous wastes by the Hazardous Waste Control Act, passed in 1972. DTSC is the state's lead agency in implementing the Act. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Act.

California Department of Pesticide Regulation

The DPR monitors the use of pesticides through evaluation and registration of pesticide products before sale or use in California. DPR also evaluates health impacts of pesticides through risk assessment and illness surveillance. DPR conducts comprehensive assessments of pesticide risks to all populations from exposure via air, water, and food, and in the home and workplace. All reported pesticide-related illnesses are investigated and DPR uses this data to evaluate its regulatory program and to refine applicable safety rules. DPR additionally monitors potential health and environmental impacts of previously registered pesticides, helping find ways to prevent future contamination.

3.6.2 Affected Environment

3.6.2.1 Hazards Associated with Adjacent Agriculture

The 7.5-mile-long Project corridor runs adjacent to agriculture for approximately 4.7 miles of the length of the trail, or approximately 63 percent of the alignment. A variety of chemicals are used and stored on agricultural properties along the corridor, including pesticides, herbicides, and nutrients. The potential hazards associated with these chemicals are described below.

Agricultural Pesticides

The County of Santa Cruz County Office of the Agricultural Commissioner (Agricultural Commissioner's office) retains a registry of pesticides used on individual agricultural parcels in the County. Pesticide Use Records (PUR) for the North Coast area from November 2012 to November 2017 are included in Appendix E of the NCRT EIR (RTC 2019). PURs for the North Coast area show that pesticides were applied 4,242 times from November 2012 to November 2017, with approximately 95 percent of these occurring by ground application. Over half of pesticide applications between 2012 and 2017 occurred during the three-month period of July, August, and September, and 88 percent occurred between May and October. Over 140 different pesticides were applied during this period.

In addition to being applied on crops in and adjacent to the Project corridor, pesticides are stored on agricultural properties along the alignment.

Historical agricultural operations in the Project vicinity likely used organophosphate and/or organochlorine pesticides, and residual amounts of these chemicals could exist in surficial soils along the Project corridor.

Symptoms of acute exposure to organophosphate may include numbness, tingling sensations, incoordination, headache, dizziness, tremor, nausea, abdominal cramps, sweating, blurred visions, difficulty breathing or respiratory depression, and slow

heartbeat. Very high doses may result in unconsciousness, incontinence, and convulsions or fatality. Some organophosphates may cause delayed symptoms beginning one to four weeks after an acute exposure, which may or may not have produced immediate effects (USEPA).

Symptoms of acute exposure to organochlorines may include headache, dizziness, nausea, vomiting, tremors, confusion, and hyperesthesia and paresthesia of face and extremities. Organochlorines are absorbed from the gut, by the lungs, and across the skin in varying degrees. Severe poisonings of organochlorines can result in convulsions, respiratory depression, or coma (USEPA 2013).

The only fumigant currently used in the North Coast area is Telone II, which is used to control nematodes, insects, and disease organisms in soil. The active ingredient in Telone II is 1,3-Dichloroproene (1,3-D). 1,3-D is sprayed on the ground or injected into the soil. In soil, the product can exist as a gas or a liquid, with a half-life of up to 69 days. 1,3-D evaporates quickly when discharged to surface water, with an estimated half-life of 50 hours. Human exposure is most likely to occur through the air, following the compound entering the atmosphere after its application to soils. Exposure poses health risks to humans, although the risks are not yet fully understood and estimates of human health impacts rely on animal studies (US EPA 2008).

Acute or short-term inhalation exposure to high concentrations of 1,3-D may cause upper respiratory symptoms, eye irritation, dizziness, and runny nose. Chronic or subchronic (moderate) exposure may be toxic to some organs, including the liver, bladder, kidney, and lungs. 1,3-D is considered to be a likely carcinogen to humans, for both inhalation and oral exposure. Carcinogenicity is considered to be the most critical public health concern associated with 1,3-D. The difference in exposure risks between children and adults is undetermined (CalEPA 2006). It should be noted that there have been no complaints to the Agricultural Commissioner regarding Telone II in the North Coast area (Sanford 2018).

In 2015, DPR completed a scientific study of the inhalation risks of 1,3-D. Based on this research, DPR implemented limits on 1,3-D in 2017. The restrictions limit public exposure throughout the state to 1,3-D, due to the risks that were determined for instances of nearby, prolonged exposure. For trail users passing by a field that was treated with 1,3-D, the degree of exposure would be characterized as short-term/acute ambient exposure. CalEPA's study of 1,3-D did not determine this degree of exposure to be a health risk for adults or children.

3.6.2.2 Hazards Associated with Historical Rail Uses

The Project corridor primarily aligns with the Santa Cruz Branch Rail Line corridor. This rail line was established in 1905. Potential hazards associated with historical rail uses include the presence of residual chemicals and the potential presence of asbestos and lead.

Residual Chemicals

Some historic railroad operations involved the use of chemicals that may result in present-day contamination. The most commonly reported contamination along rail lines comes from metals, pesticides (e.g., lead arsenate), and constituents of oil or fuel (petroleum products).

These chemicals have been associated with railroad operations. Arsenic in the soil along a rail right-of-way (ROW) may come from old railroad ties dipped in an arsenic solution, arsenic weed-control sprays, and arsenic-laced slag used as railroad bed fill. However, arsenic is also a naturally-occurring substance, so arsenic present in the soil may be partially or entirely resulting from background concentrations.³ Lubricating oil and diesel that dripped from the trains are likely sources of the petroleum product contaminants found along rail lines.

Additionally, the creosote used to protect the wooden railroad ties from decay is known to contain polynuclear aromatic hydrocarbons (PAHs). Some PAHs are known to be human carcinogens. With regard to the potential for creosote to leach into adjacent soil and groundwater, creosote is generally not a mobile compound. Therefore, the likelihood of creosote traveling far from a source area is considered low.

Additional sources of contaminants associated with the rail line may include arsenic from pesticides, heavy metals for wood preservatives, and lead or mercury from fuel combustion or leaking gauges (Greene-Roisel and Fogt 2004; Rails-to-Trails Conservancy 2004).

In 1997 A Phase 1 Preliminary Site Assessment (ESA) was conducted to support the RTC's purchase of the Santa Cruz Branch Rail Line. This assessment was conducted for 31.6 miles of the Davenport and Santa Cruz Branch Lines, collectively referred to as the Santa Cruz Branch Rail Line (Geomatrix 1997). The assessment encompassed the 7.5 miles of the Proposed Project from Davenport south to Wilder Ranch State Park (milepost 31.1 to milepost 23.6). It included site reconnaissance, review of historical documents, background research and interviews, and an environmental regulatory file review. Findings from that reconnaissance included:

- No known rail derailments or spills within the proposed project limits; and,
- On-site features that are within the proposed project limits that potentially could affect environmental conditions were identified from the historical review. These features include an engine house and potential underground storage tank (UST) at MP 26.69. No other potential environmental features were observed during field reconnaissance. Based on the findings of the preliminary site assessment, it was recommended that a Phase II investigative program be performed to evaluate whether historical features at the engine house and potential UST at milepost 26.69 affect environmental conditions within the project limits.

Phase II investigations and human health risk assessment consisted of advancing soil borings to collect soil samples at targeted and systematic locations along the Branch Line identified in the 1997 Phase I report and during site reconnaissance in 2005 and 2009. The analytical results for soil samples collected were compared to screening level criteria to evaluate whether environmental impacts were present along the Branch Line corridor (AMEC Geomatrix 2009).

³ Naturally-occurring arsenic is typically present at concentrations greater than risk-based screening criteria, which are derived based on an excess cancer risk level of 1×10^{-6} . As such, it is appropriate to evaluate the presence of arsenic based on its background concentration and estimate the incremental risk for exposure to arsenic from concentrations greater than the background. Due to the range of arsenic concentrations along the rail line reflected in the Phase II ESA, it was uncertain what arsenic concentrations represented naturally occurring conditions or arsenic concentrations attributable to an impact. Therefore, additional samples were collected during the 2009 Phase II investigation (AMEC Geomatrix 2009).

During the Phase II investigations, arsenic was detected at concentrations above environmental screening levels (ESLs). Since naturally-occurring arsenic concentrations typically are present at levels greater than the risk-based screening thresholds, the ESLs are not directly applicable, and it is appropriate to evaluate the background arsenic concentration.

Therefore, as part of the 2009 Phase II investigation, additional samples were collected to develop a sufficiently large data set of arsenic concentrations in soil along the Branch Line to calculate a site-specific background concentration. The analysis method for determining background arsenic threshold concentration followed the CA Department of Toxic Substances Control protocol. A site-specific background threshold value of arsenic in soil for the Santa Cruz Branch Rail Line was calculated to be 14.4 mg/kg based on 74 samples taken deeper than 1.5 feet below ground surface. A concentration of arsenic of 14 mg/kg in soil boring SB-05-10 taken within the project area at a depth of 10 feet provides further evidence that the background concentration of 14.4 mg/kg is representative of the proposed trail project along the north coast. The west side of the City of Santa Cruz has a background arsenic concentration of 13.67 mg/kg which is also consistent with the area along the north coast. This background level is within approximately 2.5 miles of the southern boundary of the Project area.

Geophysical survey at the presumed location of the potential UST at milepost 26.69 was conducted as recommended from Phase I. The presence of the UST could not be confirmed by the geophysical survey; therefore, targeted soil samples were collected within this area to evaluate potential environmental impacts from this historical feature.

Targeted soil sampling was conducted to address the engine house and potential UST at MP 26.69. Two borings were conducted at this location and samples were analyzed for total petroleum hydrocarbons (TPH) associated with gasoline (TPHg), diesel (TPHd), PAHs, Title 22 metals, and VOCs at depths of 1, 5 and 10 feet. TPHg and VOCs were not detected in any of the samples analyzed. TPHd, PAHs, and metals were detected at concentrations below their respective 2005 and 2009 Environmental Screening Levels (ESLs) or applicable background concentration.

Systematic soil sampling occurred in 2005 within the proposed project limits, to evaluate the possibility that railroad operations resulted in pervasive environmental impacts along the entirety of the railroad corridor. The sampling in the agricultural north, ranged from MP 26.11 to MP 27.00. It included 4 boring locations at MP 27.00, 26.65, 26.36, and 26.11, at varying depths up to 3 feet. It should be noted that borings were located along the rail line close to agricultural activities where pesticide and arsenic levels can be assumed to be the highest due to herbicide use from both the railroad and farming activities. Samples were analyzed for TPHd, TPHmo (associated with motor oil), PAHs, select metals, and pesticides. TPHd, TPHmo, PAHs, metals and pesticides were not detected at concentrations above their respective ESLs or applicable background concentrations (AMEC Geomatrix 2009).

Based on the Phase I and Phase II site assessments, no further field investigation or testing should be needed as the soil contaminant concentrations within the Project area are below or at the screening level thresholds or applicable background concentrations.

Asbestos and Lead

Existing structures along the rail line, such as crossing gates, switch boxes, and other small supporting enclosures or appurtenances, were constructed between 1903 and 1977 (RTC 2012). Due to their age, many structures may have been built with materials containing friable asbestos and lead-based paint.

Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials (ACM) are damaged or disturbed. When these fibers get into the air they may be inhaled into the lungs, where they can cause significant health problems (USEPA 2017a). Beginning in the late 1970s, asbestos was phased out for building and construction purposes.

Lead is a highly toxic metal that was used for many years as a component of consumer products. Sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, urban dust, and secondary lead smelters. Excessive exposure can result in the accumulation of lead in the bloodstream, soft tissues, and bones. Children are particularly susceptible to lead-related health problems as it is easily absorbed into developing systems and organs. In 1978, the federal government required the reduction of lead in house paint to less than 0.06 percent lead. Lead paint used on older structures continues to pose a public health hazard unless and until it is abated. Inspection, testing, and removal of lead-containing building materials must be performed by state-certified contractors required to comply with applicable health and safety and hazardous materials regulations.

3.6.2.3 Hazardous Materials Sites

A Radius Report was completed for the Project corridor by GeoSearch (2018) to identify features, historical uses, or activities that could be associated with environmental impairment of soil and groundwater along the trail corridor. The Radius Report included review of historical topographical maps, historical aerial photographs, and publicly maintained and available records pertaining to on-site and nearby environmental investigations, chemical use, and the possible presence of underground storage tanks.

As shown in Table 3.6-1, the Radius Report identified 28 potentially hazardous material sites on federal and state listings within 0.25 mile of the Project corridor. Seven sites were identified as historical toxic or hazardous material release sites (refer to the bold listings in the far-right column of the table), indicating that they could still pose a threat to human health or the environment. Two of these sites, Map ID Number 6 and Number 9, were cleaned up and closed. Due to the nature of the site, the Wilder Ranch Burn Dump is analyzed alongside the release sites even though it is not identified as having a release event. The dump is discussed in further detail below along with the five other sites.

- **Map ID Number 3 (Lorenzi Ranch).** According to GeoSearch, the property contained an underground storage tank that had leaked gasoline into the surrounding soil. According to GeoTracker, the cleanup status of the site is “Completed – Case Closed,” but the case summary report (dated December 29, 1992) contains no remedial actions.
- **Map ID Number 6 (Fambrini Farms).** According to GeoSearch, a leaking underground storage tank (LUST) of gasoline was discovered in March 2004, site assessments occurred through October

2005, and remediation activities took place through August 2006 (GeoSearch 2018). This case was closed with a completed status in April 2014.

- **Map ID Number 7 (Northbound Highway 1 Marine View Ave).** According to GeoSearch, a dump truck struck rocks causing a release from its saddle fuel tanks onto dirt on this property in April 1999 (GeoSearch 2018). The property owner had contacted the County office of Environmental Health for remediation of the site, but no remediation measures are recorded for this release site.
- **Map ID Number 9 (Ocean View Gas).** According to GeoSearch, a release of waste oil, motor oil, hydraulic fluid, or lubricating oil occurred on this property in 1989 (GeoSearch 2018). Soil excavation was undertaken to remove some limited contaminated soils observed during the tank removal. This release site was given a case closure status in July 2012.
- **Map ID Number 12 (Bonny Doon Road).** Two release events are associated with this listing: A 1996 release of 25,000 pounds of ammonium nitrate which was cleaned up; and a release of transmission oil in 1998 that was also cleaned up.
- **Map ID Number 14 (Wilder Ranch Burn Dump).** Although not identified as a release site, there is unknown potential for aerially deposited contaminants because materials were burned at the site and because records regarding the site are limited. According to the SEMS report contained in the GeoSearch Radius Report, the Wilder Ranch Burn Dump is not listed on the National Priority List (NPL), and it is a removal site only, indicating that no site assessment work is needed. The non-NPL status was effective November 30, 2001.
- **Map ID Number 15 (Davenport Cement Plant).** This site includes numerous releases between 1994 and 2008. The release events included diesel fuel, hydraulic oil, calcium hydroxide, motor oil, and lime slurry. According to the response to closure investigation report available on GeoTracker (dated February 7, 2018), the property is still required to undertake remediation. The site status is open with potential contaminants of concern including arsenic, diesel, heating oil, fuel oil, naphthalene, PAHs, TPHs, waste oil, motor oil, hydraulic oil, and lubricating oil. Potential media of concern include groundwater, sediments, and soils.
- **Map ID Number 23 (Lundberg Studies, Inc.).** The listing includes release of lead compounds. The status of the site is inactive as of November 12, 2006.

3.6.3 Environmental Consequences

3.6.3.1 No Action Alternative

Under the No Action Alternative, there would be no construction-related activities that could disturb contaminated soil, exposing the public or environment to hazardous materials. Further, without the new trail, there would be no increased exposure of trail users and maintenance personnel to pesticides and other hazardous chemicals from routine agricultural operations. The impact from hazards and hazardous materials would be less than significant.

3.6.3.2 Proposed Project Alternative

Trail User Exposure to Pesticides and Other Hazardous Materials

Under the Proposed Project, the alignment would be located adjacent to active agricultural operations that use pesticides and other hazardous chemicals routinely for agricultural

operations. Thus, trail users and trail maintenance personnel could be exposed to these hazardous materials during and after their application on adjacent properties.

Construction workers, trail users, and maintenance personnel could be exposed to agricultural chemicals through ingestion, inhalation, and dermal contact. The most likely paths of exposure are ingestion and inhalation of the chemicals during and after they are applied to crops on adjacent properties. Each chemical has a certain “breakdown period,” which is the time it takes for the chemical to dissipate. Regulations for some chemicals do not permit any human contact with the area sprayed until the chemical has dissipated down to acceptable levels. The re-entry periods (i.e., the period of time after which a person may re-enter the area in which the chemical was applied) following application of the chemical are specified on the chemical label and by regulation. The Santa Cruz County Agricultural Commissioner’s office requires that pesticide users strictly adhere to the chemical label and other applicable regulations.

The only fumigant currently used in the North Coast area is Telone II (active ingredient 1,3-D), which made up approximately 4.8 percent of the area’s pesticide application between 2012 and 2017. Telone II is applied to conventional (non-organic) Brussels sprouts along the Project corridor during the late spring and early summer, a time when the trail is likely to be used most actively. However, Telone II is typically applied during early morning hours that would likely not coincide with peak trail use times.

As discussed in Section 3.3, *Agricultural Resources*, application of Telone II is prohibited within 100 feet of any occupied structure, and this buffer must be maintained for seven days following application (Santa Cruz County Agricultural Commissioner 2017b). These buffer restrictions do not currently apply to transient uses, like the Proposed Project. State Parks indicates that existing agricultural operators on State Parks property informally implement a 50-foot application exclusion zone between public trails and pesticide application (Spohrer 2018). Therefore, Telone II application would not likely occur within 50 feet of the trail, but the potential exists for application within 100 feet of the trail. As such, trail users or maintenance personnel could be exposed to this restricted-use pesticide when on the trail. Risk of exposure to Telone II would increase if trail users or maintenance personnel enter the adjacent agricultural lands within seven days of Telone II application (whether trespassing or for off-site maintenance, such as litter removal).

For trail users passing by a field that was treated with this pesticide, the degree of exposure would be characterized as short-term/acute ambient exposure. A scientific study of the active ingredient in Telone II (1,3-D) did not determine this degree of exposure to be a health risk for adults or children (CalEPA 2015). The transient nature of contact with 1,3-D for trail users would limit exposure, as trail users would not remain stationary in the most intensive contact zone.

For non-fumigant pesticides, the risk of exposure for trail users and maintenance personnel would result primarily due to dermal skin contact or ingestion. Because the potential exists for trail users to trespass onto adjacent agricultural property after pesticides have been applied (as discussed in Section 3.3, *Agricultural Resources*), trails users could become exposed to potentially dangerous chemicals. Exposure to pesticides could result in a variety of deleterious health effects.

Table 3.6-1 Hazardous Materials Sites near the Project Corridor

Map ID Number	Site Name	Site Location	Distance from Project Corridor (feet) ^a	Database Reference ^b
1	Coast Dairies and Land Co.	Highway 1 Mile Marker 264, Davenport, CA 95017	0	HWTS
2	Pacific Mariculture Abalone	5515 Coast Road, Davenport, CA 95017	58	FRSCA, PCSR09
3	Lorenzi Ranch	5511 Coast Road, Santa Cruz, CA 95060	58	<u>GeoTracker</u> , FRSCA, HISTCORTESE, HWTS, LUST
4	Rancho Los Palmas	7201 Coast Road, Davenport, CA 95017	100	FRSCA
5	Kurt Zeiher	6511 Coast Road, Davenport, CA 95017	143	SWEEPS
6	Fambrini Farms	Highway 1 South of Davenport, CA 95017	164	<u>GeoTracker</u> , FRSCA, HISTUST, LUST
7	N/A	Northbound Highway 1 Marine View Ave, Davenport, CA 95017	211	<u>CHMIRS</u> , <u>ERNSCA</u>
8	Cash Store LLC	1 Davenport Ave, Davenport, CA 95017	243	HWTS
9	Ocean View Gas	490 Highway 1, Davenport, CA 95017	259	<u>GeoTracker</u> , FRSCA, HISTCORTESE, HISTUST, LUST, SWEEPS
10	Davenport Old Town Pump Station	30 Fair Ave, Davenport, CA 95017	264	FRSCA
11	P Bargiacchi and Son	2101 Coast Road, Santa Cruz, CA 95060	306	HISTUST
12	N/A	Bonny Doon Road, Santa Cruz, CA	306	CHMIRS, <u>ERNSCA</u> , <u>HMIRS09</u>
13	R J Fambrini – Home Ranch	Santa Cruz, CA	343	GeoTracker
14	Wilder Ranch Burn Dump	Wilder Ranch State Park, Santa Cruz, CA 95060	375	FRSCA, SEMS
15	Davenport Cement Plant ^c	Highway 1, Davenport, CA 95017	385	AIRSAFS, <u>CHMIRS</u> , GeoTracker, ECHOR09, EMI, <u>FRSCA</u> , HISTUST, HWTS, <u>ICIS</u> , ICISNPDES, LDS, MRDS, MSHA, NPDES, NPDES09, PCSR09, RCRANGR09, SEMSARCH, SWIS, <u>IRI</u> , WMUDS
16	R J Fambrini – Petes Upper	Santa Cruz, CA	391	GeoTracker
17	Jacobs Farm	1751 Coast Road, Santa Cruz, CA 95060	422	ABST, GeoTracker, FRSCA, HISTUST, HWTS
18	Sunset Farms Inc.	3451 Coast Road, Santa Cruz, CA 95060	433	ABST, FRSCA, HISTUST
19	Pacific Elementary	50 Ocean St., Santa Cruz, CA 95060	475	FRSCA
20	Santa Cruz Biotechnology Inc.	5322 Coast Highway 1, Santa Cruz, CA 95060	475	FRSCA, HWTS
21	Wilder Ranch Historic State Park	1401 Coast Road, Santa Cruz, CA 95060	544	FRSCA, HWTS
22	N/A	Davenport Fire Department, Davenport, CA 95017	681	FRSCA
23	Lundberg Studies Inc.	131 Old Coast Road, Davenport, CA 95017	834	ECHOR09, FRSCA, HWTS, NPDES, <u>IRI</u>
24	David G Willis	3642 Coast Road, Davenport, CA 95017	866	HISTUST
25	Davenport Mill	133 Marine View Ave, Davenport, CA 95017	866	ECHOR09, FRSCA

Map ID Number	Site Name	Site Location	Distance from Project Corridor (feet) ^a	Database Reference ^b
26	Vernon Russel Thompson	2691 Highway 1, Santa Cruz, CA 95060	945	ABST, FRSCA, HISTUST, HWTS
27	Wilder Sand Plant	Santa Cruz County, Santa Cruz, CA 95060	1,114	MINES
28	Granite Rock Co.	1800 Coast Road, Santa Cruz, CA 95060	1,162	ECHOR09, FRSCA, HWTS, NPDES

^a Distance listed is the nearest distance from either the Proposed Project or Alternative 1 (whichever is closer)

^b Database acronyms are defined below. **Bold and underlined** indicates release database listing.

State Listings:

- Above Ground Storage Tanks (ABST)
- Historical Underground Storage Tanks (HISTUST)
- Statewide Environmental Evaluation and Planning System (SWEEPS)
- Geotracker Cleanup Sites (GeoTracker)
- Leaking Underground Storage Tanks (LUST)
- Solid Waste Information System Sites (SWIS)
- California Hazardous Material Incident Report System (CHMIRS)
- Emissions Inventory Data (EMI)
- Hazardous Waste Tanager Summary (HWTS)
- Land Disposal Sites (LDS)
- Mines Listing (MINES)
- National Pollutant Discharge Elimination System Facilities (NPDES)
- Historical Cortese List (HISTCORTESE)
- Waste Management Unit Database (WMUDS)

Federal Listings:

- Emergency Response Notification System (ERNSCA)
- Resource Conservation and Recovery Act – Non-Generator (RCRANGR09)
- Superfund Enterprise Management System (SEMS)
- Superfund Enterprise Management system Archived Site Inventory (SEMSARCH)
- Aerometric Information Retrieval System/Air Facility Subsystem (AIRSAFS)
- Enforcement and Compliance History Information (ECHOR09)
- Facility Registration System (FRSCA)
- Hazardous Materials Incident Reporting System (HMIRSR09)
- Integrated Compliance Information System (ICIS)
- Integrated Compliance Information National Pollution Discharge Elimination System (ICISNPDES)
- Mine Safety and Health Administration Master Index File (MSHA)
- Mineral Resource Data System (MRDS)
- National Pollutant Discharge Elimination System (NPDESR09)
- Permit Compliance System (PCSR09)
- Toxics Release Inventory (TRI)

^c The Davenport Cement Plant is referred to in the GeoSearch database as RMC Lonestar Cement Plan.

Source: GeoSearch 2018 (refer to NCRT EIR, Appendix J)

As described in Section 2.1.2, *Action Alternative (Proposed Project)*, the Proposed Project contains several design and operational features, such as fencing, intended to limit the exposure of trail users to pesticides and other agricultural chemicals. In many locations, the trail would be in the existing railway cut, and in that case, there is a physical barrier such as a slope and/or dense vegetation where pedestrians and bicyclists would not be able to exit the trail. In addition, notices would be posted at entrances to the trail advising of ongoing agricultural activities, and stating that the trail user agrees to use the trail at his/her own risk. Through these notices, trail users would be advised that agricultural operations will be occurring and may include agricultural dust and pesticide spraying in accordance with State and local laws and ordinances.

In addition to the above design features, numerous federal, state, and local regulations regarding the use, transportation, and disposal of hazardous materials and waste exist. Compliance with applicable federal, state, and local regulations would reduce exposure hazards from adjacent agricultural operations.

The impact of the Proposed Project would be **less than significant with mitigation**. Implementation of mitigation measures identified in Section 3.3, *Agricultural Resources*, would reduce the impact of exposing trail users and maintenance personnel to pesticides and other agricultural chemicals during and after their application on adjacent properties to a less than significant level.

Ground Disturbance Could Release Soil Contaminants

Although the Proposed Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, several hazardous materials sites are located nearby. Although the release cases are closed, there is the potential for residual impacts to be present in soil and groundwater. Ground-disturbing activities during construction could result in exposure of construction personnel and the public, including future trail users, to existing contaminants from the former releases at listed sites (the Davenport Cement Plant), historic rail operations, and dust particles associated with these releases and prior pesticide application on adjacent properties.

Listed Hazardous Materials Sites

The Proposed Project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, but several hazardous materials sites are located near the trail alignment. Therefore, some risk exists that construction activities could expose construction personnel and the public to health hazards by inadvertently releasing contaminants that could be present.

The majority of the release sites identified in Table 3.6-1 would not pose a potential threat to human health or the environment due to closure status, past remediation, distance from the Proposed Project alignment (164 feet to 834 feet), or a combination thereof.

The Davenport Cement Plant (Map ID Number 15), is considered an open case and is currently undergoing remediation. The multiple releases at this property may have caused groundwater contamination, potentially allowing the contaminants to leach into soils in the Proposed Project area. At 385 feet north of the northern terminus of the Proposed Project,

this release could pose a potential hazard from ground-disturbing activities during construction.

Although the Wilder Ranch Burn Dump (Map ID Number 14) is not a release site and is listed as a non-NPL site, it is unknown whether the Proposed Project would result in impacts as available documentation regarding the closed case listing for this site was lacking.

Historic Use

Former rail use in the Proposed Project corridor could pose a hazard during soil disturbing activities during construction. The historic use as a railroad line presents the potential that the corridor is contaminated with arsenic, heavy metals, pesticides, herbicides, PAHs, TPHs, and other contaminants associated with rail operations. As discussed in Section 3.6.2 under *Residual Chemicals*, the Phase II site assessment soil borings advanced along the Project corridor detected the presence of TPHs, PAHs, pesticides, and metals. No contaminants were detected by the Phase II site assessment soil borings at concentrations above the respective contaminant's industrial environmental screening level or applicable background concentration. Based on the site assessments, residual contaminants would not pose a hazard from ground-disturbing activities.

Contaminated Dust Particles

Ground-disturbing activities during construction could result in existing contaminants from the former releases at the Davenport Cement Plant, historic rail operations, and prior pesticide application on adjacent properties being spread via dust particulates or direct worker contact and exposure. Members of the public using existing informal blufftop trails, including trails crossing the Proposed Project corridor to provide access to area beaches, could also be exposed to dust particulates. In addition, improper handling and disposal of contaminated soils could pose a health risk to people.

Mitigation would be required to ensure that potentially hazardous materials are identified and properly handled during construction. The impact of the Proposed Project would be **less than significant with mitigation**.

3.6.4 Avoidance, Minimization, and/or Mitigation Measures

Based on previous hazardous material site investigations, the evidence does not support a need for further hazardous materials testing. However, based on continued coordination between RTC and California EHS, the following measures will be implemented if required to reduce the potential for hazardous materials impacts:

Mitigation Measure HAZ-4(a): Conduct Soil Sampling and Implement Necessary Remediation

Mitigation Measure HAZ-4(b): Prepare and Implement Soils Management Plan

3.7 Hydrology and Water Quality

This section evaluates potential impacts relating to hydrology and water quality on and around the Project corridor. This analysis includes review of surface water, runoff patterns, and water quality. Based on the NCRT EIR analysis, it was determined that the Project would not deplete groundwater supplies nor substantially interfere with groundwater

recharge (see Section 3.9 of the NCRT EIR, RTC 2019). Therefore, this topic will not be discussed further. Potential impacts to wetlands and waterways in the Project area are discussed in Section 3.11, *Wetlands and Other Waters of the U.S.*

3.7.1 Regulatory Setting

3.7.1.1 Federal

The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act (CWA) of 1977, dictates water quality standards and regulates the discharge of pollutants from point sources into waters of the U.S. The overall goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Section 303 of the act requires states to develop or adopt and implement water quality standards. This consists of designating the use of waters and setting water quality criteria. In addition, each state identifies impaired waters (also known as the 303(d) list) that require additional measures and a long-term plan to bring such waters up to water quality standards. Under Section 304(a), the EPA also issues recommended water quality criteria that aid states in developing these standards.

Section 402 and Section 404 of the CWA set forth the permitting programs to regulate discharges into waters of the U.S. Section 402 establishes the NPDES permitting program, which requires a permit for any point source discharge (excluding dredged and fill material) into a water of the U.S. As discussed in Section 3.11, *Wetlands and Other Waters of the U.S.*, Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. As part of the goal of maintaining water quality standards, any entity requiring a permit, commonly a Section 404 permit, needs to obtain water quality certification from the state.

3.7.1.2 State

The Porter-Cologne Act, enacted by the State of California in 1969, provides the State Water Resources Control Board authority over state water rights and implementation of water quality policy. This act also establishes Regional Water Quality Control Boards; the Project is located within the jurisdiction of the Central Coast Regional Water Quality Control Board. Regional Water Quality Control Boards are responsible for issuance of 401 Water Quality Certifications and NPDES permits. Santa Cruz County is within the Central Coast Regional Water Quality Control Board (CCRWQCB) jurisdiction. Water quality objectives for receiving waters in Santa Cruz County are specified in the Basin Plan prepared by the CCRWQCB, in compliance with the federal CWA and the Porter-Cologne Act. The plan identifies existing and potential beneficial uses for waterbodies within the basin, water quality objectives, and water quality standards.

3.7.2 Affected Environment

3.7.2.1 Watersheds

The California Department of Water Resources (DWR) divides surface watersheds in California into ten Hydrologic Regions (HR). This region covers approximately 7.25 million acres and includes all of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara counties, as well as parts of San Benito, San Mateo, Santa Clara, and Ventura counties (DWR

2009). The DWR subdivides HRs into Hydrologic Units (HU) that are commonly known as watersheds. In the Central Coast HR, the Project corridor is located in the Big Basin HU (CDF 2004). The Central Coast Regional Water Quality Control Board (CCRWQCB) governs basin planning and water quality in the Big Basin HU (CCRWQCB 2019). The DWR further subdivides HUs into Hydrologic Areas (HA) and Hydrologic Sub-Areas (HSA). The Project is located in the Santa Cruz HA and the Davenport HSA. The Davenport HSA is a coastal watershed that drains an area of approximately 106 square miles. The southern boundary of the watershed is just west of Santa Cruz, at Natural Bridges State Beach. The watershed extends north to the headwaters of Waddell Creek, which begin in Big Basin Redwoods State Park near the San Mateo/Santa Cruz county boundary. Waddell Creek discharges to the Pacific Ocean just south of Año Nuevo State Park.

As of the date of this analysis, the *Water Quality Control Plan for the Central Coastal Basin – June 2019 Edition* (Basin Plan) shows the Project corridor as located in the Big Basin HU and under the jurisdiction of the CCRWQCB (CCRWQCB 2019).

3.7.2.2 Topography

The Project corridor is located in the Coast Ranges Geomorphic Province, a series of mountain ranges and valleys that trend northwest subparallel to the San Andreas Fault (CGS 2002). The coastline of this province is uplifted, terraced, and wave-cut. Multiple stream channels, or ‘gullies,’ descend from the ridgeline of Ben Lomond Mountain in a southwesterly direction. These stream channels carry sediment to the ocean as they have done for millennia. A series of marine terraces have formed as a result of wave action and lithification of marine sediments. Due to their nature and location, these terraces experience both sheet flow associated with their generally flat profile and concentrated flow due to the presence of stream channels, or gullies. The terraces slope gently towards the ocean and consequently runoff that occurs as sheet flow outside of a defined stream channel generally flows seaward.

Multiple stream channels pass below the Project corridor in tunnel-like culverts that were drilled through the Santa Cruz Mudstone. Consequently, all of the major stream channels that cross below the Project corridor now pass unimpeded through culverts that discharge to the Pacific Ocean. These major culverts are located substantially below the Project corridor ground surface. Refer to Figure 3.7-1 for photographs of a typical ocean-discharging culvert.

3.7.2.3 Surface Water

Streams and Drainage Patterns

According to the National Hydrography Dataset (NHD), three unnamed streams and six named streams cross the Project corridor (NHD 2017), shown in Figure 3.7-2a and Figure 3.7-2b. The six named streams that flow beneath the Project corridor include the following, listed from south to north: Baldwin Creek, Majors Creek, Laguna Creek, Yellow Bank Creek, Liddell Creek, and San Vicente Creek. In addition, Wilder Creek flows beneath a trail connection to Wilder Ranch near the southern terminus of the Project corridor; however, trail improvements at this location would be limited to striping on an existing road or signage.

The three unnamed streams that cross the Project corridor are located in the southern portion of the corridor. Two unnamed streams (one of which is known locally as Lombardi Creek) cross southeast of Baldwin Creek and one unnamed stream crosses between Baldwin Creek and Majors Creek.

Runoff that does not collect in a defined stream channel flows either as sheet flow across the marine terraces towards the Pacific Ocean or infiltrates into soil that overlies the Santa Cruz Mudstone. The infiltrated stormwater subsequently evaporates, is taken up by vegetation, or is transported as subsurface flow towards the ocean.

Surface Water Quality

The Davenport HSA is largely undeveloped with the exception of the unincorporated community of Davenport in the northwestern corner of the watershed, and scattered rural residential development along the rail corridor and in the foothills to the east. Agricultural operations occupy the southern coastal portion of the watershed.

The City of Santa Cruz is located approximately 1.0 mile southeast of the southern terminus of the Project corridor, and Davenport is situated adjacent to the Project corridor's northern terminus, with development on the inland side of Highway 1. Stormwater runoff from urban and agricultural lands can be a source of water quality pollutants, including sediment, heavy metals, bacteria, pesticides, insecticides, and fertilizers (CCRWQCB 2019). Existing impairments to water quality in and adjacent to the Project corridor and efforts to improve water quality and prevent further degradation are discussed below.

The Basin Plan defines beneficial uses of several streams and estuaries in or adjacent to the Project corridor. The beneficial uses for those waterbodies are listed below in **Table 3.7-1**. Based on the established beneficial uses listed below, the CCRWQCB established water quality standards as well as the level of treatment necessary to maintain the standards and ensure the continuance of the beneficial uses.

The Basin Plan also defines beneficial uses for coastal waters in the region. The stretch of coastal waters within the Project corridor is recognized as providing the beneficial uses of Water Contact Recreation, Non-Contact Water Recreation, Industrial Service Supply, Navigation, Marine Habitat, Shellfish Harvesting, Commercial and Sport Fishing, and Wildlife Habitat.

The CCRWQCB assessed surface waters in the region for potential pollutants or other adverse effects that may impair one or more of the beneficial uses described above and found that San Vicente Creek and the coastal waters adjacent to the Project corridor are currently impaired and are not achieving the water quality standards established in the Basin Plan. Both San Vicente Creek and the coastal waters adjacent to the Project corridor are listed on the 2012 303(d) list of impaired waterbodies (SWRCB 2018). San Vicente Creek is listed as impaired by sedimentation/siltation. A discharge limit for non-point sources, known as a Total Daily Maximum Load (TMDL), is required but has not yet been completed. The coastal waters of the Pacific Ocean adjacent to the Project corridor are listed as impaired by Dieldrin, an organochloride insecticide used widely from the 1950s to the early 1970s but that has since been banned in the United States. A TMDL is required to address this impairment but has not yet been completed.

3.7.1 Environmental Consequences

3.7.1.1 No Action Alternative

Under the No Action Alternative, there would be no ground disturbance, no new structures, and no new impervious surfaces. Thus, there would not be an associated potential increase of pollutant discharges to Waters of the State or alterations to drainage patterns in the rail corridor through the introduction of new impervious surfaces. Therefore, the impact to hydrology and water quality would be less than significant.

3.7.1.1 Proposed Project Alternative

Pollution Discharge

Construction

Construction of the Proposed Project would include excavation of materials, clearing and grubbing, grading, placement of crushed aggregate base and paved surface, revegetation, installation of signs, and installation of a safety fence. The Proposed Project would entail cut and fill operations or use of retaining walls to widen the bench in some locations.

Construction of the Proposed Project would disturb approximately 39.1 acres.

At the eroding bluff near Davenport, options are being considered to support the trail: creating a slope using wire mesh baskets, constructing a retaining wall, installing a soil-nail wall, or re-establishing the portion of the bluff that has eroded through the use of fill. In all three options, coastal armoring would need to be established at the base of the slope. This armoring and the slope stabilization would minimize or eliminate further erosion.

In general, stormwater would flow on the surface from the new paved trail to the adjacent pervious (unpaved) areas. To improve drainage along the proposed trail, culverts would be installed and/or replaced at approximately 46 locations along or beneath the existing railroad bench or at adjacent parking lots.

Construction of the Proposed Project could result in soil erosion due to earth-moving activities such as excavation, grading, soil compaction and moving, soil stockpiling, slope modification, and culvert installation. Although the Proposed Project corridor is generally flat, runoff during a large storm event can occur as sheet flow across the Project alignment. This runoff has the potential to result in erosion, resulting in off-site sediment transport via stormwater. The types of pollutants contained in runoff from construction sites along the Proposed Project corridor may include sediments and contaminants such as oils and fuels from construction equipment. Additionally, existing pollutants that may be present in the Proposed Project corridor, such as nutrients, pesticides, herbicides, trace metals, and hydrocarbons, can attach to sediment and be transported downstream through erosion to nearby drainages or into the Pacific Ocean, contributing to degradation of water quality.

Figure 3.7-1 Typical Ocean-Discharging Culvert beneath the Project Corridor



Bonny Doon Beach, culvert opening at the base of the cliff in left hand portion of photograph



Source: Rincon Consultants field visit, December 8, 2017

Figure 3.7-2a North Coast Stream Crossings: North (Davenport to Scaroni Road)



Imagery provided by ESRI and its licensors © 2020. Additional data provided by National Hydrography Dataset, 2017.

Fig 3.9-2a NHD Stream Crossings North

Figure 3.7-2b North Coast Stream Crossings: South (Scaroni Road to Wilder Ranch)



Imagery provided by ESRI and its licensors © 2020. Additional data provided by National Hydrography Dataset, 2017.

Fig 3.9-2b NHD Stream Crossings South

Construction of the Proposed Project could also potentially result in the accidental release of hazardous materials such as diesel fuel, gasoline, lubricant oils, and other fluids required for the operation of construction vehicles or equipment. These accidentally released or leaked hazardous materials could indirectly impact water quality through runoff during a subsequent storm event.

Prior to construction, a 401 Water Quality Certification and a NPDES permit would be obtained. As part of the NPDES permit, a SWPPP would be developed, which would reduce potential water quality impacts during construction. This construction-phase impact of the Proposed Project would be **less than significant with mitigation**.

Operation

Once constructed, the Proposed Project would result in a net increase of impervious surfaces from the new paved trail, and paving at the Davenport Beach and Panther/Yellowbank Beach parking lots. Asphalt pavement for the Proposed Project would cover approximately 11.4 acres. The increase in impervious surface could affect water quality within the study area by increasing the velocity and amount of stormwater runoff into the adjacent study area watershed.

Operation of the Proposed Project could potentially result in the addition of contaminants into the stormwater runoff entering the local stormwater drainage system. If stormwater controls are not designed or maintained properly, runoff from the Proposed Project corridor (especially runoff from the newly paved parking lots) could contain contaminants such as oil, grease, and metals that could enter nearby drainages and ultimately degrade surface water and groundwater quality. Compliance with the NPDES-required SWPPP would reduce the risk of water degradation on- and off-site from soil erosion and other pollutants related to Proposed Project operation.

The current plans for the Proposed Project describe several stormwater quality management measures, such as new or replaced culverts along the Project corridor and bioswales at the Panther/Yellowbank Beach parking lot. At this time, these stormwater quality management measures are not designed to a level where potential impacts can be assessed in detail. A Stormwater Control Plan would be developed that describes stormwater quality management measures at an engineering-level of detail to treat runoff from the Project site. This more detailed assessment would demonstrate, prior to the commencement of construction activities, that the proposed stormwater control measures would be properly maintained to meet applicable NPDES requirements. With implementation of the required mitigation and compliance with the NPDES-required SWPPP, this impact would be **less than significant with mitigation**.

Table 3.7-1 Beneficial Uses of Waterbodies in the Project Corridor

Beneficial Uses	Waterbody Name						
	Baldwin Creek	Baldwin Creek Estuary	Majors Creek	Laguna Creek	Laguna Creek Estuary	Liddell Creek	San Vicente Creek
Municipal and Domestic Supply	X		X	X		X	X
Agricultural Supply	X		X	X		X	X
Industrial Process Supply							X
Industrial Service Supply			X	X			X
Groundwater Recharge	X		X	X	X	X	X
Water Contact Recreation	X	X	X	X	X	X	X
Non-Contact Water Recreation	X	X	X	X	X	X	X
Wildlife Habitat	X	X	X	X	X	X	X
Cold Fresh Water Habitat	X	X	X	X	X	X	X
Warm Fresh Water Habitat		X					
Migration of Aquatic Organisms	X	X	X	X	X	X	X
Spawning, Reproduction, and/or Early Development	X	X	X	X	X	X	X
Preservation of Biological Habitats of Special Significance	X	X					
Rare, Threatened, or Endangered Species	X	X	X	X	X	X	X
Estuarine Habitat		X	X		X	X	X
Fresh Water Replenishment	X		X	X		X	X
Commercial and Sport Fishing	X	X	X	X	X	X	X
Shellfish Harvesting		X			X		

Source: CCRWQCB 2019

3.7.2 Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented to reduce impacts on water quality. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure HWQ-1(a): Prepare Accidental Spill Control Plan and Conduct Environmental Training prior to Construction

Mitigation Measure HWQ-1(b): Maintain Vehicles and Equipment During Construction

Mitigation Measure HWQ-1(c): Conduct Design-level Drainage Analysis Prior to Construction, and Implement Identified Measures to Minimize Runoff During Construction

Mitigation Measure HWQ-1(d): Prepare Stormwater Control Plan prior to Construction and Implement Identified Stormwater Control Measures

3.8 Paleontological Resources

Paleontological resources represent the earth's history revealed through the rocks, and are typically encountered as fossils. If a project would result in the alteration or destruction of any of these resources, impacts to paleontological resources may result.

3.8.1 Regulatory Setting

3.8.1.1 Federal

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects. Therefore, the following federal and state laws will apply to this project.

16 United States Code (USC) 431-433 (the "Antiquities Act") prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered "objects of antiquity" by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

16 United States Code (USC) 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

23 United States Code (USC) 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law.

23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

3.8.2 Affected Environment

3.8.2.1 Geological Setting

The Project corridor is situated along the coast adjacent to the Santa Cruz Mountains within the Coast Ranges geomorphic province of California (California Geological Survey [CGS] 2002). The Coast Ranges are characterized by numerous north-south-trending peaks and valleys that range in elevation from approximately 500 feet above mean sea level (amsl) to 8,098 feet amsl at the highest summit, which is Mount Linn in Tehama County.

Geologic Units

As shown in Figure 3.8-1a and Figure 3.8-1b, the Project corridor includes four geologic units mapped at the surface by Brabb (1997): the late Miocene Santa Cruz Mudstone (Tsc), Pleistocene marine terrace deposits (Qcl), and Holocene basin (Qb) and alluvial deposits (Qal).

The Santa Cruz Mudstone has yielded pollen, foraminifera, and mollusks from Santa Cruz County as well as several rare vertebrate localities, which produced fossil specimens of fish scales and a sea cow rib (Clark 1981).

Pleistocene marine terrace deposits have a record of vertebrate fossil preservation in coastal California and have produced scientifically significant specimens from multiple localities. In southern and central coastal California, Pleistocene marine terrace deposits have yielded vertebrate fossil specimens of camel, horse, ground sloth, whale, dolphin, shark, and fish (Jefferson et al. 1992; Woodring et al. 1946). In Santa Cruz County, Pleistocene alluvial deposits of similar lithology to the Pleistocene terrace deposits in the Project area have preserved invertebrate, plant, and microfossil specimens from multiple localities (Clark 1981; Weber and Allwardt 2001).

Quaternary alluvial and basin deposits (Qal, Qb) of Holocene age are intermittently exposed along drainages between terrace platforms in the Project corridor. No previously recorded fossils have been documented from within Quaternary alluvial and basin deposits near the alignment. Holocene-age alluvial deposits, particularly those younger than 5,000 years old, are generally too young to contain fossilized material, but they may overlie sensitive older deposits (i.e., the Santa Cruz Mudstone and Pleistocene marine terrace deposits) at an unknown depth.

The late Miocene Santa Cruz Mudstone, Pleistocene marine terrace deposits, and Quaternary alluvial and basin deposits are obscured at ground surface by up to approximately three feet of soil development (NRCS 2018). In addition, the soil and uppermost sediments have been disturbed previously during to past agricultural and railroad uses.

Locality Record Search Results

A search of the paleontological locality records at the Natural History Museum of Los Angeles County (LACM) resulted in no previously recorded fossil localities in the Project corridor or vicinity.

A supplemental review was conducted of the museum records maintained in the University of California Museum of Paleontology (UCMP) online collections database, and there is no

record of vertebrate fossil localities in the immediate vicinity of the Project corridor (UCMP 2018). The closest vertebrate locality on record, which produced a tooth of the deep-water shark, *Hexanchus*, is from the Santa Cruz Mudstone in Santa Cruz County. The UCMP lists a total of 692 paleontological localities from Santa Cruz County, including 71 that have produced vertebrate fossils. None of the 71 vertebrate localities occur in Pleistocene sediments.

3.8.1 Environmental Consequences

3.8.1.1 No Action Alternative

The No Action Alternative would not involve subsurface disturbance in previously undisturbed areas; therefore, this alternative has no potential to disturb scientifically important paleontological resources.

3.8.1.2 Proposed Project Alternative

Based on the record searches and literature review, the paleontological sensitivity of the geologic units underlying the Project area was determined in accordance with criteria set forth by the Society of Vertebrate Paleontology (2010). The Santa Cruz Mudstone and marine terrace deposits have a high paleontological sensitivity because these units have proven to yield significant vertebrate fossils in Santa Cruz County and elsewhere along the coast of California and they have the potential to yield significant resources in the Project area (Clark 1981; Jefferson et al. 1992; McLeod 2018; Woodring et al. 1946). Along the Proposed Project alignment there is approximately 16.4 acres of area considered to have high paleontological sensitivity.

The Holocene alluvial and basin deposits mapped in the Project area are determined to have a low paleontological resource potential at shallow to moderate depth because they are likely too young to contain fossilized material. There is approximately 1.8 acres of area along the Proposed Project alignment considered to have low paleontological sensitivity.

Excavation during Proposed Project construction would typically be limited to a depth of two feet, primarily in areas that have been previously disturbed for either rail line construction or by agricultural activities. However, in some areas, excavation between 10 feet and 48 feet deep would be required (refer to Table 2-2 in Section 2.1.2, *Action Alternative (Proposed Project)*).

Excavation and grading at depths of 10 to 48 feet could reach previously undisturbed strata with a high paleontological sensitivity (e.g., late Miocene Santa Cruz Mudstone and Pleistocene marine terrace deposits). Such disturbance may result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data.

Impacts from the Proposed Project on paleontological resources would be **less than significant with mitigation**. Implementation of mitigation measures, described below, would reduce potential impacts to paleontological resources through monitoring during construction and ensuring the recovery, identification, and curation of previously unrecovered fossils.

3.8.1 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce the potential for paleontological impacts. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure CR-3: Conduct Paleontological Monitoring During Construction

3.9 Recreation

This section evaluates the potential environmental effects associated with implementation of the Proposed Project to public parks, recreation, and open space recreational resources in and near the Project area.

3.9.1 Regulatory Setting

3.9.1.1 Federal

National Marine Sanctuaries Act

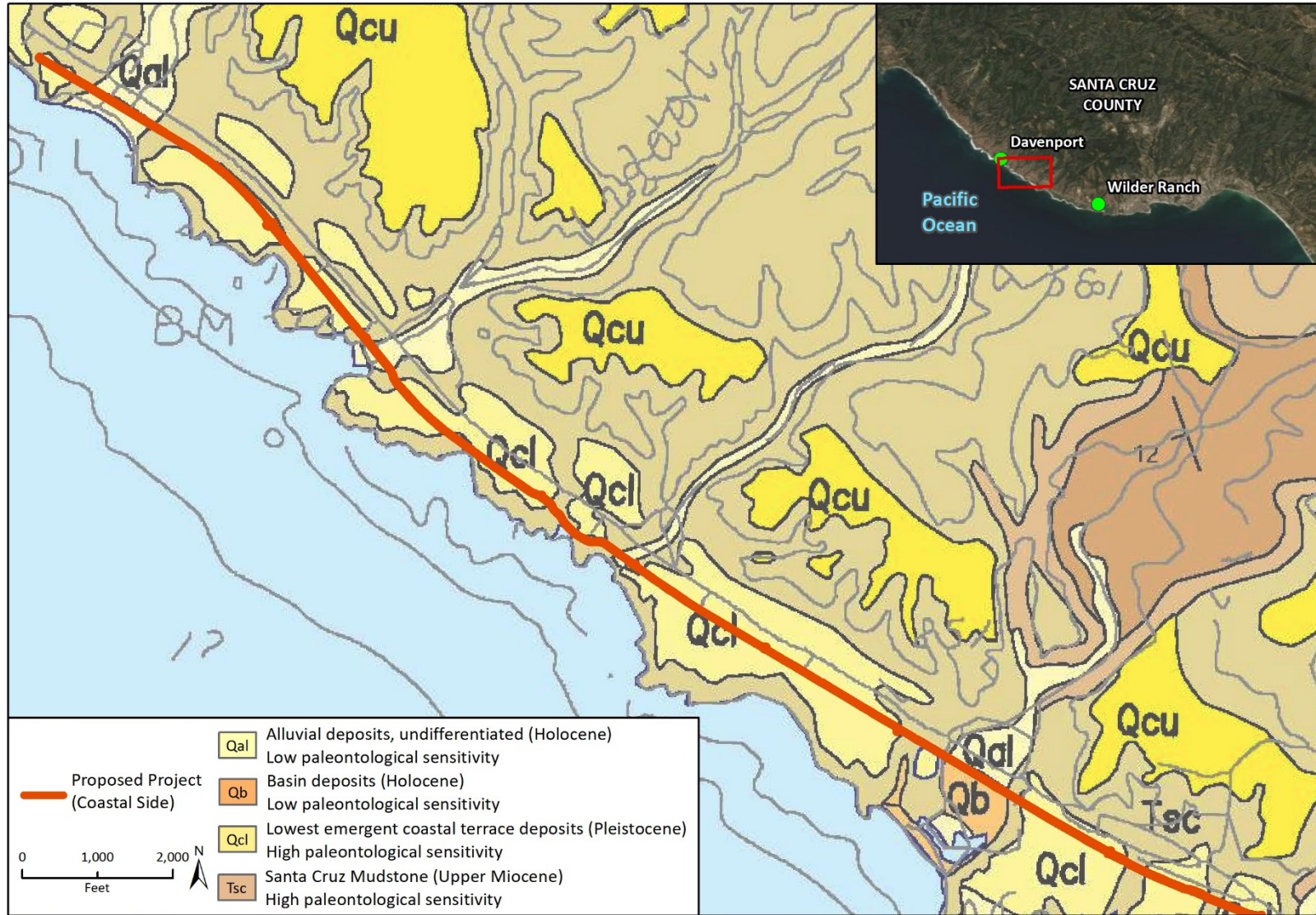
The National Oceanic and Atmospheric Administration, within the U.S. Department of Commerce, provides authority for the National Marine Sanctuaries Act, originally enacted as Title III of the Marine Protection, Research and Sanctuaries Act of 1972. This act authorizes the Secretary of Commerce to designate and protect areas of the marine environment with special significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or aesthetic qualities as national marine sanctuaries. National marine sanctuaries consist of designated marine waters and submerged lands and can extend up to the mean high-water line.

The National Marine Sanctuary System includes 13 sanctuaries, including the Monterey Bay National Marine Sanctuary that extends from San Francisco to Cambria, including the area of the Pacific Ocean located west of the Project corridor.

Coast Dairies Long-Term Resource Protection and Access Plan

The Coast Dairies Long-Term Resource Protection and Access Plan (The Trust for Public Land 2001) is an existing condition report for the property that includes both the Coast Dairies property within Wilder Ranch State Park, and what is now the Cotoni-Coast Dairies National Monument. These areas are located north of the Wilder Ranch farm area, and span both the coastal and inland sides of Highway 1. The purpose of the plan is to provide direction and guidance on how to best manage natural and physical resources, visitor use, development, and use of lands and facilities, while protecting natural resources throughout the property. This plan will be the basis for future environmental analyses as further plans for the properties are implemented. The Coast Dairies Plan will be used as a template against which future project implementation plans are reviewed to determine whether such projects will protect and enhance the values of the property.

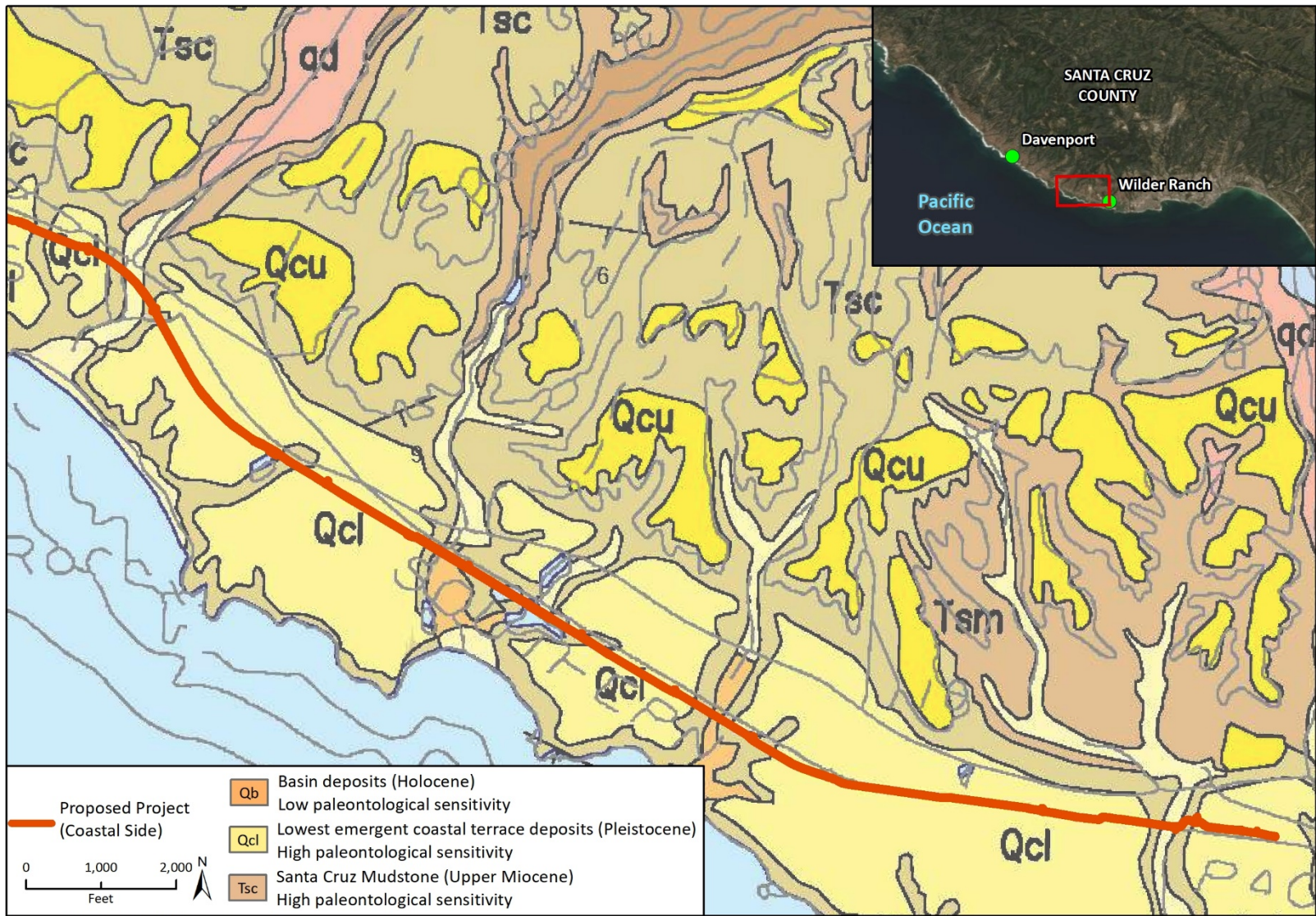
Figure 3.8-1a Paleontological Sensitivity in the Project Area: North (Davenport to Scaroni Road)



Data provided by Brabb, E.E., 1997, Geologic map of Santa Cruz County, California.

CR Fig 2a Geologic Map North

Figure 3.8-1b Geologic Units in the Project Area: South (Scarconi Road to Wilder Ranch)



Data provided by Brabb, E.E., 1997, Geologic map of Santa Cruz County, California.

CR Fig 2b Geologic Map South

3.9.1.2 State

Wilder Ranch State Park General Plan

The Wilder Ranch State Park General Plan (California State Parks Department [State Parks] 1980) recognizes the potential of Wilder Ranch State Park, at the southern terminus of the Project, to help meet California's recreation demands. The plan establishes goals to provide recreational opportunities for day and overnight use, protect cultural and natural resources, and provide educational elements throughout the park for both cultural and natural resources. It also identifies areas to remove exotic plants and rehabilitate natural areas that have been degraded through past land uses. While preserving and enhancing natural resources, the plan also acknowledges the historical use of the site for agricultural purposes and plans for the retention of agricultural crop production in the park through management of lease holds to farmers. The plan establishes recreational provisions that include walking, hiking, mountain biking, and equestrian use interspersed with educational opportunities.

3.9.2 Monterey Bay Sanctuary Scenic Trail Network Final Master Plan

As described in the *MBSST Network Master Plan and EIR* (RTC 2014), the Master Plan was developed by the RTC to establish the alignment and design standards for a continuous transportation and recreational trail system along the Santa Cruz Branch Rail Line through Santa Cruz County (RTC 2014). This trail would connect to the Monterey Bay Coastal Recreational Trail that serves parts of Monterey County, eventually meeting at the Pajaro River, which divides the two counties. At full buildout, the trails would serve most of Santa Cruz and Monterey counties, providing a continuous recreational trail along the entire Monterey Bay coastline. The Project comprises Segment 5 of the MBSST. Relevant goals, objectives, and policies in the MBSST Network Master Plan include the provision of a trail that extends along the Santa Cruz Branch Line throughout the county that would separate pedestrian and bicycle traffic from roadways and vehicle traffic. The trail system would use existing recreational trails to the fullest extent possible, and would provide scenic views of the Monterey Bay National Marine Sanctuary while minimizing impacts of the trail on environmental resources. The MBSST Network is also part of the California Coastal Trail through Santa Cruz County.

3.9.3 Affected Environment

3.9.3.1 Recreation

The Project corridor extends through open space and agricultural land with trails to the coastal bluffs and beaches.

There are two formal trails, designated in a management plan for recreational purposes, adjacent to the Project corridor. These include the California Coastal Trail and the Wilder Ranch State Park Trail. The Coast Dairies State Park Path is also proposed for development by State Parks to be located between Panther Beach and Laguna Creek Beach. These trails have multiple access points along the Project alignment. These trails are located adjacent to agricultural lands and along the coastal bluffs, local beaches, and the coastline. Access to the trails and beaches from Highway 1 or Wilder Ranch occurs by formal and informal crossings of the rail line.

The Project corridor is located in an agricultural setting, where the majority of the lands are used for crop production. The remainder of the corridor extends through open space and

coastal bluffs. There are a number of local beaches that are widely used for recreation along the coastal side of the Project alignment, including: Davenport Beach located at the north end of the Project corridor; Bonny Doon Beach located 1.0 mile south of Davenport; Panther/Yellowbank Beach located 2.0 miles south of Davenport; and a number of smaller beaches including Laguna Creek, Four Mile, Shark Fin Cove, and Scott Creek beaches. Much of this land is in State Park property, as described below.

3.9.3.2 Federally Protected Resources

There are three federally protected resources located along the Project corridor, including the Monterey Bay National Marine Sanctuary, and the California Coastal National Monument that includes the Cotoni-Coast Dairies lands inland, and the shoreline that extends adjacent to the length of the Project alignment. The entire California shoreline is protected through this national monument.

The Monterey Bay National Marine Sanctuary was designated on September 18, 1992, by the National Oceanic and Atmospheric Administration under the authority of the National Marine Sanctuaries Act. The Sanctuary stretches from Marin on the north to Cambria on the south along 276 miles of the coast, extending an average distance of 30 miles from the shore. The Sanctuary supports sandy beaches, rocky shores, kelp beds and marine habitats for an extensive variety of marine wildlife and vegetation. The Sanctuary was established with the purpose of protecting marine natural resources, research and education, and public use, including commercial fishing and recreational activities. The Sanctuary may be accessed from beaches along the Project corridor.

The California Coastal National Monuments were created to protect islands, rocks, pinnacles, and exposed reefs that had not been appropriated or reserved in other ways, and include over 20,000 named and unnamed places off the coast within 12 nautical miles. The California Coastal National Monuments include Cotoni-Coast Dairies property, and the coastline and open waters, both located along the Project alignment as shown in Figure 3.9-1a.

The Cotoni-Coast Dairies National Monument is managed by the United States Bureau of Land Management (BLM) and was added to the California Coastal National Monuments program in 2017. It is located on the inland side of Highway 1, across from the Coast Dairies property within Wilder Ranch State Park. The 5,800-acre preserve includes coastal prairies, redwood forests, riparian canyons, and grazing lands. These lands are not currently open to the public, but the BLM is in the process of developing an access plan for this area (Blom 2017). Currently, studies are being undertaken to evaluate the resources in the preserve. These studies will be used to determine compatible land uses throughout the preserve that will protect sensitive natural resources, while providing access and educational opportunities to the public, as feasible.

The California Coastal National Monument, established in 2000, also includes unique coastal habitat for marine-dependent wildlife and vegetation on more than 20,000 rocks, islands, exposed reefs and pinnacles along the entirety of the California coastline. This area is also managed by the BLM. This area includes the coastline adjacent to the Project alignment and extending approximately 12 nautical miles seaward, ending along the continental shelf. The area provides extensive opportunities for nature viewing throughout the coasts of California, as well as providing wildlife and oceanic habitats to support natural resources.

3.9.3.3 State Parks

There is one state park located along the Project corridor, Wilder Ranch State Park, (**Figure 3.9-1b**), which includes the Coast Dairies property.

Wilder Ranch State Park is located at the southern terminus of the Project corridor. The 7,000-acre park extends from the crest of Ben Lomond Mountain to the seashore, and provides opportunities for hiking, mountain biking, and horseback riding. The park also includes coastal bluff trails, croplands, historic structures, and farm animals. Public events are hosted there throughout the year, detailing historic land uses in the park and throughout the greater Santa Cruz region. The Proposed Project's southern terminus is at the Wilder Ranch farmstead.

The Coast Dairies property is located west of Highway 1 on lands managed by the California State Parks Department within Wilder Ranch State Park (Figure 3.9-1a). The property includes most of the Project corridor, spanning from Wilder Ranch on the south to just north of Davenport. The property includes a system of unimproved coastal bluff trails that connect Davenport, Davenport Cove (Shark Fin Cove), Bonny Doon Beach, Panther/Yellowbank Beach and Laguna Creek Beach. The lands within the Coast Dairies property also include old ranch properties and several additional small informal beaches. Currently, there is no plan in place for these lands; however, they are used extensively for recreational purposes.

The North Coast area includes bicycling routes on both Highway 1 and mountain bike trails through state parks, primarily on the inland side of Highway 1. Highway 1, near the Project corridor, is a popular road route for cyclists. This facility provides a connection between the cities of San Francisco, Half Moon Bay, Santa Cruz, and Monterey, and other popular tourist destinations along the central coast. Bicyclists using this corridor also access the beaches, state parks, and the unincorporated community of Davenport using the existing pathways that connect Highway 1 to the coast.

Wilder Ranch at the southern end of the Project corridor is a major destination for mountain biking in the mountains of Santa Cruz County. From the trails in Wilder Ranch, there are connections that lead to additional mountain bike trails through formal and informal connections through UCSC's upper campus, the City of Santa Cruz Pogonip open space, Henry Cowell State Park, and Big Basin State Park. Additionally, there is a well-used paved bicycle path extending on the coastal side of Highway 1 from Wilder Ranch south to Shaffer Road in Santa Cruz.

3.9.1 Environmental Consequences

3.9.1.1 No Action Alternative

There would be no new recreational use (multi-use trail) along the rail corridor. Recreationists would continue to use the coastal bluff trails and beaches as they currently do. The impact to recreation and visitor experience under the No Action Alternative would be less than significant.

3.9.1.2 Proposed Project Alternative

The Proposed Project would provide a new 7.5 miles multi-purpose trail and increase connectivity and opportunity to use a variety of existing recreational facilities in the North Coast area.

The new multi-use trail would provide an additional recreational amenity in Santa Cruz County that is not currently available in the North Coast area. The new trail would provide an opportunity for the public to walk, run, bicycle, and view nature through open space areas; and would improve access to the coastal bluffs and beaches, California Coastal Trail, and Wilder Ranch State Park, including the Coast Dairies property. During construction, access to portions of the trails and beaches may be temporarily restricted.

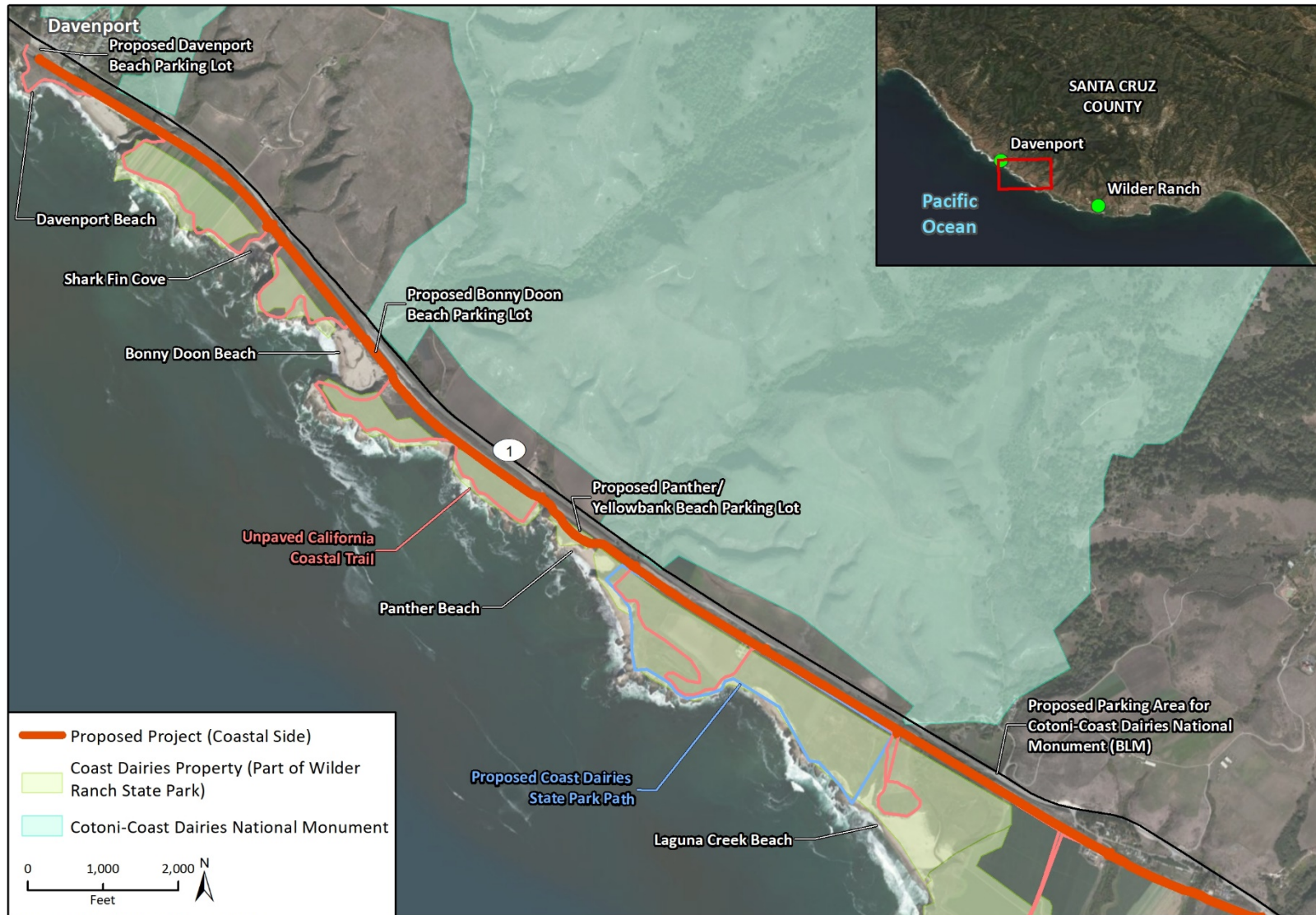
Some crossings of the rail line that allow passage from Highway 1 to the beaches and trails may be closed in the future when the rail line becomes active and fencing is erected between the rail and the multi-use trail. Table 2-1 in Section 2.1.2.4 *Rail Crossing*, estimates that four existing formal crossings and six informal crossings of the rail line would be closed. However, as Table 2-1 indicates, the distance from a proposed closed crossing to an open rail crossing to access the trails or beaches ranges between 225 to 1,180 feet. Overall, this would be a minor impact on recreation.

The Proposed Project additionally includes the identification of a Trail Manager and preparation of an Operations and Maintenance (O&M) Plan. The Trail Manager would be responsible for implementing the O&M Plan and maintaining the facilities along the Project corridor. Through ongoing trail maintenance and oversight via the Trail Manager, physical deterioration of the proposed trail and associated amenities, some of which would be utilized by existing recreators in the North Coast area, would not be substantial.

Although the Proposed Project trail would increase accessibility to and use of state parks, open space, and beaches along the project alignment, it is expected that the use of these facilities would be passive, and that recreators would not significantly degrade the existing facilities. Furthermore, the Proposed Project would provide a new recreational opportunity along the North Coast, with additional amenities and trail supervision that would enhance the accessibility of recreational areas throughout this area.

This impact of the Proposed Project would be positive in providing additional recreational facilities to the region. It would therefore be considered beneficial and less than significant. No mitigation is required.

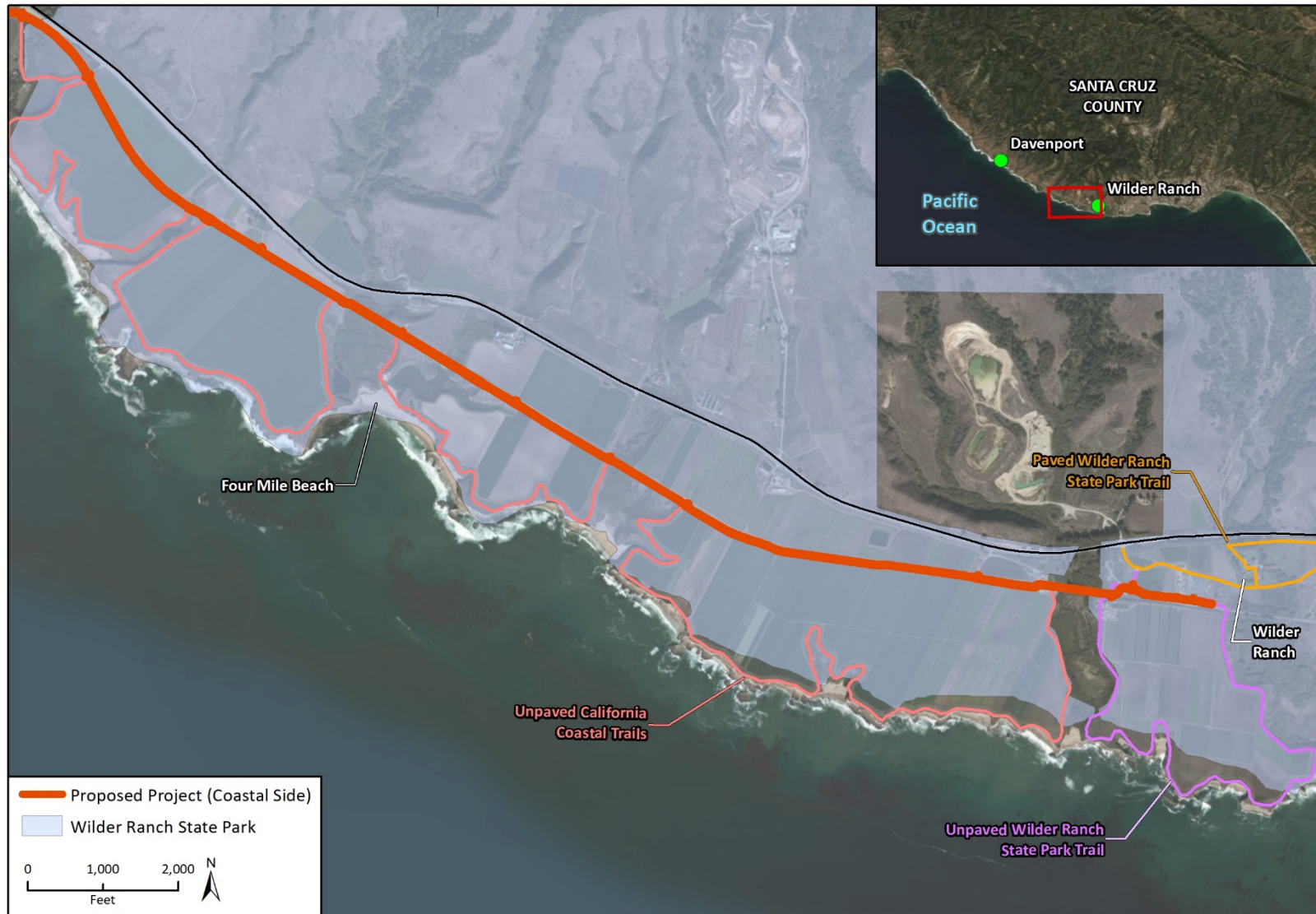
Figure 3.9-1a Recreational Facilities: North (Davenport to Scaroni Road)



Imagery provided by ESRI and its licensors © 2020.

Fig 3.13-1a Recreational Facilities North

Figure 3.9-1b Recreational Facilities: South (Scaroni Road to Wilder Ranch)



3.10 Transportation/Circulation

This section describes the potential impacts to transportation and traffic on and around the Project corridor that might be expected from implementation of the No Action and the Proposed Project. The existing setting and impact analysis is based on the Transportation Impact Analysis prepared by Kimley-Horn for the NCRT EIR (RTC 2019, Appendix K).

3.10.1 Regulatory Setting

3.10.1.1 State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for the operation and maintenance of the state highway system in California. The applicable standards for Highway 1 near the Project corridor are Level of Service (LOS) D or worse under existing conditions and LOS E for cumulative conditions. LOS is a performance measure, commonly used by public agencies, based on a scale of A to F with A being the best (free-flow traffic) and F being the worse (stop-and-go congestion).

3.10.2 Affected Environment

3.10.2.1 Road Network

Highway 1 parallels the 7.5-mile trail corridor and provides vehicular access from San Francisco to the north and Santa Cruz to the south. This highway generally has two lanes between Wilder Ranch State Park and Davenport, although limited sections have three and four lanes. The speed limit in this area is 45 miles per hour (mph) at Davenport Beach and 55 mph at Bonny Doon Beach and Panther/Yellowbank Beach. Several parking locations line this segment of Highway 1 and provide access to existing coastal pedestrian trails. Bonny Doon Road intersects with Highway 1 at Bonny Doon Beach, providing vehicular access from the unincorporated community of Bonny Doon to the northeast. Several local roads also intersect Highway 1 along the Project corridor, including: Marine View Avenue, Ocean Street, Center Street, Davenport Avenue, and Old Coast Road in Davenport; Bonny Doon Road; Laguna Road; Coast Road (near Coast Dairies); Back Ranch Road; Scaroni Road; Dimeo Lane; and Coast Road (near Wilder Ranch). Laguna Road, Coast Road (both locations), and Scaroni Road are all loop roads that intersect with Highway 1 in two locations.

3.10.2.2 Traffic Conditions

Most vehicle traffic on this portion of Highway 1 occurs on weekends. As part of the environmental compliance process for the project, volume counts on Highway 1 were conducted during a mid-day peak period (11 a.m. to 2 p.m.) on Saturday, October 18, 2017. This weekend did not represent a peak weekend, but a typical Saturday during the year. Traffic counts were conducted where Highway 1 intersects with the Davenport Lot North, Bonny Doon Beach, and Panther/Yellowbank Beach parking lots. Figure 3.10-1 shows counts of existing vehicular turning movements at these locations.

In addition to estimated peak existing demand, Google Earth satellite imagery was used to count parked vehicles on a busy, sunny day during the peak summer season (Friday, September 1, 2017, Labor Day weekend).

3.10.2.3 Parking Conditions

The Transportation Impact Analysis identified 11 parking locations scattered adjacent to Highway 1 parallel to the Project corridor. People primarily access these parking locations to visit the beaches and inland recreation areas. Parking demand is highest on warm sunny days during the summer and over warm holiday weekends. At these times, the parking locations reach capacity and visitors use the gravel shoulders along Highway 1 for informal and overflow parking. Parking is permitted along Highway 1 in most sections of the corridor from 6 a.m. to 10 p.m. “No Parking” zones have been established along sections, indicated by the red dashed lines in Figure 3.10-2.

Of the 11 parking locations identified, the Proposed Project includes improvements at the following three parking lots on the coastal side of Highway 1:

- The Davenport Lot North is unpaved and accommodates approximately 54 parked vehicles. This lot also provides parking for people going to the restaurants and stores in Davenport, on the inland side of Highway 1, as well as for tourists accessing bluff top trails and beaches in the vicinity.⁴
- The Panther/Yellowbank Beach Lot is unpaved and accommodates approximately 160 parked vehicles.
- The Bonny Doon Beach Lot is paved and includes 55 parking spaces.

Currently, there are no signals at these parking areas; however, there are left turn pockets at the Davenport Lot North and Bonny Doon Beach Lots. No left turn pockets are provided at the Panther/Yellowbank Beach lot. The driveways to these parking lots currently function like side street stop-controlled intersections.

Table 3.10-1 compares field counts of average and peak hourly parking demand, which apply to the busiest daytime hours between mid-morning and mid-afternoon.

The peak-day counts taken on September 1, 2017 are roughly representative of parking capacity in the studied parking locations (Vo 2018).

As shown in Table 3.10-1, during an average hour on a peak day, 54 cars were parked in Davenport Lot North, 55 cars in the Bonny Doon Beach Lot, and 160 cars in the Panther/Yellowbank Beach Lot. Additionally, 362 cars were parked in other formal lots along the corridor, while 42 cars were parked elsewhere along Highway 1 (i.e., on the highway shoulder). Altogether 673 vehicles were parked along Highway 1 from Davenport to Wilder Ranch on this peak day.

⁴ The Davenport Lot, located at the north end of the trail alignment, on the coastal side of the Highway 1/Ocean Street intersection in Davenport, is split into two sections for the purpose of this analysis – Davenport Lot North and Davenport Lot South. As described in Section 2.1.2, Action Alternative (Proposed Project), the northern portion of the lot (Davenport Lot North) is publicly-owned, and the southern portion of the lot (Davenport Lot South) is privately-owned. As stated here, Davenport Lot North accommodates approximately 54 parked vehicles; Davenport Lot South accommodate approximately 56 parked vehicles, for a total of 110 parked vehicles combined.

3.10.2.1 Pedestrian and Bicyclist Circulation

Pedestrian activity along the Project corridor occurs at parking locations next to Highway 1 and existing pedestrian trails leading to the coastline. At the Davenport Beach lot (including Davenport Lot North and Davenport Lot South), pedestrians also cross Highway 1 to gain access to the restaurants and shopping in Davenport. On its northern and southern approaches into Davenport, Highway 1 has pedestrian warning signs and flashing beacons.

Railroad crossings leading to the coastline are shown in Figure 2-8 and Table 2-1 in Section 2.1.2, *Action Alternative (Proposed Project)*. There are 25 existing crossings over the rail line between Davenport and Wilder Ranch State Park.

Bicycle activity along the Project corridor occurs primarily along Highway 1. Although Highway 1 lacks striped bicycle lanes, bicyclists currently use the paved and striped shoulder. The shoulder width varies from approximately 1.0 foot to 11 feet. South of the Project corridor, Wilder Ranch has a separated bike path adjacent to Highway 1 on the coastal side of the highway that connects to Santa Cruz. No bicycle racks are currently provided at any of the parking lot locations along Highway 1.

3.10.2.1 Rail Operations

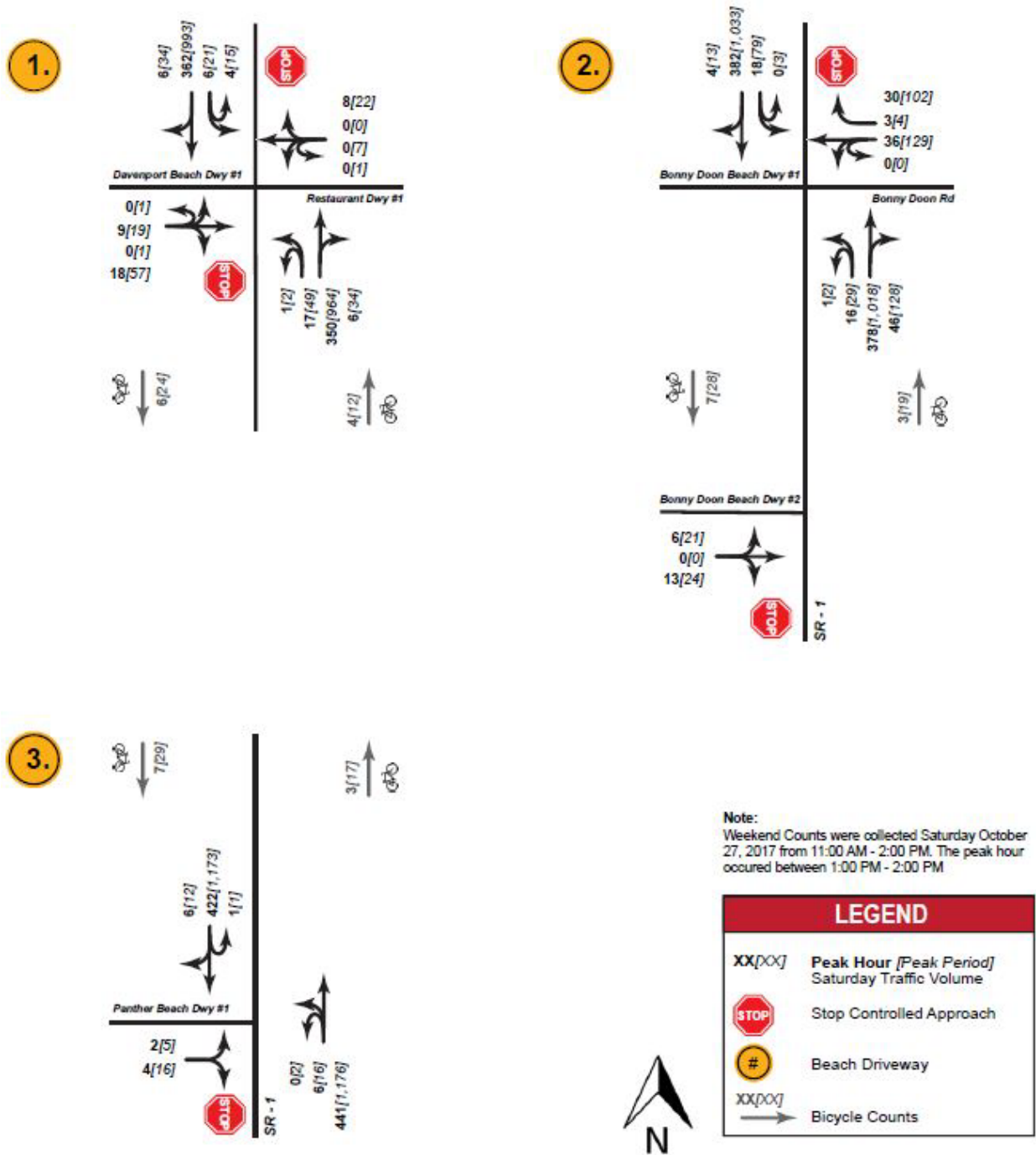
The 7.5-mile-long Project corridor extends along the RTC-owned Santa Cruz Branch Rail Line corridor. Currently, no regular freight or passenger services occur along the rail line in the Project vicinity. In June 2018, the RTC entered into an agreement with a rail operator to provide rail operations on the Santa Cruz Branch Rail Line and to serve as the common carrier on this line as designated by the Surface Transportation Board (STB).

3.10.2.1 Traffic Safety

Existing traffic safety hazards occur where pedestrians cross Highway 1 to and from parking areas. Near the Davenport Lot North, potentially unsafe crossings were observed during the October 28, 2017 parking survey, where pedestrians would start to cross the road to access retail shops and restaurants and oncoming cars were forced to stop. Pedestrians were also observed crossing from the inland side of Highway 1 at Bonny Doon Road to access the beach. Highway 1 lacks signage warning motorists of pedestrian crossings with the exception of the pedestrian crossing warning sign in Davenport.

Two collisions resulting in pedestrian injuries occurred between 2013 and 2017 on the segment of Highway 1 parallel to the Project corridor, based on data from the Statewide Integrated Traffic Record System (SWITRS). The proximity of bicyclists riding on the shoulder of Highway 1 to motorists traveling at highway speeds also poses a traffic safety hazard. Between 2013 and 2017, the SWITRS database reports one fatal accident and seven severe injuries from collisions between bicyclists and motorists on the segment of Highway 1 parallel to the Project corridor. However, no collisions involving pedestrians or bicyclists were reported within 500 feet of the Davenport Lot North, Bonny Doon Beach Lot, or Panther/Yellowbank Beach Lot during these years.

Figure 3.10-1 Weekend Turning Movement Volumes



Source: Kimley-Horn 2018; refer to Appendix K

Figure 3.10-2 Parking and No Parking Locations



Source: Kimley Horn, 2018

Table 3.10-1 Existing Peak & Average Hourly Parking Demand near the Project Corridor

Location ^a	Counts of Parked Cars	
	September 1, 2017 (Peak Day)	October 28, 2017 (Average Day)
1. Cement Plant Lot	33	4
2a. Davenport Lot North (unpaved)	54	23
2b. Davenport Lot South (unpaved)	56	25
3. Shark Fin Cove Beach (unpaved)	66	13
4. Bonny Doon Beach paved	55	20
5. Bonny Doon Beach at Bonny Doon Road (unpaved)	11	0
6. Panther/Yellowbank Beach north (unpaved)	48	4
7. Panther/Yellowbank Beach south (unpaved)	160	1
8. Laguna Beach (unpaved)	46	4
9. Four Mile Beach (unpaved)	54	1
10. Wilder Ranch State Park (paved)	32	n/a
11. Wilder Ranch State Park unpaved	16	39
12. Other parking lots along Highway 1 and shoulder parking	42	4
Total Parking Demand	673	138

^a The location number refers to the project locations numbered in **Figure 3.10-2**. The three parking lots to be improved as part of the Project are shown in **bold**. Source: Kimley-Horn 2018; refer to NCRT EIR (RTC 2019), Appendix K

3.10.3 Environmental Consequences

3.10.3.1 No Action Alternative

Under the No Project scenario, there would be no new trail or parking lot improvements that would generate new vehicle trips, and thus no increased demand for parking, associated traffic delays, or design hazards at parking lot entrances or where the trail crosses roadways and results in potential conflicts between vehicles and trail users. However, there also would be no improvements at the at the Highway 1 crossing to and from the Davenport Beach parking lot, and thus this pedestrian crossing would be less safe under the No Project Alternative than under the Proposed Project. Because this does not create a substantial impact compared to existing conditions, the impact to transportation/circulation would be less than significant.

3.10.3.2 Proposed Project Alternative

Traffic Level of Service

The Proposed Project would serve as a new recreational resource that attracts additional visitors to the coastal area of Santa Cruz, and would generate new vehicle trips on Highway 1 as trail users drive to and from parking lots adjacent to the highway. Based on data provided in the NCRT EIR, it is estimated that the Proposed Project would add 300 daily vehicle trips and 150 peak-hour trips on peak weekend days during the summer. These new trips would increase existing traffic delay at the intersections of Highway 1 with driveway entrances to the Davenport Lot North, Bonny Doon Beach Lot, and Panther/Yellowbank Beach parking Lot. Table 3.10-2 compares existing traffic delay at these intersections with modeled after implementation of the Project.

Table 3.10-2: Existing and Existing + Project Intersection Level of Service during Weekend Peak Hours in Summer Months

Intersection	Control ^a	Movement	Existing Conditions		Existing Conditions + Project	
			Delay (sec/veh ^b)	LOS	Delay (sec/veh)	LOS
Highway 1/ Davenport Lot North Driveway	TWSC	Overall	0.6	A	0.6	A
		Worst Approach	13.1	B (EB)	13.6	B (EB)
Highway 1/ Bonny Doon Beach North Driveway	TWSC	Overall	1.4	A	1.5	A
		Worst Approach	16.1	C (WB)	17	C (WB)
Highway 1/ Bonny Doon Beach South Driveway	TWSC	Overall	0.3	A	0.3	A
		Worst Approach	13.3	B (EB)	13.4	B (EB)
Highway 1/ Panther/Yellowbank Beach Driveway	TWSC	Overall	0.1	A	0.1	A
		Worst Approach	13.4	B (EB)	13	B (EB)

¹ TWSC = two-way stop-controlled intersection

² sec/veh = seconds of delay per vehicle

EB = east bound, WB = west bound

Source: Kimley-Horn 2018; Refer to NCRT EIR Appendix K

As shown in Table 3.10-2, the worst approach to an intersection affected by the Proposed Project, at Highway 1 and the northern entrance to the Bonny Doon Beach parking lot, would have LOS C conditions under the existing scenario and with Proposed Project-generated traffic. This level of traffic delay would not exceed the applicable Caltrans threshold of LOS D or worse under existing conditions. This impact of the Proposed Project would be **less than significant**. No mitigation is required.

Traffic Safety

The Proposed Project could affect traffic safety at roadway crossings, parking lots, and farm vehicle crossings. These potential design hazards and incompatible uses are discussed below.

Pedestrian Crossings

In Davenport, the Proposed Project would introduce design features to reduce existing traffic hazards for pedestrians crossing Highway 1. The improvements, to be determined in coordination with Caltrans, may include increased signage, striping, and lighting upgrades such as a High Intensity Activated Crosswalk (HAWK) beacon or similar. Better signage, striping, and/or lighting would provide a clearer warning to motorists of crossing pedestrians at the Highway 1/Ocean Street intersection, reducing traffic hazards between motorists and pedestrians in this part of Davenport.

Outside of Davenport, new trail users traveling by motor vehicle could increase the number of people parking on the shoulder of Highway 1 during peak days. However, sufficient parking space is available on the coastal side of Highway 1 to accommodate additional parking demand by trail users (see Figure 3.10-2). Because of the abundance of parking capacity on the coastal side of Highway 1, it is expected that few trail users would park on the inland shoulder of Highway 1 creating unsafe conditions. The Proposed Project would not result in a substantial increase in unsafe pedestrian crossings by people parking on the shoulder of Highway 1.

At the south end of the trail alignment, the proposed trail connection to Wilder Ranch would extend alongside and on existing paths between the rail corridor and Coast Road, and then continue along the coastal side of Coast Road. There would be no design hazards associated with the trail connection to Wilder Ranch.

The Proposed Project would cross two segments of Scaroni Road, a narrow one-lane road that loops south of Highway 1 to provide access to agricultural properties. In this location, bicycles and pedestrians would cross the roadway in the same location that currently exists, without the benefit of a path separated from automobiles. This crossing may lead to conflicts between user groups, which could be a hazardous condition. Design features to minimize user conflicts would apply to the Proposed Project, including:

- Use clear signage or pavement markings to define etiquette and yielding protocol
- Set multi-use mode priority and communicate at access points
- Enforce rules using volunteer trail patrols and a uniformed presence – especially when a trail is new, to establish precedent and expectations.

Despite these design features, trail crossings at public roadways could result in conflicts between vehicles and trail users. Placement of stop or yield signs on the trail is not currently proposed. Measuring approximately 15 feet, the crossings would be relatively short and there is a low volume of traffic on Scaroni Road. Nevertheless, without adequate sight distance, conflicts at the Scaroni Road crossings may represent a hazardous condition.

Parking Lots

The Proposed Project would alter the configuration of Davenport Lot North and Panther/Yellowbank Beach Lot along Highway 1. An assessment of sight distance was performed to determine if existing sight distance is adequate for vehicles approaching driveways to these parking lots on Highway 1 and for vehicles exiting the driveways. The NCRT EIR (RTC 2019) analysis (Section 3.14.4) indicated that the available stopping sight distance at each parking lot exceeds 610 feet, which is longer than the required distances. In addition, the NCRT EIR (RTC 2019) analysis demonstrated that the available corner sight

distance at each parking lot exceeds 610 feet, which is longer than the required distances. Because motor vehicles approaching and exiting driveways in the Proposed Project improved parking lots would have adequate stopping and corner sight distances, it would be safe for drivers to merge into flowing traffic on Highway 1.

Farm Vehicle Crossings

Approximately 3.4 miles of the Proposed Project alignment follow existing farm roads, representing 47 percent of the Proposed Project alignment. In addition, numerous farm roads in the North Coast area cross the existing rail line, shown in Figure 2-6 and listed in Table 2-1 in Section 2.1.2, *Action Alternative (Proposed Project)*. Of the 25 crossings, 16 are permitted CPUC formal paved or unpaved roads used by farm vehicles, seven are informal trails used for pedestrian/bicycle access to the beaches or coastal bluffs, two are informal crossings used by farm vehicles.

Existing agricultural roads in the Proposed Project vicinity are used by large farm equipment (ring rollers, land planes, plows, tractors, and pesticide trailers), farm trucks, and personal vehicles. According to the North Coast Farmers, farm vehicle trips at some existing rail crossings can exceed 300 trips per day (North Coast Farmers 2017). At each of these crossings, the potential exists for conflicts between trail users and farm vehicle and equipment.

Under the Proposed Project, improvements at trail crossings with public and private roads would include grading, installation of pavement and concrete crossing panels, and signage. As currently proposed, the trail itself would not include signage warning trail users of agricultural vehicles or other vehicles, and signage on roadways crossing the trail would include signs warning that “no motor vehicles” are allowed and signs indicating the presence of a multi-use trail at crossings with public roadways. Mitigation Measure T-3(b) includes a requirement that additional signs be installed on the trail warning about the presence of farm vehicles.

In summary, the Proposed Project could result in conflicts between vehicles and/or farm equipment and trail users, at roadway crossings. With mitigation, this impact of the Proposed Project would be **less than significant**.

Demand for Parking

As discussed above under Traffic Level of Service, trail users would generate an estimated 300 daily vehicle trips and 150 peak-hour trips on peak weekend days during the summer. Trail users arriving by motor vehicle would likely use the 11 parking locations along Highway 1, as listed in Table 3.10-1, or the shoulder of the highway. Under the Proposed Project the number of parking stalls at Davenport and Panther/Yellowbank parking lots has been maximized to the greatest extent possible given the topographic and right-of-way constraints. As described under Section 3.10.2, *Parking Conditions*, the Davenport Lot North, Bonny Doon Beach Lot, and Panther/Yellowbank Beach Lot are currently and would continue to be fully occupied during peak weekend times; the other parking locations along Highway 1 are currently and would continue under the Proposed Project to be fully occupied during peak summer days, with parking demand spilling over onto the shoulder of Highway 1. The trail would be readily accessible on foot from these parking areas, which would spread out parking demand across the Project corridor.

Although new trail users arriving by vehicles would increase the demand for parking in these areas, under the Proposed Project, sufficient overflow parking space would remain in informal

parking lots on the shoulder of Highway 1 to accommodate the additional demand. As shown in Figure 3.10-2, several miles of Highway 1 parallel to the Proposed Project corridor are not subject to no-parking restrictions, thus allowing daytime parking on the shoulder.

This impact of the Proposed Project would be less than significant because it would not result in inadequate parking supply. No mitigation is required.

3.10.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to transportation and circulation. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure T-1: Public Outreach for Bicycling and Walking

Mitigation Measure T-3(a): Design Roadway Crossings to Minimize Safety Hazards

Mitigation Measure T-3(b): Install Agricultural Vehicle and Trail Warning Signs

Mitigation measure T-3(c): Install Pedestrian Signage at Davenport Lot South

3.11 Wetlands and Other Waters of the U.S.

This section discusses the numerous wetlands, creeks, drainages, and other waterbodies identified in the Project area and the jurisdiction of these resources. The information provided in this section is summarized from the Wetland, Other Waters of the U.S. and Riparian Area Delineation Report prepared for this project and information contained in the NCRT EIR (RTC 2019).

3.11.1 Regulatory Setting

3.11.1.1 Federal

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill materials into waters of the U.S. As defined in 33 CFR 328.3, these waters generally include wetlands and other waters, such as intrastate lakes, rivers, streams, mudflats, and tributaries to those waters. The EPA shares responsibility over waters of the U.S., with the USACE overseeing the Section 404 permit program. In addition, Executive Order 11990 directs federal agencies to observe a “no net loss” of wetlands in order to “minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.”

3.11.1.2 State

In California, the Regional Water Quality Control Boards historically claimed jurisdiction over the same features as the USACE. Based on recent case law, each board’s authority may extend to isolated wetlands and waters no longer regulated by the USACE. Santa Cruz County is within the Central Coast Regional Water Quality Control Board (CCRWQCB) jurisdiction. Section 401 of the Clean Water Act and the Porter-Cologne Act provide the Regional Water Quality Control Boards’ regulatory authority, which is further discussed in the Water Quality section. In addition, California State Water Resources Control Board Resolution No. 2008-0026

sets forth a policy of protecting both wetlands and riparian areas for the purpose of maintaining water quality.

3.11.2 Affected Environment

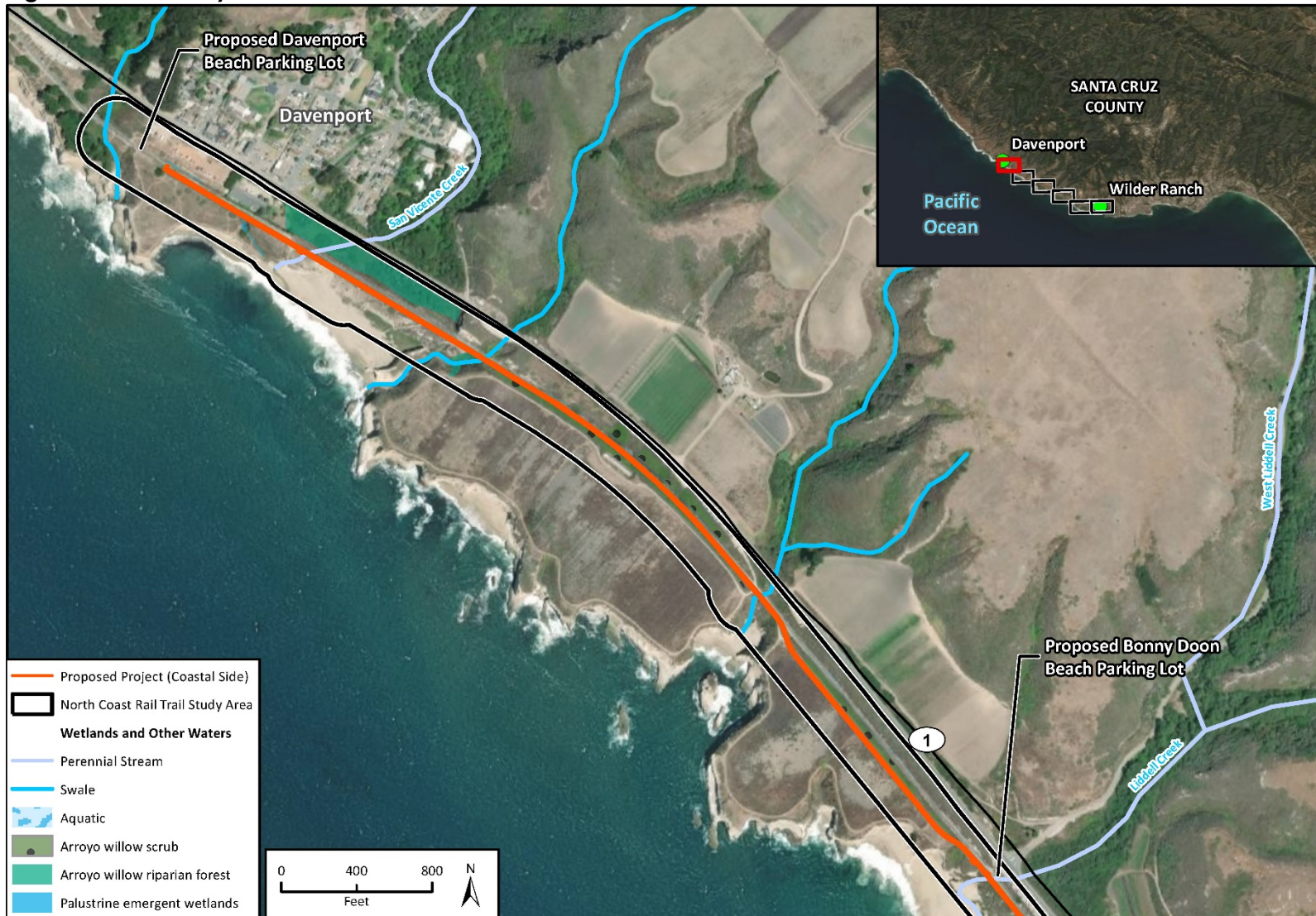
Aquatic resources in the Project area include a variety of freshwater, estuarine, open water, and drainage ditch complexes. These resources have been categorized as palustrine emergent wetlands, aquatic/riverine features, and arroyo willow riparian. Figures 3.11-1a to 3.11-1f provides a depiction of the wetlands and other waters within the Project area.

3.11.2.1 Palustrine Emergent Wetland

There is approximately 5.15 acres of palustrine emergent wetland in the study. The majority of emergent wetland features within the study area are palustrine features including all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. Palustrine emergent wetland habitat is considered an ESHA. These wetlands occur predominantly within the rail corridor. These areas are subject to federal jurisdiction under the Clean Water Act and state regulation under the authority of the Porter Cologne Water Quality Act and California Coastal Act. In the coastal zone, only one positive wetland indicator (hydrology, hydric soils, hydrophytic plants) are required to identify wetlands. As a result, many of the wetland ditches along the rail corridor lacking evidence of hydric soils are identified as wetlands for purposes of analysis in this document.

Emergent wetlands support a unique array of specially adapted native and non-native hydrophytic grasses and forbs, providing habitat for a variety of common and special-status animals. These are described in the habitat characterization section above and include CRLF, and numerous avian species.

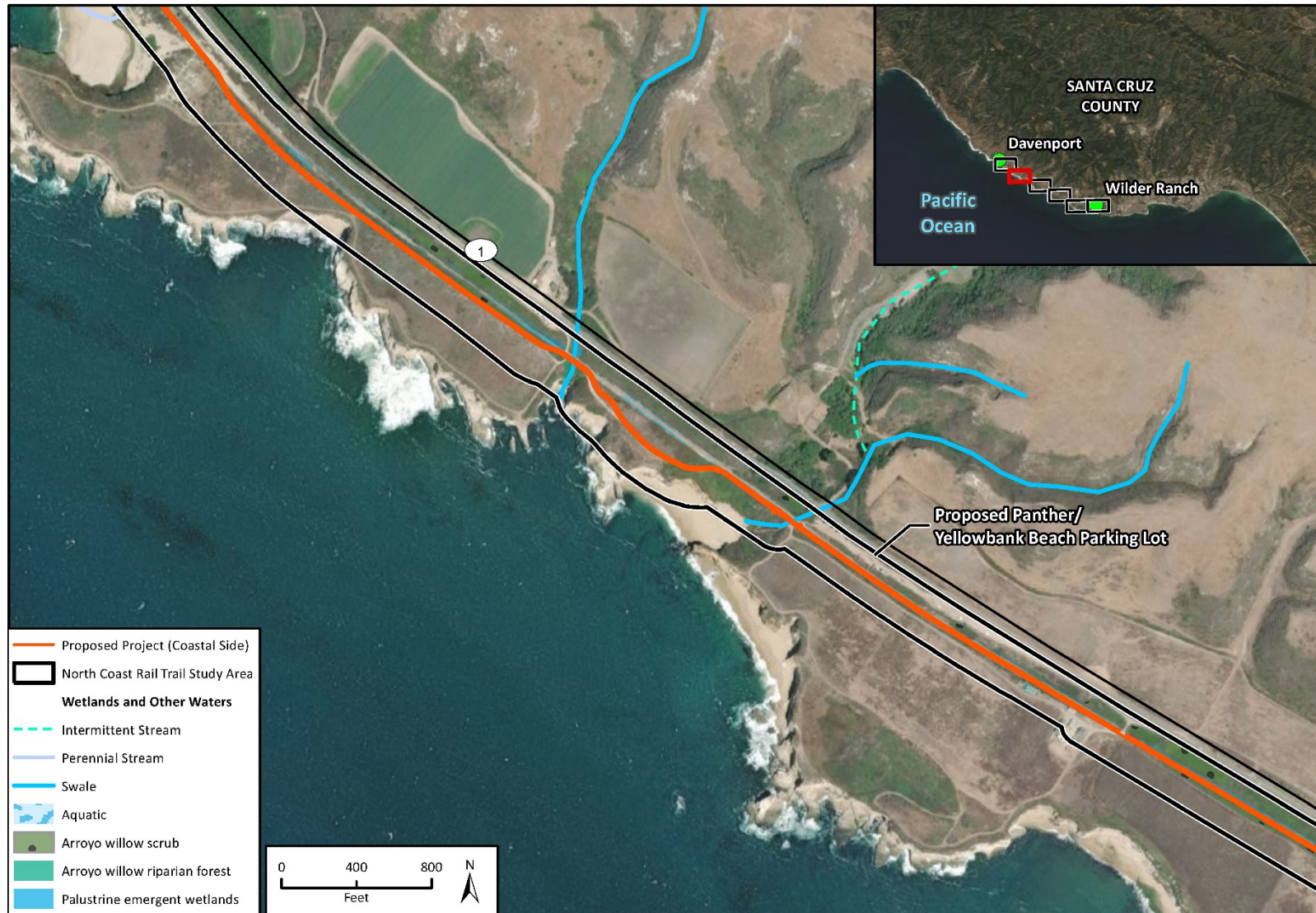
Figure 3.11-1a Study Area Wetlands and Other Waters



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Additional data provided by EcoSystems West, 2018.

Fig 3.4-3a-f Wetlands and Other Waters

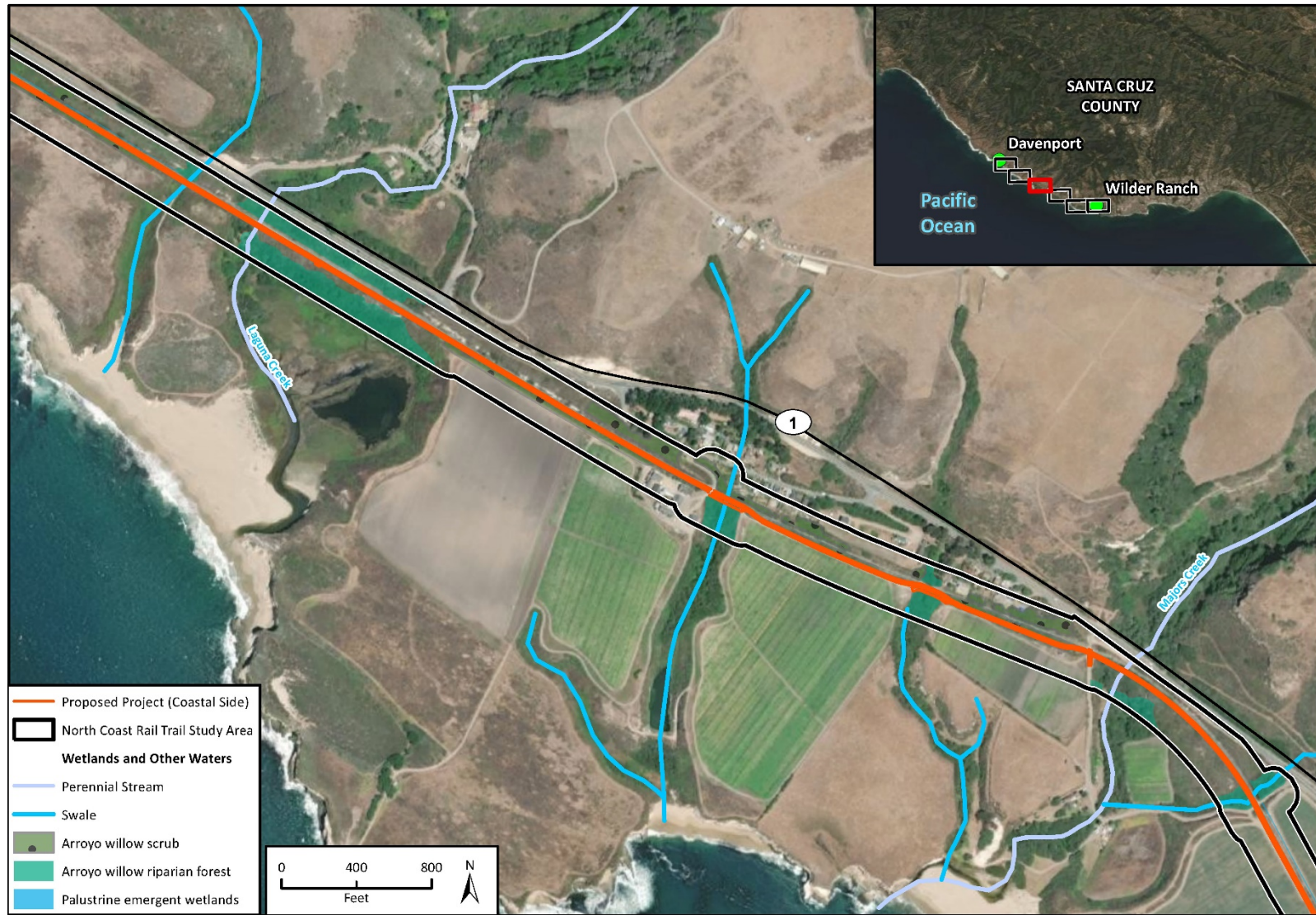
Figure 3.11-1b Study Area Wetlands and Other Waters



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Additional data provided by EcoSystems West, 2018.

Fig 3.4-3a-f Wetlands and Other Waters

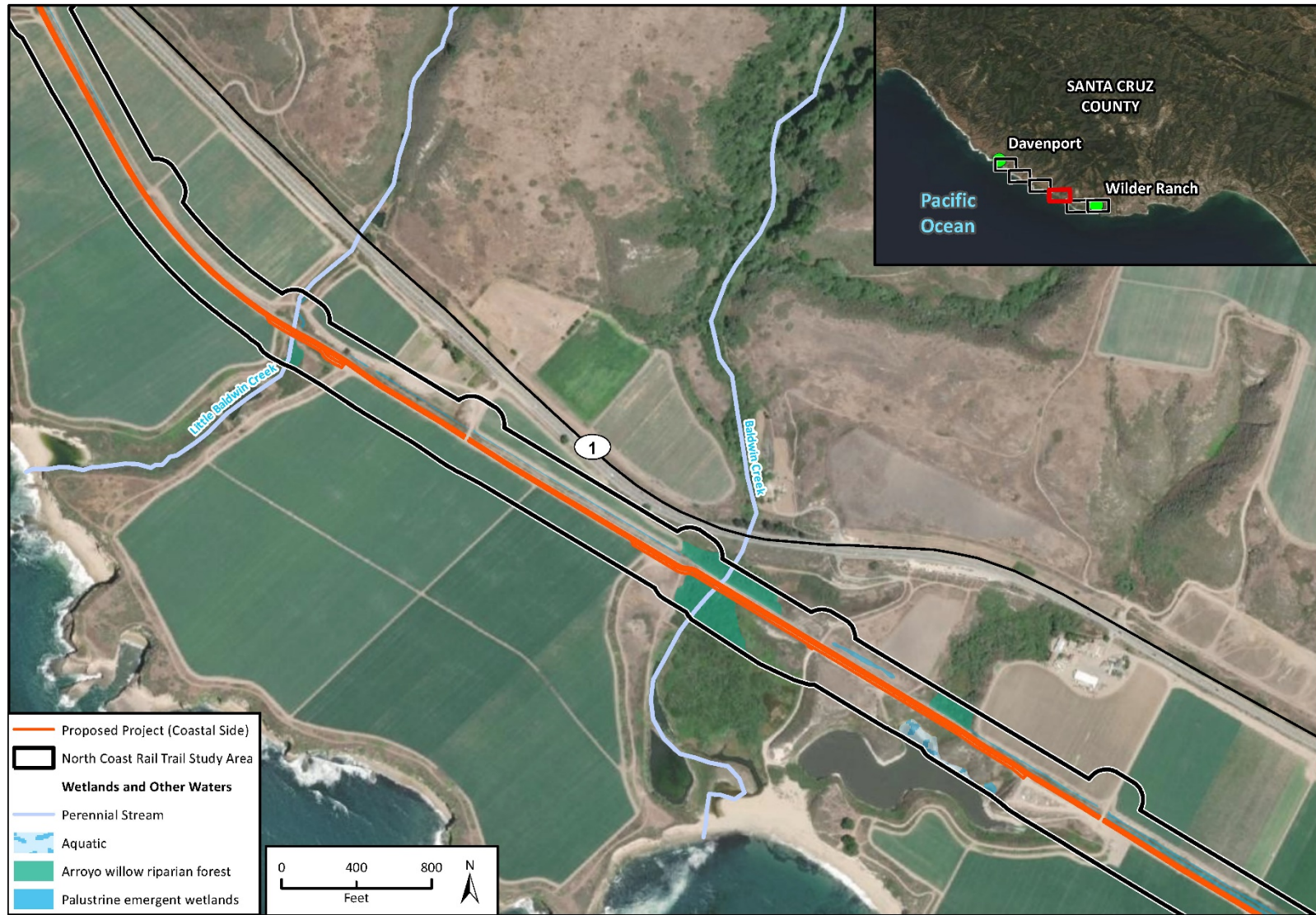
Figure 3.11-1c Study Area Wetlands and Other Waters



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Fig 3.4-3a-f Wetlands and Other Waters

Figure 3.11-1d Study Area Wetlands and Other Waters



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Fig 3.4-3a-f Wetlands and Other Waters

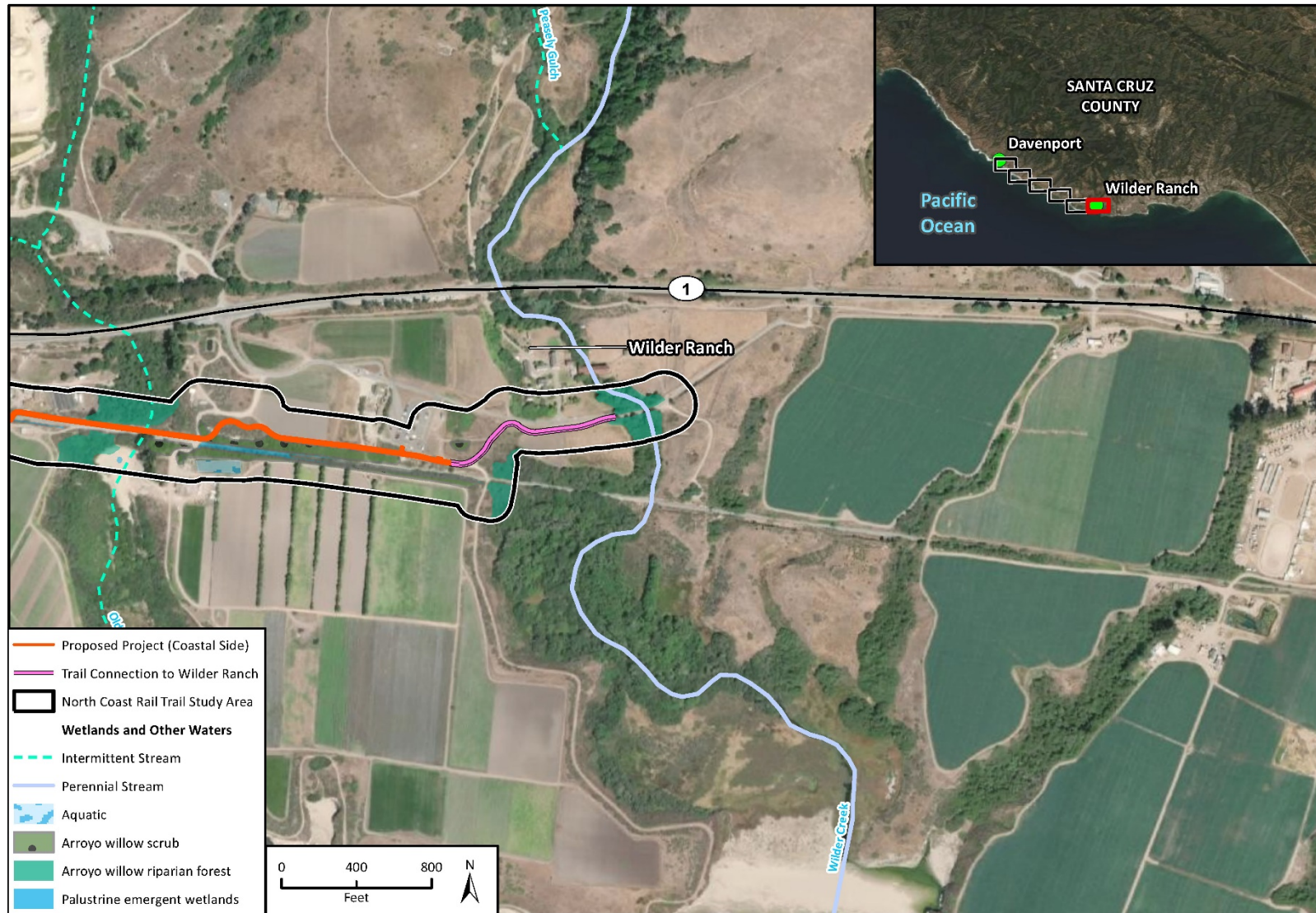
Figure 3.11-1e Study Area Wetlands and Other Waters



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Fig 3.4-3a-f Wetlands and Other Waters

Figure 3.11-1f Study Area Wetlands and Other Waters



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 Additional data provided by EcoSystems West, 2018.

Fig 3.4-3a-f Wetlands and Other Waters

3.11.2.1 Other Waters of the U.S.

The other waters found within the study area include aquatic features not classified as wetland. Riverine habitat within the Project area are included in this category. These habitats are considered ESHA and are also subject to federal jurisdiction under the Clean Water Act and state regulation under the authority of the Porter Cologne Water Quality Act, California Coastal Act, and Sections 1600-1616 of the CFGC [CFGC Code § 1600-1616 (CDFW 2017)].

Within the study area there is approximately 0.069 acres of other waters of the U.S. that includes riverine habitat. Riverine features include a series of named and unnamed creeks crossing the study area. Named streams crossing the trail alignments from north to south include San Vicente Creek, Liddell Creek, Laguna Creek, Majors Creek, Baldwin Creek, Lombardi Gulch, and Old Dairy Gulch. Wilder Creek is located in the study area at the southern terminus of the Trail Connection to Wilder Ranch. Many of these stream courses have been manipulated, and flow is conveyed beneath the roadways and the rail corridor via tunnels and culverts. The tunneled streams were excluded from analysis because of their distance from the Project area and will not be discussed further. There are approximately 14 other channels that are categorized as riverine that have cobble and gravel unconsolidated bottoms. Approximately 0.008 acres of riverine habitat may be impacted by the Project. The majority of these channels are ephemeral and two are man-made irrigation ditches.

The study area also includes a portion of a large, semi-natural lagoon immediately southeast of Four Mile Beach and numerous agricultural irrigation reservoirs. The majority of these reservoirs are filled year-round, but several are allowed to dry periodically or, in areas where agricultural operations have ceased, have been removed from active use and only fill temporarily from seasonal precipitation.

3.11.2.2 Arroyo Willow Scrub

This category of habitat is regulated under the Coastal Act as a coastal wetland because it contains hydrophytic vegetation and/or wetland hydrology. Arroyo willow (*Salix lasiolepis*) scrub consists of areas dominated almost entirely by dense thickets of arroyo willow, with a relatively undeveloped understory of herbs and sub-shrubs. These areas likely developed under historically wet hydrologic conditions, most likely due to persistent runoff from adjacent agricultural irrigation. However, in many areas contemporary hydrology is lacking as the majority of adjacent coastal bluffs and terraces, particularly in the northern reach of the study area, are no longer used for agriculture.

In the study area, arroyo willow scrub is located primarily along the steep embankments on either side of rail corridor, extending north from Scaroni Road to Davenport Beach. Arroyo willow is typically a small- to medium-sized tree or shrub with multiple trunks from the base. Areas supporting this habitat type range from dense, monospecific stands to mixed assemblages of arroyo willow, poison oak, pacific blackberry, stinging nettle, and California bee plant.

3.11.2.3 Arroyo Willow Riparian

This category of habitat is regulated under the Coastal Act as a coastal wetland because it contains hydrophytic vegetation and/or wetland hydrology. Tree-sized arroyo willow dominates this riparian forest habitat type. Shining willow (*Salix lucida* ssp. *lasiandra*), alder (*Alnus* sp.), and American dogwood (*Cornus sericea* ssp. *sericea*) are commonly associated

riparian trees. This vegetation type is typically dense and often impenetrable. The native woody vine Pacific blackberry is abundant and often very dense in the understory. The invasive, non-native vine cape-ivy (*Delairea odorata*) is also prevalent. Few other understory species occur except in relatively open areas. Dense thickets of poison oak (*Toxicodendron diversilobum*) are localized in openings.

Along the streams that intersect the alignment, the riparian vegetation is ecologically rich and supports a suite of wildlife species, including insects, amphibians, birds and mammals. Sierran treefrog (*Pseudacris sierra*) and California red-legged frog (*Rana draytonii*) are known to occur in these habitats, as well as other amphibian species such as salamanders and newts. Riparian habitats provide a dense multi-tiered canopy with diverse foraging, roosting, sheltering, and/or nesting habitat for birds and are important stopover sites for migratory bird species. The riparian vegetation also buffers adjacent aquatic habitats contributing shade, food, and sources of nutrients to the gulches, creeks, and lagoon and aquatic wildlife species.

3.11.3 Environmental Consequences

3.11.3.1 No Action Alternative

Under the No Project scenario, the trail would not be constructed in or adjacent to palustrine emergent wetlands or aquatic/riverine habitats. However, there would be continued use of the parking areas and existing trails located near and extending through the Project corridor to access the coastal bluffs and beaches. This continued use could result in minor adverse effects to wetlands and waters of the U.S., which would be substantially similar to existing conditions. Thus, the impact to wetlands and waters of the U.S. from implementation of the No Action Alternative would be less than significant.

3.11.3.2 Proposed Project Alternative

Construction

As shown in Table 3.11-1, the Proposed Project trail construction would result in permanent loss of approximately 0.33 acres of palustrine emergent wetlands with additional temporary wetland impacts of up to 0.19 acres. This level of impact is based on preliminary design and represents a worst-case scenario. As design progresses, the level of impact is expected to decrease.

Trail and parking area construction and slope stabilization activities would also result in permanent loss of approximately 2.85 acres of arroyo willow scrub and 0.62 acres of arroyo willow riparian forest. Temporary construction impacts of up to 0.58 acres of arroyo willow scrub and 0.30 acres of arroyo willow riparian forest are expected to occur.

The majority of palustrine emergent wetland features are situated in drainage ditches immediately adjacent to the existing rail bed. At most locations, these areas are lined with non-native fill (base rock) and do not support hydric soils. However, these one or two parameter wetlands (hydrophytic vegetation and/or wetland hydrology) are regulated by the California Coastal Commission. The hydrology in ditch wetlands ranges from ephemeral to semi-permanent depending on the depth, substrate, aspect, and drainage patterns.

Construction near palustrine emergent wetland features may directly displace existing ditch wetlands and indirectly disrupt ecological functions and values in remaining wetlands by

degrading water quality and vegetation through introduction of sediments and pollutants resulting from Proposed Project activities.

Impacts to arroyo willow scrub and riparian forest habitats would result in the removal or partial loss of mature willows and other associated vegetation.

Table 3.11-1: Aquatic and Riverine Habitats

Type ¹	Acres within Study Area	Permanent Impacts (acres)	Temporary Impacts (acres)
Wetlands			
Arroyo willow scrub	15.54	2.85	0.58
Arroyo willow riparian	23.84	0.62	0.30
Palustrine Emergent	5.15	0.33	0.19
Other Waters of the U.S.			
Ephemeral	0.058	0.0037	0.004
Intermittent	0.002	0	0.0003
Perennial	0.009	0	0
Total	0.069	0.0037	0.0043

¹Wetland types are based on the Cowardin Classification system (Cowardin et al. 1979) and hydrogeomorphic classifications (Brinson et al. 1993).

The replacement or improvement of existing culverts and slope stabilization activities would result in negligible impacts to other waters of the U.S. as shown in Table 3.11-1. Impacts may include erosion and sedimentation. Culvert replacement would require clearing of vegetation in the localized area, excavation to remove failed culverts and excess sediment, and backfilling. Temporarily impacted areas would be restored shortly after construction and would be monitored to attain success criteria, which would be outlined in a mitigation and monitoring plan. Permanently impacted wetlands and waters of the U.S and State shall be mitigated through compensatory means, such as restoration or creation of habitat, in consultations with the Army Corps of Engineers (USACE) and the California Regional Water Quality Control Board. Prior to construction, in compliance with the Clean Water Act, a Nationwide 404 Permit and a 401 Water Quality Certification shall be obtained. All conditions of the permit will be adhered to during construction.

Operation

Wetlands and riverine habitats may be directly and indirectly affected by trail usage. Many remaining wetlands are situated in close proximity to the proposed trail alignment and may be subject to trampling from unpermitted off-trail encroachment, litter, and alterations to surface and subsurface hydrology and water quality due to increased impervious surfaces (refer to Section 3.7, *Hydrology and Water Quality*). Moreover, wetlands immediately adjacent to active trail corridors are often susceptible to introduction of invasive weeds which may displace existing native vegetation and degrade wildlife habitat.

In summary, construction and operation would result in adverse effects to palustrine emergent wetlands and aquatic/riverine habitats. The project would comply with all federal and state permit conditions as described above. Mitigation measures would be implemented to protect water quality during construction and to minimize construction-related impacts to wetlands, aquatic and riverine features to the extent feasible and compensate for permanent losses. Therefore, the construction and operation impacts of the Proposed Project would be **less than significant with mitigation**.

3.11.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to wetlands and waters of the U.S. The full description of the *Proposed Project* avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure BIO-8(a): Minimize Construction in Sensitive Habitat Areas

Mitigation Measure BIO-8(c): Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-8(d): Implement Best Management Practices during Construction

Mitigation Measure BIO-9(a): Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-9(b): Develop and Implement Wetland Mitigation and Monitoring Plan

3.12 Cumulative Impacts

Cumulative impacts are impacts that result from the incremental effect of a proposed action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7). The purpose of a cumulative effects analysis is to ensure that federal agencies consider the full range of the consequences of their actions when making decisions in order to move towards sustainable development (CEQ 1997).

FHWA guidance states that the degree to which cumulative impacts need to be addressed in an EA depends on the potential for the impacts to be significant, and will vary by resource, project type, geographic location, and other factors.

The NCRT EIR (RTC 2019) performed a detailed cumulative analysis for the Project and serves as the supporting documentation for this section. Table 3.12-1 presents the list of cumulative projects that are considered in the discussions below for each resource. No additional projects have been identified that may contribute to cumulative impacts on resources within the Project corridor since the NCRT EIR was certified in April 2019.

In addition to the list of cumulative projects, the analysis considers buildout of the Santa Cruz County General Plan and Local Coastal Program (LCP) and the City of Santa Cruz General Plan.

The Santa Cruz County General Plan and LCP Land Use Plan provides a framework for development and growth in the county (Santa Cruz County 1994). The policies determine where growth should be focused in the county, and that public services grow with the population. Growth is also balanced with the protection of natural resources. The General Plan and LCP contain policies that address the existing and future land uses in unincorporated Santa Cruz County. The General Plan and LCP were adopted by the County Board of Supervisors on May 24, 1994, and were certified by the California Coastal Commission on December 15, 1994.

The City of Santa Cruz General Plan was adopted in 2012 and is a comprehensive, integrated, and internally consistent statement of Santa Cruz's development policies for the city. Although

the Project corridor is located outside of the city boundary, planned growth in the City would be expected to incrementally augment the Project user populations. Therefore, planned city growth could contribute to cumulative impacts. Accordingly, buildout under the City of Santa Cruz General Plan is considered in this cumulative analysis.

Table 3.12-1 List of Cumulative Projects

Project Name	Location	Description
Davenport Cement Plant Coastal Restoration and Reuse Plan	Davenport	Plan to redevelop 103-acre site with visitor center/museum, trails, camping and/or cabins, agriculture, and open space uses ^a
Davenport Recycled Water Project	Davenport	Improvements to the storage of treated water at the wastewater treatment plant to ensure no potential discharge or runoff from the spray field during the wet season ^b
Cotoni-Coast Dairies National Monument Management Plan	Inland side of Highway 1, from Laguna Creek to Swanton Road	Management plan for public access and resource protection in 5,800-acre area
San Vicente Redwoods Preserve	Inland side of Highway 1, north of Davenport	Public access and forest restoration in 8,500-acre open space area
Rail Service	Santa Cruz Branch Rail Line	Although the exact extent of freight and/or passenger rail service is unknown at this time, for the purpose of analysis it is assumed herein that the rail operator may operate freight and/or passenger rail service along the North Coast, as described in Section 2.5, <i>Project Operation and Maintenance/Rail Operation and Maintenance</i> .
Unified Corridor Investment Study	Santa Cruz County	Study of transportation improvements to Highway 1, Soquel Avenue/Soquel Drive/Freedom Boulevard, and Santa Cruz Branch Rail Line ^c
Monterey Bay Sanctuary Scenic Trail Network (MBSST) Master Plan	Santa Cruz County	Master Plan to establish a continuous alignment and a set of design standards for a multi-use trail along the Coastal Rail Trail spine (RTC-owned rail corridor) and associated spur trails, for the length of Santa Cruz County

^a Santa Cruz County 2017a, 2017b.
^b DCSO 2015.
^c The Unified Corridor Investment Study (UCIS) identifies a 16-20 feet wide trail for the "Trail alongside Rail" scenario in the rural area north of Wilder Ranch (RTC 2018).

3.12.1 Regulatory Setting

The Council on Environmental Quality (CEQ) developed *Considering Cumulative Effects Under the National Environmental Policy Act*, which recommends identifying those resources that could experience cumulative impacts, and then determining the separate effects of past actions, present actions, the proposed action, and other future actions (CEQ 1997). CEQ notes that, "most often, the historical context surrounding the resource is critical to developing baselines" and supporting decision-making (CEQ 1997). This historical context is presented in the Affected Environment section, below.

Under Section 15355 of the CEQA guidelines, the term "cumulative impacts" refers to two or more individual effects that, when considered together, are considerable, or compound or increase other environmental impacts, as follows:

- The individual effects may be changes resulting from a single project or a number of separate projects.
- The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.
- A cumulative impact consists of an impact that is created as a result of the combination of the project being evaluated together with other projects causing related impacts.
- The discussion of cumulative impacts shall...focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

3.12.2 Environmental Consequences

The environmental consequences of the No Action Alternative and the Action Alternative on individual resources are presented throughout this EA. Included below are the overall cumulative impacts that may be anticipated when the effects of the alternatives are combined with other past, present, and reasonably foreseeable future actions.

The cumulative impact assessment presented in this EA focuses on resources for which the cumulative projects or plans would have measurable impacts on the resource. The contribution of the Project's impacts to cumulative impacts was then assessed.

The NCRT EIR found the following resources would not be significantly impacted by cumulative projects and plans and the Project's contribution would not be cumulatively considerable:

- Aesthetics
- Agriculture
- Paleontological Resources
- Recreation
- Water Quality and Hydrology

Therefore, the cumulative impact assessment focuses on the following resources:

- Biological Resources
- Cultural Resources
- Hazardous Materials
- Wetlands and Other Waters of the U.S.
- Transportation

3.12.2.1 No Action Alternative

Implementation of the No Action Alternative would result in a continuation of current conditions. This alternative would not involve trail construction or parking lot improvements and therefore no cumulative impacts would occur as a result of selecting this alternative.

3.12.2.2 Proposed Project Alternative

Biological Resources

The cumulative setting for biological resources includes proposed developments in the North Coast area of Santa Cruz County from the coastal aspects of the foothills inland of Highway 1 extending to the ocean, and from Lower Swanton Road in the north to just west of the Santa Cruz city limits, at Natural Bridges State Beach. This cumulative extent is appropriate because it encompasses the mosaic of representative habitat types (and associated biological resources) affected by the Proposed Project, including creeks and drainages, natural communities, agriculture, rangeland, and coastal development.

As shown in Table 3.12-1, cumulative projects in the North Coast area, including the Davenport Cement Plan Coastal Restoration and Reuse Plan, the Cotoni-Coast Dairies National Monument Management Plan, the San Vicente Redwoods Preserve, Rail Service, and Monterey Bay Sanctuary Scenic Trail Network (MBSST) Master Plan, consist of public access improvements that introduce a substantial increase of public use to the coastal portion of the North Coast Area. Both construction of the access improvements and the increased public access and use would result in increased:

- Trampling, and degradation of sensitive habitats;
- Disruption of habitat values associated with edge habitat;
- Degradation of wetlands, creeks, drainages, riparian habitat, water quality, associated habitat values and functions, and ecosystems services; including channelization of storm runoff that may increase stream flow, erosion, and sedimentation;
- Disruption of wildlife utilization of biological resources for foraging; hydration; cover, shelter, aestivation/hybernacula; nesting and breeding; movement, dispersal, and migration; including for sensitive fish species, CRLF, sensitive and native nesting birds, and San Francisco dusky-footed woodrat;
- Fragmentation of contiguous natural landscapes, and loss of large hunting territories for higher order predators; and
- Illegal camping, introduction of litter (including human foods), urine and fecal matter, illegal off-leash dogs (causing harassment and mortality of wildlife).

Taken cumulatively, these impacts would result in degradation and fragmentation of the suite of habitat types and associated biological resources that occur within the cumulative setting on the North Coast, and result in overall diminished regional ecological functions and values.

The Project would contribute to these impacts by adding Project-related infrastructure and provisions for on-going maintenance. Conservation of biological resources would be necessary to minimize and mitigate cumulative impacts.

Presumably, permanent losses of sensitive habitats associated with each public access project would be mitigated within each project's planning purview, as with the Proposed Project and therefore would not be considered cumulative impacts.

As discussed in Section 3.4, *Biological Resources*, mitigation identified in this EIR would reduce Project-level impacts. Mitigation Measure BIO-8(c) prescribes the development of a Project-specific Biological Resources Mitigation and Management Plan (MMP), which would mitigate permanent loss of sensitive natural communities, and mitigate impacts to other sensitive

biological resources known to occur within the Project corridor, including wildlife movement habitat. The MMP also requires the inclusion of strategies to protect remaining sensitive habitats along the rail corridor from impacts associated with operation of the trail. Mitigation Measures BIO-C(a) and BIO-C(b) described below specifically target potential cumulative impacts, through the addition of conservation goals and objectives and provision for qualitative performance criteria and adaptive management into both MMPs.

The development of Project-related infrastructure (e.g., garbage collection, restrooms), and provisions for on-going maintenance and conservation of biological resources would further reduce Project-level impacts. Additional measures in the Operations and Maintenance Plan to protect biological resources would further reduce cumulative impacts.

Therefore, with the following additional mitigation measures, the Project's contribution to cumulative biological resources impacts would be not be significant.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation Measure BIO-C(a): Include Cumulative Conservation Goals and Objectives in Project-Specific Biological Resources Mitigation and Management Plan (Mitigation Measure BIO-8c)

To mitigate for cumulative impacts, the Project-Specific Biological Resources Mitigation and Management Plan (MMP) developed shall include specific goals, objectives, and qualitative performance criteria to maintain functional connectivity between habitat patches and open spaces, including the functions and values of the existing linear feature comprised of sensitive habitats and wetlands along the rail bed, for movement, dispersal, migration, and genetic exchange of native plants and animals through the conservation of the following.

- Sensitive habitats and edge habitats.
- Ecosystems services and water quality associated with wetlands, creeks, drainages, riparian habitat.
- Wildlife movement habitat, including resources for foraging; hydration; cover, shelter, aestivation/hybernacula; nesting and breeding; movement, dispersal, migration; with special consideration given to the sensitive and breeding species listed above. Wildlife bypasses shall be considered as a strategy.
- Contiguous natural landscapes and connected hunting territories for higher order predators.

The MMP shall include adaptive management strategies specifically addressing cumulative impacts if performance criteria are not met. The MMP shall also include an evaluation of (and adaptive management as needed for) the effects of illegal camping, litter (including human foods), urine and fecal matter, and illegal off-leash dogs on biological resources.

Mitigation Measure BIO-C(b): Include Maintenance and Conservation of Biological Resources in the Project Operations & Maintenance Plan

To mitigate for cumulative impacts, the Project Operations & Maintenance Plan shall provide for the maintenance and conservation of biological resources along the trail alignment by maintaining fencing and vegetative barriers which protect biological resources, install and maintain additional protective fencing around areas determined biologically sensitive by a qualified biologist, and enforce hours of trail use.

Cultural Resources

The geographic scope for considering cumulative impacts to cultural resources is based on the historic, ethnographic, and prehistoric period use patterns of the Project area and surrounding region. The geographic extent of cumulative impacts for the historic period is the North Coast area of Santa Cruz County. For the ethnographic period, the geographic extent includes the entire traditional Ohlone territory. The geographic context for the prehistoric period includes Santa Cruz County and nearby portions of adjacent counties.

Cumulative development in the North Coast area of Santa Cruz County may result in a significant cumulative impact to historic resources. It is anticipated that the Davenport Cement Plant site, located approximately 0.2 mile northwest of the Project corridor, would be redeveloped into a park with visitor center/museum, trails, camping and/or cabins, agriculture, and open space uses but decision making is still in progress. This cumulative project would involve demolition of some or all existing industrial structures that are visible from the northern portion of the rail corridor near Davenport. The unincorporated community of Davenport and the Davenport Cement Plant are potential historic resources (Leachman and Prybylski 2017), and the Davenport Cement Plant Coastal Restoration and Reuse Plan could result in cumulative impacts to these resources.

As discussed in Section 3.5, *Cultural Resources*, the approximately 7.5-mile segment of the Davenport Branch Line is eligible for federal, state, and local designation as a historic resource. For the Proposed Project, implementation of Mitigation Measure CR-1(a) would require interpretive displays documenting the history of the Davenport Branch Line and surrounding historical resources. By communicating the history of the Project corridor and its contribution to regional history, this mitigation would ensure that historical resource impacts resulting from the Proposed Project would be reduced to a less than significant level. As such, the Proposed Project's contribution to cumulative historic resource impacts would not be significant.

Cumulative development may also impact archaeological resources within Ohlone tribal territory. For example, in order to operate rail service on the rail corridor, the rail operator could engage in ground disturbance to make improvements to the existing railroad tracks. As with historic resources, impacts to archaeological resources are typically site-specific, and would be addressed on a project-by-project basis. Compliance with mitigation measures would ensure that the known archaeological resources within the Project alignment are the subject of data indexing and preserved through capping, and any unknown archaeological resources are protected through monitoring and recovery. Data indexing would preserve important information from the sites for future study, thereby reducing the loss of data in the archaeological region as a whole. Thus, cumulative impacts to archaeological resources would be less than significant, and the Proposed Project's contribution to this cumulative effect would not be significant.

Hazards and Hazardous Materials

Cumulative impacts associated with hazards and hazardous materials are generally site-specific. As such, the geographic scope for considering cumulative impacts to most hazards is the Project corridor and the immediately adjacent areas. For cumulative impacts related to the transport, use, and disposal of hazardous materials, the geographic extent would include the Highway 1 corridor through the North Coast area, as well as the areas immediately adjacent to the rail line, if future freight and/or passenger rail service includes the transport of hazardous materials.

Cumulative buildout of the Santa Cruz County General Plan could expose new residents and structures to hazardous materials impacts in the county, including where development would be located on former agricultural or industrial properties, or within or adjacent to the rail line. However, hazardous materials releases are generally specific to each project and, for purposes of this cumulative analysis, the geographic context focuses on the Project area and immediately adjacent lands. Because of the site-specific nature of potential hazardous materials-related issues, any future development along the corridor would be required to address these issues on a case-by-case basis through project-specific environmental review and adherence to the mitigation measures therein. Therefore, cumulative impacts would not be significant.

As discussed in Section 3.6, *Hazards and Hazardous Materials*, the Proposed Project could expose construction workers, trail users, and maintenance personnel to agricultural chemicals due to the Project corridor's proximity to existing agricultural properties, as well as exposure to existing soil contaminants released during Project construction. However, implementation of Mitigation Measures described in Section 3.3, *Agricultural Resources*, and Section 3.6 *Hazardous Materials*, where applicable, would reduce Project-specific impacts to a less than significant level. With these measures, the Project's contribution to a cumulative impact from exposure to agricultural chemicals or other soil contaminants would not be significant.

Wetlands and Other Waters of the U.S.

The cumulative setting for wetlands and other waters is similar to that for Biological Resources discussed above. It includes proposed developments in the North Coast area of Santa Cruz County from the coastal aspects of the foothills inland of Highway 1 extending to the ocean, and from Lower Swanton Road in the north to just west of the Santa Cruz city limits, at Natural Bridges State Beach.

The plans and projects in the North Coast area identified in Table 3.12-1 consist of public access improvements that introduce a substantial increase of public use to the coastal portion of the North Coast Area. Both construction of the access improvements and the increased public access and use would result in increased potential for adverse impacts to wetlands and other waters. The impacts would include disruption of habitat values, degradation of water quality, and channelization of runoff that may increase sediment and erosion. Taken cumulatively, these impacts would result in degradation and fragmentation of the wetlands and waters of the U.S. in the North Coast region.

Presumably, permanent losses of wetlands and other waters associated with each public access project listed in Table 3.12-1 would be mitigated within each project's planning purview, as with the Proposed Project and therefore would not be considered cumulative impacts.

In addition, on-going farming operations and rail line improvements and future maintenance would impact wetlands and other waters adjacent to farms and the rail line and indirectly to downstream waterbodies. Wetlands and other waters of the U.S. have been adversely impacted primarily by past agricultural practices and past maintenance of the rail line. These ongoing and future practices may contribute moderate releases of sediment into wetlands and waterways adjacent to the trail and rail line. The past detrimental effects on wetlands and other waterbodies, as well as the expected impacts of on-going agricultural operations, would result in continuing adverse impacts.

The Proposed Project would permanently and temporarily impact wetlands and other waters of the U.S., although impacts are anticipated to be less than significant with implementation of compensatory mitigation as discussed in Section 3.11, *Wetlands and Other Waters of the U.S.* Mitigation measures also include the development of a Wetland Mitigation and Management Plan for this project, which would also minimize the Project's contribution to cumulative impacts through long-term monitoring. Mitigation Measures BIO-C(a) and BIO-C(b) described above under the Biological Resources cumulative discussion specifically target potential cumulative impacts, through the addition of conservation goals and objectives and provision for qualitative performance criteria and adaptive management into the Mitigation and Management Plan.

Therefore, the Project's contribution to cumulative impacts to wetlands and other waters would not be significant.

Transportation/Circulation

The cumulative setting for transportation is future traffic conditions on Highway 1 near the Project corridor during the years 2035 and 2040. The analysis of cumulative transportation/circulation impacts is based on the TIA prepared for the Project (Kimley-Horn 2018) and presented in Appendix K of the NCRT EIR (RTC 2019).

Peak-hour cumulative traffic conditions in 2040 were based on Caltrans estimates of future traffic growth to that year on Highway 1. For 2035, peak-hour cumulative traffic conditions were estimated by deriving an annual growth factor based on Caltrans traffic data from 2014 and estimates of 2040 traffic conditions, then using this growth factor to reduce estimated 2040 traffic volumes.⁵ Cumulative traffic conditions were modeled at the intersections of Highway 1 with the Davenport Beach, Bonny Doon Beach, and Panther/ Yellowbank Beach parking lots (Kimley-Horn 2018).

This analysis assumes a 12 percent increase in the county's population to 2040, based on the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy prepared by the Association of Monterey Bay Area Governments (AMBAG 2018), that would result in a corresponding increase in estimated vehicle trips associated with the Project. The trail would generate an estimated 150 peak-hour trips in 2040.

Table 3.12-2 compares cumulative traffic delay for the No Action Alternative and the Proposed Project at the intersections of Highway 1 with the Davenport Beach, Bonny Doon Beach, and Panther/Yellowbank Beach for the year 2035.

⁵ The traffic model utilized for the analysis projects to 2035; however, Caltrans requested analysis of a 2040 cumulative scenario. Therefore, the cumulative analysis herein considers both 2035 and 2040.

Table 3.12-2 2035 Cumulative Intersection Level of Service during Weekend Peak Hours for the No Action Alternative and Proposed Project

Intersection	Control ^a	Movement	No Action Alternative		Proposed Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Highway 1/ Davenport Beach Driveway	TWSC	Overall	1.4	A	2	A
		Worst Approach	>50	F (EB)	>50	F (EB)
Highway 1/ Bonny Doon Beach North Driveway	TWSC	Overall	25.1	D	31.7	D
		Worst Approach	>50	F (WB)	>50	F (WB)
Highway 1/ Bonny Doon Beach South Driveway	TWSC	Overall	1.3	A	1.6	A
		Worst Approach	>50	F (EB)	>50	F (EB)
Highway 1/ Panther Beach Driveway	TWSC	Overall	0.2	A	0.2	A
		Worst Approach	>50	F (EB)	>50	F (EB)

^a TWSC = two-way stop-controlled intersection

Source: Kimley-Horn 2018, Appendix K NCRT EIR (RTC 2019)

As shown in Table 3.12-2, it is estimated that the worst approach to all three parking lots would exceed 50 seconds of delay per vehicle during peak hours under the No Action Alternative scenario for 2035. This level of delay would represent LOS F conditions, which exceed the Caltrans threshold of LOS E for the cumulative scenario. Therefore, without implementation of the Proposed Project, cumulative projects through the year 2035 would have a significant and unavoidable cumulative impact on traffic conditions. This indicates a cumulative condition with or without the Proposed Project. The level of contribution by the Proposed Project to the cumulative effect is therefore not significant. However as discussed in Section 3.10, *Transportation/Circulation*, the RTC would implement Mitigation Measure T-1 as a condition of project approval to incrementally reduce vehicle trips by promoting walking and bicycling between the city of Santa Cruz and the proposed trail.

Table 3.12-3 compares cumulative traffic delay for the No Action Alternative and the Proposed Project at the intersections of Highway 1 with the Davenport Beach, Bonny Doon Beach, and Panther/Yellowbank Beach parking lots for the year 2040.

Table 3.12-3 2040 Level of Service during Weekend Peak Hours for the No Action Alternative and the Proposed Project

Intersection	Control ^a	Movement	No Action Alternative		Proposed Project	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Highway 1/ Davenport Beach Driveway	TWSC	Overall	1.7	A	2.4	A
		Worst Approach	>50	F (EB)	>50	F (EB)
Highway 1/ Bonny Doon Beach North Driveway	TWSC	Overall	30	E	38.4	E
		Worst Approach	>50	F (WB)	>50	F (WB)
Highway 1/ Bonny Doon Beach South Driveway	TWSC	Overall	1.5	A	2	A
		Worst Approach	>50	F (EB)	>50	F (EB)
Highway 1/ Panther Beach Driveway	TWSC	Overall	0.3	A	0.2	A
		Worst Approach	>50	F (EB)	>50	F (EB)

^a TWSC = two-way stop-controlled intersection

Source: Kimley-Horn 2018, Appendix K NCRT EIR (RTC 2019)

As shown in Table 3.12-3, it is estimated that the most congested approach to all three parking lots would exceed 50 seconds of delay per vehicle during peak hours under the No Action Alternative for 2040. In addition, overall cumulative traffic conditions at the intersection of Highway 1 with the northern driveway to the Bonny Doon Beach parking lot were estimated at LOS E during weekend peak hours. Cumulative delay at the most congested approach to the parking lots and overall delay at the Bonny Doon Beach parking lot would reach or exceed the Caltrans threshold of LOS E. Therefore, cumulative projects through the year 2040 would have a significant and unavoidable cumulative impact on traffic conditions, similar to the year 2035, with or without the Proposed Project. The level of contribution by the Proposed Project to the cumulative effect is therefore not significant. However as discussed in Section 3.10, *Transportation/Circulation*, the RTC would implement Mitigation Measure T-1 as a condition of project approval to incrementally reduce vehicle trips by promoting walking and bicycling between the city of Santa Cruz and the proposed trail.

If the existing railroad tracks are left in place under the Proposed Project, the potential future operation of excursion trains in the rail corridor during summer weekend and holidays between Santa Cruz and Davenport would increase parking demand. It is assumed that some recreational users would park in the Davenport Beach parking area to access the excursion trains. In this case, parking demand for the proposed trail would combine with rail use at the parking area during summer weekends. However, as discussed in Section 3.10, *Transportation/Circulation*, overflow parking space would remain available to accommodate trail users on several miles of Highway 1 parallel to the rail corridor. Therefore, the Project's contribution cumulatively to an impact on parking availability would not be significant.

3.13 Avoidance, Minimization, and Mitigation Measures

The following table summarizes the mitigation measures for each resource identified in the Environmental Assessment for the North Coast Rail Trail Project. The table also identifies the timing of the mitigation measures and the responsible agency or party. The measures identified are consistent with those identified in the NCRT EIR (RTC 2019) with annotations where appropriate that measures will be finalized in coordination with state and federal regulators when obtaining permits. Mitigation Measure BIO-8(b): Construct a Boardwalk in Coastal Dune Habitat, identified to protect dune habitat within the Project corridor, has been removed since certification of the EIR in March 2019. Subsequent design iterations have resulted in realignment of the Proposed Project trail alignment which would result in avoidance of sensitive dune habitat and has therefore negated the need to construct a boardwalk through dune habitat.

Table 3.13-1 Avoidance, Mitigation, and Minimization Measures

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
Aesthetics and Visual Resources		
<p>MM AES-3. Minimize Artificial Appearance of Coastal Armoring. At the eroding coastal bluff near Davenport, armoring to stabilize the base of the slope shall be designed to minimize its artificial appearance. The color and texture of armoring materials shall be visually compatible with the appearance of the surrounding coastal bluff. These design features shall be included in the final plan set prior to the initiation of construction.</p>	Prior to and during construction	CFL and RTC
Agricultural Resources		
<p>MM AG-1. Implement Agricultural Land Conservation Measures (Optional Measure) Prior to issuance of any grading permits, the RTC shall provide that for every 1.0 acre of FMMP Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) in the Project corridor that is permanently converted from active agriculture to non-agricultural use as a result of trail development, 1.0 acre of land of comparable agricultural productivity shall be preserved in perpetuity. Said 1:1 mitigation shall be satisfied through one or more of the following:</p> <ul style="list-style-type: none"> a. Granting a perpetual conservation easement(s), deed restriction(s), or other farmland conservation mechanism(s) to the County or qualifying land management entity,⁶ such as the Land Trust of Santa Cruz County, for the purpose of permanently preserving agricultural land. The required easement(s) or deed restriction(s) shall, therefore, total a minimum of 1.4 acres of FMMP Important Farmland. The land covered by said off-site easement(s) or deed restriction(s) shall be located in Santa Cruz County. b. Making an in-lieu payment to a qualifying entity, such as the Land Trust of Santa Cruz County, to be applied toward the future purchase of a minimum of 1.4 acres of FMMP Important Farmland in Santa Cruz County, together with an endowment amount as may be required. The payment amount shall be determined by the qualifying entity or a licensed appraiser. c. Making an in-lieu payment to a qualifying entity, such as the Land Trust of Santa Cruz County, to be applied toward a future perpetual conservation easement, deed restriction, or other farmland conservation mechanism to preserve a minimum of 1.4 acres of FMMP Important Farmland in Santa Cruz County. The amount of the payment shall be equal to 110 percent of the amount determined by the qualifying entity or a licensed appraiser. d. Any combination of the above. 	Prior to construction	RTC
<p>MM AG-3(a). Implement Measures to Reduce Construction-Related Conflicts with Agricultural Operations The following measures shall be implemented during construction to reduce potential conflicts between construction-related activities and agricultural operations:</p>	Prior to and during construction	CFL and RTC

⁶ A qualifying entity would be an incorporated land conservancy that has demonstrable ability to purchase, hold, and manage agricultural conservation easements and that possesses accreditation from the Land Trust Alliance.

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<ul style="list-style-type: none"> ▪ Staging areas shall not be placed in or directly adjacent to active agricultural areas and access to staging areas shall not block or inhibit access to existing farmland or farm access roads ▪ Where feasible, construction adjacent to agricultural areas shall not occur during peak harvest periods, typically in the fall months ▪ When construction activities must occur during agricultural harvest (for example, to avoid nesting bird season), reasonable access to farmland, as determined by the CFL or RTC in consultation with the North Coast Farmers, shall be maintained; while precise timing cannot be specified, CFL and RTC would endeavor to consult with the Farmers as early as feasible in the development of the construction schedule ▪ The construction contractor shall designate a contact for construction-related complaints. Contact information shall be provided to agricultural operators adjacent to the rail line, and shall be posted at construction staging areas. The contractor shall respond to complaints in a timely manner <p>These measures shall be included in final design plans and implemented by the construction contractor. The RTC or its designee shall review plans to confirm inclusion of these measures and conduct spot-check monitoring during construction to ensure compliance.</p>		
<p>MM AG-3(b). Install No Trespassing Signs Prior to Operation Signs clearly indicating “No Trespassing” shall be installed at key locations, to be identified by the RTC or CFL in consultation with the North Coast Farmers. The signs shall specify the legal ramifications for trespassing on adjacent properties. The Trail Manager shall be responsible for ensuring the signs are properly maintained and shall replace signs when they are removed or damaged such that they are no longer legible.</p>	Prior to public use	RTC and CFL
<p>MM AG-3(c). Regularly Remove Solid Waste and Litter during Operation Once the trail is open for public use, the Trail Manager shall ensure that solid waste is collected from each of the 23 proposed trash receptacles twice-weekly, or more often as needed to ensure that the trash and recycling receptacles located along the trail and in the three parking lots do not overflow. The frequencies shall be determined by the Trail Manager and may vary seasonally, with more frequent collection in the summer months when the trail is busy. Trash/recycling receptacles located in the parking lots may require more frequent collection than the receptacles along the trail alignment. The Trail Manager shall be responsible as well for collecting litter along the trail. If litter leaves the trail ROW, the Trail Operator shall ensure that the litter in the vicinity of the trail that is reasonably attributed to trail use is removed within a reasonable time frame. Access to agricultural fields for the purpose of litter removal shall be coordinated with on-site agricultural operators, taking into account pesticide/fumigant restrictions and the goal of minimizing soil compaction or direct contact with crops. The Trail Manager shall not enter adjacent agricultural fields without express permission by the agricultural operator. All solid waste and recyclable materials shall be properly disposed. Additionally, the Trail Manager shall identify garbage, feces, and trampling associated with human activity, including homeless/transient encampments, and report such activity to the County Sheriff and State Parks.</p>	Post construction	RTC and/or designated trail manager
<p>MM AG-3(d). Post Notices to Promote Food Safety Prior to Operation Prior to the trail opening for public use, the RTCs shall post notices of ongoing agricultural activities along the trail alignment, at least every mile, in addition to posting notices at the trail entrances. The location of the notices posted along the trail shall</p>	Prior to public use	RTC and/or designated trail manager

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>be identified by the RTC in consultation with the North Coast Farmers. The following information shall be added to the notices, at a minimum:</p> <ul style="list-style-type: none"> ▪ A reminder that dogs and horses are prohibited on the trail, consistent with State Parks regulations. ▪ Notice that trail users are required to use restroom facilities in consideration of food hygiene issues on adjacent agricultural lands, and provide the location of the restroom facilities at the Davenport Beach, Panther/Yellowbank Beach, and Wilder Ranch parking lots. 		
<p>MM AG-3(e). Install Agricultural Interpretive Exhibits prior to Operation. Prior to the trail opening for public use, agricultural interpretive exhibits shall be installed at key locations along the trail to highlight specifically the importance of agriculture in the North Coast area, consistent with MBSST Master Plan Design Guidelines. The signs shall be intended to educate trail users about the history of North Coast agriculture, typical agricultural practices, and other information determined appropriate in consultation with the North Coast Farmers. The displays shall explain that not all materials applied in nearby agricultural fields are pesticides, but rather may be fertilizers or soil amendments. At least five exhibits shall be placed along the trail in proximity to agricultural operations, and shall be installed in coordination and compatible with other interpretative information (e.g., Sanctuary/coastal education signage).</p>	Prior to public use	CFL and RTC
<p>MM AG-4(a). Relocate Farm Utilities Affected by Trail Construction The RTC and CFL shall be responsible for the actual and reasonable costs to disconnect, dismantle, remove, reassemble, and re-install agricultural utilities and infrastructure (including, but not limited to, irrigation system components, farm access roads, and power supplies) which was installed originally pursuant to legal entitlements to occupy or use the affected land (e.g., leases, contracts, agreements) in or immediately adjacent to the trail ROW. RTC maintains the right to decommission and/or cap unidentified utilities on rail ROW. Utilities shall be relocated in a timely manner to avoid service disruptions.</p>	Prior to construction	RTC and CFL
<p>MM AG-4(b). Design and Maintain Trail Crossings to Accommodate Farm Equipment and Restrict Access Trail crossings shall be designed to accommodate farm equipment. This shall include the following:</p> <ul style="list-style-type: none"> ▪ Crossings shall accommodate farm equipment measuring 19-foot in width, and shall be paved with a surface that can withstand tractor treads ▪ Pending consultation with the California Coastal Commission, gates may be installed at entrances some crossings to prevent access to farmlands by trail users. The gates could include lock system to ensure access by agricultural operators, the Trail Manager, State Parks personnel, and emergency first responders <p>The Trail Manager shall be responsible for clearing excessive soil, mud, and other debris carried onto the trail by farm vehicles, as needed to ensure safe crossing by pedestrians and bicyclists</p>	After construction of trail crossings	CFL, RTC, and/or Designated Trail Manager
<p>MM AG-5. Establish Pesticide Spray Notification Procedures and Install Temporary Warning Signage along Trail. The RTC shall establish notification procedures whereby agricultural operators adjacent to the Project alignment notify the Trail Manager at least 24 hours prior to a application of pesticides of primary concern within 100 feet of the trail. The Trail Manager shall develop the list of pesticides of primary concern in consultation with the Agricultural Commissioner and shall include on the list those pesticides most likely to impact public health. The Trail Manager shall update the list annually based on PURs, latest state and federal pesticide regulations, and Agricultural Commissioner recommendations.</p>	Prior to public use Temporary notices posted within 24-hours of notification of application of	RTC and/or Designated Trail Manager

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>Upon notification, the Trail Manager or their designee shall place temporary signage on the trail in the vicinity of pesticide application. The signs shall be placed in a location highly visible to trail users, and shall indicate the type of pesticide being applied, the duration of application activities, the potential health hazards associated with exposure to the pesticide, and that trail users enter at their own risk. The notice shall additionally include the web address to the National Pesticide Information Center (http://npic.orst.edu/).</p>	<p>pesticide of primary concern.</p>	
<p>Biological Resources</p>		
<p>MM BIO-2. Conduct Biological Monitoring for California Red-Legged Frog (CRLF) and Other Sensitive Wildlife Species CFL and their construction contractors shall conduct construction monitoring for California red-legged frog (CRLF) and other sensitive wildlife species, as agreed to with USFWS and CDFW, and may include the following:</p> <ul style="list-style-type: none"> ▪ Prior to initiation of construction activities, a USFWS- and CDFW-approved biologist shall prepare a construction monitoring plan that identifies all areas to be protected with exclusion fencing on a 1:1500 scale map (or similar scale determined to be practicable), and all areas requiring monitoring by a USFWS- and CDFW-approved biologist or trained construction monitor. ▪ Prior to initiation of construction activities, a USFWS- and CDFW-approved biologist shall conduct an environmental training for all construction personnel. The training shall include a description of CRLF and its habitat, and measures to protect CRLF, and other sensitive wildlife species known or with potential to occur in the Project alignments and surroundings (sensitive fish species, potential Santa Cruz black salamander and western pond turtle, sensitive and native nesting bird species, potential roosting bats species, and San Francisco dusky-footed woodrat). ▪ Prior to initiation of construction activities, the construction contractors shall install exclusion fencing (solid silt fencing) in specified areas along the project boundaries, 2.0 feet below grade and 3.0 feet above grade, with wooden stakes at intervals of not more than 5.0 feet. The fence shall be maintained in working order for the duration of construction activities. The USFWS-approved biologist shall inspect the fence daily and notify the construction foreman when fence maintenance is required. The fence shall allow for wildlife passage across the alignment at intervals to be determined in conjunction with USFWS and CDFW. ▪ If feasible, construction activities shall take place during the dry season between June 15 and October 15, or until the first rain of the season, especially vegetation removal and work in or near aquatic features, including ditch wetlands. Only minor activities of no more than five days in duration shall be initiated after October 15, and such activities shall only proceed in upland areas and when the 10-day forecast predicts a less than 30% chance of precipitation. ▪ The USFWS- and CDFW-approved biologist shall be present on-site, to monitor all ground disturbing activities, (including vegetation removal, grading, and exclusion fence installation and removal and for all construction activities located in or near aquatic breeding and non-breeding habitats including stock ponds, creeks and drainages, riparian habitat, and palustrine and ditch wetland features) for CRLF and amphibians that may be found within vegetation or sediment. Any vegetation removed shall be placed directly into a disposal vehicle. Vegetation shall not be piled on the ground unless later transferred, piece by piece, under the direct supervision of a USFWS- and CDFW-approved biologist. 	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<ul style="list-style-type: none"> ▪ Once these activities have been completed, the approved biologist or construction monitor shall conduct daily morning inspections of the work area prior to daily construction initiation. The biologist shall check underneath any vehicle or heavy equipment that is planned to be moved within the construction site for CRLF and amphibians. ▪ The USFWS- and CDFW-approved biologist shall train a designated construction monitor who shall oversee implementation of all protective mitigation measures when the USFWS-approved biologist is not present. This representative shall be trained in the identification of special-status amphibians. This representative shall not have the authority to handle special status species. ▪ FHWA construction operations engineer shall have the authority to stop work that may result in the take of a special status species at the request of UFWS- and CDFW-approved biologist and construction monitor. ▪ At the end of each work day, excavations shall be secured with a cover (preferably) or a ramp to prevent wildlife entrapment. ▪ All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. ▪ USFWS- and CDFW-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic, if present. 		
<p>MM BIO-4. Conduct Breeding Bird Survey and Identify Protective Buffers prior to Construction</p> <p>The avian breeding season occurs between February 1 and September 15. If feasible, vegetation and tree removal activities shall occur between September 15 and November 1 to avoid impacts to breeding birds and other sensitive biological resources, consistent with the preferred construction windows identified in Mitigation Measure BIO-8(d). If Project activities are initiated during breeding bird season (between February 1 and September 15) or if construction activities lapse for a period of two weeks or more, a qualified wildlife biologist shall conduct avian breeding surveys and identify protective measures prior to initiating and/or resuming construction.</p> <p>If the biologist identifies breeding birds utilizing the trail alignment and surrounding area, the biologist, in consultation with USFWS and/or CDFW, shall establish buffers appropriate to the observed nesting species to protect nesting activities from disturbance, based on standard protocols such as those outlined in the Nesting Bird Management Plan (PG&E 2015). Sensitive bird species that are known to nest adjacent to the trail alignments (northern harrier, American peregrine falcon, western snowy plover) shall be given special consideration.</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>
<p>MM BIO-5. Implement Measures to Protect Roosting Bats during Construction</p> <p>Bat maternity roosting occurs typically between May 1 and September 1, and winter hibernacula (shelter occupied during the winter by a dormant animal) for many bat species are found between November 1 and February 15. If feasible, the construction contractor shall conduct limbing/tree removal operations between September 15 and November 1 to avoid bat maternity roosts and winter hibernacula, as well as other sensitive biological resources. These dates are consistent with the preferred construction windows identified in Mitigation Measure BIO-1(a).</p> <p>To avoid impacts to resident roosting bats, a qualified biologist shall conduct a pre-construction survey for bats prior to trimming, limbing, or tree removal during all months as follows:</p> <ul style="list-style-type: none"> ▪ A qualified biologist shall determine if bats are utilizing the site for roosting. For any trees/snags that could provide roosting space for cavity or foliage-roosting bats, the trees/snags and foliage shall be thoroughly evaluated to determine 	<p>Prior to construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>if bats are present. Visual inspection, trapping, and/or acoustic surveys shall be utilized as initial techniques. If roosting bats are found, the biologist shall develop and implement acceptable passive exclusion methods in coordination with or based on CDFW recommendations. If feasible, exclusion shall take place during the appropriate windows (February 15-May 1 or September 1-October 15) to avoid harming bat maternity roosts and/or winter hibernacula (authorization from CDFW is required to evict winter hibernacula for bats).</p> <ul style="list-style-type: none"> ▪ If established maternity colonies are found, a minimum 500-foot buffer shall be established around the colony to protect pre-volant young from construction noise until the young can fly; or implement other measures acceptable to CDFW. ▪ If a tree is determined not to be an active roost site for cavity-roosting bats, it may be immediately limbed or removed as follows: <ul style="list-style-type: none"> ▫ To avoid harming potential foliage roosting bats, limbs shall be lowered, inspected for bats by a bat biologist, and chipped immediately or moved to a dump site. Alternately, limbs may be lowered and left on the ground until the following day, when they can be chipped or moved to a dump site. No logs or tree sections shall be dropped on downed limbs or limb piles that have not been in place since the previous day. ▫ If the tree is not limbed or removed within four days of the survey, the survey efforts shall be repeated. 		
<p>MM BIO-6. Implement Dusky-Footed Woodrat Protection Measures During Construction</p> <p>Prior to construction, a qualified biologist shall conduct a preconstruction survey for woodrat houses, and clearly flag all houses within the construction impact area and immediate surroundings.</p> <p>The construction contractor shall avoid woodrat houses to the extent feasible by installing a minimum 10-foot (preferably 25-foot) buffer with silt fencing or other material that shall prohibit encroachment. If this buffer and avoidance is not feasible, the qualified biologist shall allow encroachment into the buffer, but preserve microhabitat conditions such as shade, cover and adjacent food sources.</p> <p>Additionally, if avoidance is not possible, a qualified biologist shall develop and implement a Woodrat Relocation Plan. The plan shall be developed in consultation with CDFW (and review by CCC and California State Parks) and may include:</p> <p>Step 1. Live Trapping. Trapping efforts shall not take place during low night temperatures (below 40 degrees Fahrenheit), inclement or extreme weather conditions. To reduce affects to vulnerable young during their breeding season, work shall be scheduled between August 1 and October 30.</p> <p>Step 2. Dismantling. For occupied houses, the existing woodrat house shall be dismantled and the woody debris, including cached food and nesting material, carried to the nearest suitable relocation site outside the Project footprint and used to build an artificial shelter. If no San Francisco ducky-footed woodrats are captured at a given house, it shall be dismantled by hand to ground level, and the woody debris spread to reduce rebuilding.</p> <p>Step 3. Artificial Shelter Location and Installation. Sites for artificial shelters shall be located in proximity to the original house location and no closer than 20 feet from existing woodrat houses and other artificial shelters. Choose the best available microhabitat, ideally in a location with sun and shade and if possible under the same species of tree or shrub as was present at the original house location. Relocation sites shall contain biologically-suitable habitat features (e.g. stands of poison oak, coast live oaks, and dense native brush).</p>	<p>Prior to construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>Step 4. Release of San Francisco Dusky-footed Woodrat. The occupied live-traps shall be placed against the entrance to the artificial shelter, opened, and the woodrat allowed to enter, ideally on its own accord. After the individual enters, the entrance shall be loosely but completely plugged with dirt and leaf duff to encourage it to stay, at least for the short-term.</p> <p>Step 5. Monitoring. Monitoring shall be conducted for 30 days after relocation is completed and include infrared and motion activated cameras and an occupancy assessment.</p> <p>Step 6. Safety Measures. Human exposure to woodrats and possible diseases carried by woodrats shall be minimized.</p> <p>Step 5. Reporting. A report on San Francisco dusky-footed woodrat nest monitoring shall be provided to CDFW, CCC, and California State Parks within 30 days following the end of the monitoring period and shall include the methods and results of trapping and relocation, occupancy determinations, and discussion of any remedies that may be needed.</p>		
<p>MM BIO-8(a). Minimize Construction in Sensitive Habitats</p> <ul style="list-style-type: none"> ▪ To the extent feasible, all trail construction activities, including access routes, staging areas, stockpile areas, and equipment maintenance are to be located outside of the limits of mapped sensitive habitats. Sensitive habitat areas shall be mapped by a qualified biologist and clearly shown on construction plans. Temporary fencing (e.g., silt fencing) shall be installed at the outermost edge sensitive habitats and shall not be disturbed except as required for trail construction. Vegetation removal shall be limited to the minimum extent necessary to achieve project objectives. Mature trees will be retained wherever feasible and limbing of trees and shrubs in coastal scrub, arroyo willow scrub and riparian forest, and coast live oak woodlands should be favored in lieu of removal. When possible, during construction stumps and burls of native vegetation shall be retained to allow for re-sprouting following project completion. ▪ Arroyo willow riparian forest impacted by slope stabilization activities shall be minimized to the maximum extent feasible. Construction of retaining walls, slope contouring, and other stabilization techniques shall be limited to the footprint of the required work area. Silt fencing and other erosion control measures shall be placed immediately downslope to prevent sediments and debris from entering stream courses and degrading water quality. Bioengineering techniques (e.g. low crib walls, vegetation planting) shall be used as a slope stabilization approach, when feasible. ▪ Limbing and removal of coast live oak trees located in coast live oak forest habitats shall be minimized to maintain canopy cover, nesting and roosting habitat for bird and bat species, and understory habitat for wildlife, including woodrats and other small mammals. ▪ Wherever feasible, CFL and RTCs shall implement design options to avoid construction activities in sensitive habitats by shifting the trail alignment to the adjacent farm road on the coastal side of the trail alignment from south of Davenport to Bonny Doon Beach (identified in Section 2.1.4, <i>Project Construction</i>), and shifting the trail alignment on the farm road coastward to avoid sensitive habitats. 	<p>During construction</p>	<p>CFL and RTC</p>
<p>MM BIO-8(c). Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation</p> <p>A qualified (USFWS- and CDFW-approved) biologist shall prepare a Project-specific Biological Resources Mitigation and Management Plan (MMP) to compensate for direct and indirect impacts to sensitive habitats, including ESHA, and other sensitive biological resources resulting from trail construction and operation. The MMP shall compensate for permanent loss of sensitive habitats, through the creation, restoration, and enhancement of in-kind sensitive habitat, as close to impacted</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>areas as possible within the study area, or on suitable State Parks lands immediately coastward of the alignment in consultation with State Parks.</p> <p>To protect against the loss of ecological functions and values, compensatory mitigation shall re-create the following features of existing sensitive habitat that would be impacted by the Proposed Project: habitat mosaic, edge habitats, and proximity to wetlands and other waters. A portion of compensatory mitigation shall re-create the linear aspect and provision for wildlife dispersal of existing habitats, where these features are potentially lost as a result of the Proposed Project. This feature shall be designed to protect against fragmentation of remaining habitat patches adjacent to the rail bed.</p> <p>In addition, the Biological Resources MMP shall include the following:</p> <ul style="list-style-type: none"> ▪ Description of the trail alignment including a creage of temporary and permanent impacts to coastal scrub, a royo willow scrub, a royo willow riparian forest, coast live oak forest, and coastal dune habitats, including the number and type of trees slated for removal. ▪ Acreage of temporary and permanent impacts to CRLF breeding and non-breeding aquatic habitat, upland, and dispersal habitat. ▪ Ecological functions and values assessment of sensitive habitats, including CRLF habitat to determine suitable mitigation ratios (at a minimum, no-net-loss) in consultation with USFWS, CDFW, and CCC. ▪ Goals of compensatory mitigation, including types and areas of sensitive habitat to be created, restored, and/or enhanced; number and type of trees to be replaced, specific functions and values of mitigation habitat types, mitigation ratios (created/restored/enhanced: impacted), and performance criteria, including: <ul style="list-style-type: none"> ○ Conservation of functions and values of CRLF critical habitat (including breeding and non-breeding aquatic habitat features, safe movement and dispersal between aquatic features and upland and dispersal habitat that meet the criteria for primary constituent elements for CRLF); ○ Conservation of edge habitats; ○ Conservation of functions and values for wildlife movement including habitat mosaics, links between creeks and safe passage across the proposed alignment, with perennial water sources, diverse food sources, cover, and shelter. ▪ Such compensatory mitigation must occur as close to impacted areas as feasible and result in no-net-loss (minimum 1:1 replacement ratio) of sensitive habitat types, or their functions and values. ▪ Location and acreage of sensitive habitat, including CRLF habitat, mitigation areas including ownership status, and existing functions and values of restored and/or enhanced sensitive habitats. ▪ Detailed sensitive habitat creation and/or restoration construction and planting techniques. ▪ Description and design of habitat requirements for sensitive wildlife known to occur in the study area and immediate surroundings (including CRLF, potential Santa Cruz black salamander, western pond turtle, western snowy plover, northern harrier, American peregrine falcon, native nesting bird species, potential roosting bat species, and San Francisco dusky-footed woodrat) ▪ Maintenance activities during the monitoring period including replanting native vegetation found within similar habitats within the same watershed and weed removal that avoid take of CRLF and other sensitive wildlife species. Trail maintenance activities would employ hand-tools only. The use of pesticides or herbicides would be prohibited. 		

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<ul style="list-style-type: none"> ▪ Strategies to protect remaining sensitive habitats along the trail corridor and surroundings from direct and indirect impacts from trail users and illegal camping, such as: (strategies may include <ul style="list-style-type: none"> ○ split-rail and wire fencing, ○ interpretive signage including specific information about sensitive habitats and species and “leave no trace” content, and ○ green fencing (dense vegetative buffers consisting of plant species that deter human passage such as poison oak, Pacific blackberry, and stinging nettle), and ○ linear replacement wetlands (see Mitigation Measure BIO-9[b]) of sufficient width (e.g., greater than 6 feet) and depth (e.g., greater than 2.5 feet) to deter crossing. ▪ Strategies to protect wildlife movement, both across and along the trail corridor, supported by complex and mature sensitive habitat mosaics, including perennial water sources. ▪ Consideration of experience-based management approaches, the science of recreation ecology, and social carrying capacity analysis⁷ in the development of this MMP. ▪ Long-term quantitative and qualitative monitoring and reporting, including consideration of carrying capacity analysis and alternative approaches, and documenting the ability to meet or surpass performance criteria. ▪ Adaptive management strategies to: <ul style="list-style-type: none"> ○ identify shortcomings in meeting performance standards; ○ ensure long-term viability of existing, enhanced, restored, and/or newly-created sensitive biological resources; ○ enhance ecological functions and values of sensitive habitat mitigation areas, including CRLF habitat and habitat for wildlife movement; ○ ascertain the sufficiency of the parking lots, trail access, facilities development and management, and interpretive design features associated with the project to protect biological resources, with consideration given to adaptive management strategies identified in recreation ecology and social carrying capacity analysis references;⁸ ○ if impacts from illegal camping and other off-trail uses result in failure to meet performance standards, adaptive management strategies shall include reducing the hours of operation of the trail and associated facilities (restrooms and parking lots) to be consistent with State Parks hours (open from 8:00 am to sunset). <p>Mitigations, Mitigation area locations, and final replacement ratios (e.g., potentially above the minimum “no-net-loss” ratio set here) shall be determined in consultation with the relevant agencies, as follows.</p> <ul style="list-style-type: none"> ▪ U.S. Fish and Wildlife Service (USFWS). California red-legged frog (CRLF) 		

⁷ Garrigos Simon, F.J., Y. Narangajavana, and D. Palacios Marques. 2004. Carrying capacity in the tourism industry: a case study of Hengistbury Head. *Tourism Management* 25(2): 275-283; Knight, Richard L., and Kevin J. Gutzwiller, editors. 1995. *Wildlife and recreationists: Coexistence through management and research*. Washington, D.C: Island Press; Leung, Yu-Fai and Jeffrey L. Marion. 2000. *Recreation Impacts and Management in Wilderness: A State-of-Knowledge Review*. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-15-VOL-5. Washington, DC 2000; *Manfredo*, Michael J., and Richard A. *Larson*. 1993. Managing for wildlife viewing recreation experiences: an application in Colorado. *Wildlife Society Bulletin* 21:226–236; Manning, Robert E. 2002. “How Much Is Too Much: Carrying Capacity of National Parks and Protected Areas.” *Monitoring and Management of Visitor Flows in Recreational and Protected Areas Conference Proceedings*. A. Amberger, C. Brandenburg, A. Muhar, editors. 2002. 306-313.

⁸ see Footnote 5 above.

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<ul style="list-style-type: none"> ▪ California Department of Fish and Wildlife (CDFW). Sensitive habitats, work below the break in bank of stream corridors, riparian habitat, Fully-Protected species, Species of Special Concern ▪ California Coastal Commission (CCC). Environmentally sensitive habitat areas (ESHA) ▪ California State Parks. Sensitive resources and habitats on State Park property <p>The <i>draft</i> MMP shall be submitted to USFWS, CDFW, CCC, and California State Parks for review prior to formal adoption. Monitoring reports will be provided to these agencies.</p>		
<p>MM BIO-8(d). Implement Best Management Practices (BMP) during Construction</p> <p>The construction specifications shall include the following BMPs to protect water quality and biological resources during project construction activities.</p> <ul style="list-style-type: none"> ▪ Minimize removal or disturbance of existing vegetation outside of the footprint of project construction activities [refer to Mitigation Measures BIO-8(a) and BIO-9(a)]. ▪ Limit site access and parking, equipment storage and stationary construction activities to the designated staging areas to the maximum extent feasible. ▪ Prior to staging equipment on-site, clean all equipment caked with mud, soils, or debris from off-site sources or previous project sites to avoid introducing or spreading invasive exotic plant species. When feasible, remove invasive exotic plants from the Project area. All equipment used on the premises should be cleaned prior to leaving the site for other projects. ▪ Position all stationary equipment such as motors, pumps, generators, and/or compressors over drip pans. At the end of each day, move vehicles and equipment as far away as possible from any water body adjacent to the Project site in a level staging area. Position parked equipment also over drip pans or a absorbent material. ▪ Check under all equipment for wildlife before use. If any listed or special-status wildlife is observed under equipment or in the work area, do not disturb or handle it. Cease Project activities and contact the biological monitor or resource agencies for further guidance, if the animal continues to be encountered in the Project area. ▪ If security fencing is installed around the construction site, allow for passage of wildlife to maintain a link between inland and coastal habitats including stream corridors during construction activities. Prohibit the use of plastic mesh safety fencing to prevent wildlife entrapment. ▪ Avoid working at night or during rain events when special-status amphibians and mammals are generally more active. Consult weather forecasts from the National Weather Service at least 72 hours prior to performing work. ▪ Properly contain and remove all food trash that may attract predators into the work area and construction debris and trash from the work site on a regular basis. ▪ Refuel and perform all vehicle and/or equipment maintenance off-site at a facility approved for such activities. ▪ To the greatest extent feasible, stabilize all exposed or disturbed areas in the Project area. Install erosion control measures as necessary such as silt fences, jute matting, weed-free straw bales, plywood, straw wattles, and water check bars, and broadcasting weed-free straw wherever silt-laden water has the potential to leave the work site and enter the nearby streams. Prohibit the use of monofilament erosion control matting to prevent wildlife entanglement. Modify, repair, and/or replace erosion control measures as needed. 	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<ul style="list-style-type: none"> ▪ Revegetate with native vegetation found within similar habitats within the same watershed to minimize erosion, prevent the establishment of invasive weeds, and accelerate the recovery of native vegetation communities. ▪ Whenever feasible, certain construction activities will be timed to avoid impacts to sensitive habitats and wildlife species, as presented in Table 3.4-5 of the EIR, and at the end of this MMRP. Ideally, most if not all vegetation clearing will be done in the fall. 		
<p>MM BIO-9(a). Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats Minimize construction related activities including, but not limited to, access routes, staging areas, stockpile areas, and equipment maintenance, within or adjacent to the limits of palustrine emergent wetlands and aquatic/riverine habitats, to the extent feasible. Wetlands and aquatic/riverine areas shall be clearly shown on construction plans. Temporary fencing (e.g., silt fencing) shall be installed at the outermost edge of all features not directly affected by trail construction.</p>	Prior to construction	CFL and RTC
<p>MM BIO-9(b). Develop and Implement Wetland Mitigation and Monitoring Plan A qualified biologist shall be retained to prepare a Wetland Mitigation and Monitoring Plan (MMP) for all direct and indirect impacts to wetlands and aquatic/riverine habitats resulting from trail construction, resulting in no-net-loss (minimum 1:1 replacement) of these sensitive habitat types. The mitigation area locations and replacement ratios shall be determined in consultation with the USFWS, NOAA Fisheries, USACE, Central Coast RWQCB, California Coastal Commission, and California Department of Fish and Wildlife. It is expected that mitigation requirements shall be based on the determination by the California Coastal Commission that the trail is a resource-dependent use by providing safe pedestrian and bicycle access to the recreation (e.g., beaches, scenic viewpoints) along the northern Santa Cruz coast and based on its capacity for “nature study” pursuant to Section 30233(a)(7) of the Coastal Act. The Wetland MMP shall include the following:</p> <ul style="list-style-type: none"> ▪ Description of the Project including acreage of temporary and permanent impacts to palustrine emergent wetlands, Coastal Act wetlands including arroyo willow scrub and arroyo willow riparian forest, and aquatic/riverine features as identified in a formal delineation of jurisdictional wetlands and other Waters of the U.S. ▪ Ecological functions and values assessment of wetlands, including a determination of regulatory status and permitting requirements to determine suitable mitigation ratios ▪ Goals of compensatory mitigation project including types and areas of wetland and aquatic/riverine habitat to be created, restored, and/or enhanced; specific functions and values of mitigation habitat types; and mitigation ratios (created/restored/enhanced : impacted) ▪ Location and acreage of wetland and riparian mitigation areas including size, ownership status, and existing functions and values of restored and/or enhanced sensitive habitats ▪ Detailed wetland and aquatic/riverine construction and planting techniques ▪ Description and design of habitat requirements for special-status plants and wildlife, including CRLF, potentially occupying wetland and aquatic/riverine habitats ▪ Maintenance activities during the monitoring period, including replanting native wetland and riparian vegetation and weed removal, that will not result in take of CRLF 	Prior to and during construction	CFL and RTC

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<ul style="list-style-type: none"> ▪ Long-term quantitative and qualitative monitoring and reporting, documenting a ability to meet or surpass performance criteria ▪ Adaptive management strategies to ensure long-term viability and enhance ecological functions and values of sensitive habitat mitigation areas ▪ Strategies to protect remaining wetland and aquatic/riverine habitats along the trail corridor from direct and indirect impacts from trail users. Strategies may include split-rail fencing, interpretive signage, and green fencing (dense vegetative buffers) <p>The <i>draft</i> MMP s shall be submitted to USFWS, CDFW, CCC, and California State Parks for review.</p>		
<p>MM BIO-C(a). Include Cumulative Conservation Goals and Objectives in Project-Specific Biological Resources Mitigation and Management Plan (MM BIO-8(c))</p> <p>To mitigate for cumulative impacts, the Project-Specific Biological Resources Mitigation and Management Plan (MMP) developed as Mitigation Measure BIO-8(c) shall include specific goals, objectives, and qualitative performance criteria to maintain functional connectivity between habitat patches and open spaces, including the functions and values of the existing linear feature comprised of sensitive habitats and wetlands along the rail bed, for movement, dispersal, migration, and genetic exchange of native plants and animals through the conservation of:</p> <ul style="list-style-type: none"> ▪ Sensitive habitats and edge habitats; ▪ Ecosystems services and water quality associated with wetlands, creeks, drainages, riparian habitat; ▪ Wildlife movement habitat, including resources for foraging; hydration; cover, shelter, aestivation/hibernacula; nesting and breeding; movement, dispersal, migration; with special consideration given to the sensitive and breeding species listed above; and ▪ Contiguous natural landscapes and connected hunting territories for higher order predators. <p>The MMP shall consider following strategies:</p> <ul style="list-style-type: none"> ▪ Wildlife bypasses; and ▪ Interpretive signs with “leave no trace” educational content <p>The MMP shall include adaptive management strategies specifically addressing cumulative impacts if performance criteria are not met.</p> <p>The MMP shall include an evaluation of (and adaptive management as needed for) the effects of illegal camping, litter (including human foods), urine and fecal matter, and illegal off-leash dogs on biological resources.</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>
<p>MM BIO-C(b). Include Maintenance and Conservation of Biological Resources in the Project Operations & Maintenance Plan</p> <p>To mitigate for cumulative impacts, the Project Operations & Maintenance Plan shall provide for the maintenance and conservation of biological resources along the trail alignment by maintaining fencing and vegetative barriers which protect biological resources, install and maintain additional protective fencing around areas determined biologically sensitive by a qualified biologist, and enforce hours of trail use.</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>
<p>CULTURAL RESOURCES</p>		

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>MM CR-1(a). Install Historical Interpretive Exhibits Prior to Trail Use Consistent with MBSST Master Plan Design Guidelines, RTCs shall develop an on-site interpretive exhibit with materials concerning the history and engineering features of the former Davenport Branch Line and its character-defining features. The exhibits shall be installed at key locations along the trail to specifically highlight the importance of the Davenport Branch Line (such as the Davenport Beach and Panther/Yellowbank Beach parking lots), including its earthen embankments and association with the Santa Cruz Portland Cement Company. Interpretation of the site's history shall be supervised by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards, and may engage additional consultants to develop the display. There shall be at least five exhibits, including signage and salvaged materials, such as small segments of original ballast, ties, and rail, to be placed intermittently along the trail route as approved by the lead agency. The historical interpretive exhibits shall be designed in conjunction and compatible with interpretive exhibits for nature education.</p>	<p>Prior to construction</p>	<p>RTC and CFL</p>
<p>MM CR-2(a). Archaeological Capping at the existing Prehistoric Archaeological Sites prior to Project Construction If warranted based on consultation with the SHPO. Each site within the footprint of the Proposed Project (CA-SCR-56 and CA-SCR-58) may be capped with a geotextile and a layer of sterile fill material. A minimum of 12 inches of fill material shall be placed between any Project ground disturbance and the surface of the archaeological site (e.g., if the maximum depth of ground disturbance at a given location is 3 feet, 4 feet of fill must be placed over the site at that location). Capping shall extend a minimum of 3 feet from the edge of Project ground disturbance but may extend further if required by the nature of Project activities at a given location. Archaeological site areas shall be marked with signage indicating that the locations are environmentally sensitive areas. Signage at these locations shall not indicate the presence of archaeological sites. Fencing shall be installed along either side of the trail to discourage off-trail activity in these locations. For resources on State Parks property, archaeological capping shall be completed in consultation with State Park and the State Historic Preservation Officer.</p>	<p>During construction</p>	<p>CFL and RTC</p>
<p>MM CR-2(b). Conduct Archaeological Monitoring during Construction Prior to the commencement of construction activities, an orientation meeting shall be conducted by an archaeologist with the general contractor, subcontractor, and construction workers associated with earth disturbing activities. The orientation meetings shall describe the potential of exposing archaeological resources, the types of cultural materials may be encountered, and directions on the steps that shall be taken if such a find is encountered. Topics to be discussed shall include, but not be limited to, Ohlone material culture and a brief history of the Town of Davenport and Wilder Ranch. During construction, a qualified archaeologist shall be present during all earth moving activities involving excavation within native soils. Archaeological Monitoring may be reduced or halted at the discretion of the monitors as warranted by conditions such as sediments being excavated are fill, negative findings during the first 60 percent of rough grading, or encountering bedrock. If monitoring is reduced to spot-checking, spot-checking shall occur at regular intervals as determined by the qualified archaeologist or when ground disturbance will extend to depths not previously reached. Archaeological monitoring shall not be reduced on or within 50 feet of known archaeological sites. If previously unknown or undiscovered prehistoric or archaeological resources are encountered during ground-disturbing construction activities, the archaeological monitors shall request the construction operation engineer to stop work, and State Parks and the SHPO, if appropriate, shall be notified at once to assess the nature, extent, and potential significance of any prehistoric or archaeological cultural</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>remains. Procedures to identify and test the resources shall be coordinated with State Parks and the SHPO.</p>		
<p>MM CR-4. Stop Work if Unanticipated Discovery of Human Remains During construction, the construction personnel shall stop work if human remains (i.e., bones) are inadvertently discovered during ground-disturbing activities. Consistent with California Health and Safety Code Section 7050.5, if human remains are found, no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the Santa Cruz County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner is required to notify the NAHC, a representative of which would determine and notify a most likely descendant (MLD). The MLD must complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If human remains are found on State Parks Lands, they shall be treated in accordance with State Parks policies with involvement from the State Parks District Tribal Liaison.</p>	<p>During construction</p>	<p>CFL and RTC</p>
<p>TRIBAL CULTURAL RESOURCES</p>		
<p>TCR-1. Conduct Native American Monitoring during Construction In coordination with State Parks archeologist, a Native American monitor shall be retained and remain present during ground disturbing activities within previously identified areas of high sensitivity and any archaeological excavation, and shall participate in the orientation meeting required under Mitigation Measure CR-2(b) in Section 3.5, <i>Cultural Resources</i>. In the event that cultural resources of Native American origin are identified during construction, the Native American monitor shall request the COE to halt and redirect ground disturbance away from the find. CFL, in coordination with State Parks, shall consult with a qualified archaeologist and begin or continue Native American consultation procedures. If it is determined that the resource is a tribal cultural resource, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with Native American groups. The mitigation plan may include but would not be limited to avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measure.</p>	<p>During construction</p>	<p>CFL and RTC</p>
<p>PALEONTOLOGICAL RESOURCES</p>		
<p>MM CR-3. Conduct Paleontological Monitoring during Construction Prior to the commencement of ground disturbing activities, a qualified professional paleontologist shall be retained to prepare and implement a Paleontological Resources Mitigation Plan (PRMP) for the Project. A Qualified Paleontologist is defined as an individual who meets the education and professional experience standards as set forth by the SVP (2010), which includes a BS or BA degree in geology or paleontology, one year of monitoring experience, and knowledge of the local paleontology and collection/salvation paleontological procedures and techniques. The PRMP shall describe paleontological monitoring procedures to be used during construction; communication protocols to be followed if a fossil discovery is made during project development; mitigation recommendations in detail, including and preparation, curation, and final reporting requirements, as described below.</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>Once the PRMP has been prepared and prior to the start of construction, the Qualified Paleontologist or his or her designee, shall conduct Worker Education Awareness Program (WEAP) training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staffs should fossils be discovered by construction staff. The WEAP shall be fulfilled at the time of a preconstruction meeting.</p> <p>During construction, a qualified paleontological monitor shall be present during earth moving activities (e.g., excavation, trenching, drilling) which are 1) wider than three (3) feet; 2) deeper than the typical two (2) feet (at the locations listed in Table 2-2, Construction Estimates, in Section 2.6, <i>Project Construction</i>, of this EIR), and in previously undisturbed Santa Cruz Mudstone and Pleistocene marine terrace deposits. Monitoring is not required for the entire length of the trail. The duration and timing of the monitoring shall be determined by the Qualified Paleontologist and the location and extent of proposed ground disturbance. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, the Qualified Paleontologist may recommend that monitoring be reduced to periodic spot-checking or cease entirely.</p> <p>In the event a fossil is discovered by construction personnel or the paleontological monitor anywhere in the Project area, all work in the immediate vicinity of the find shall cease and the Qualified Paleontologist shall evaluate the find before re-starting work in the area. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammals) require more extensive excavation and longer salvage periods. In this case, the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Shortly after halting construction in the immediate vicinity of the find, the paleontologist shall notify CFL and RTC, which shall then have the authority to determine how long to maintain the suspension of construction in the immediate vicinity of the find. Before allowing the recommencement of construction, CFL shall allow the paleontologist or his or her designee sufficient time to safely remove a representative sample of significant fossils from the find.</p> <p>Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection (such as the UCMP), or with State Parks if identified on State Parks property, along with all pertinent field notes, photos, data, and maps.</p> <p>At the conclusion of monitoring and laboratory work and museum curation (if required and conducted), a final report shall be prepared describing the results of the paleontological mitigation monitoring efforts associated with the Project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The final report shall be submitted to CFL, RTC and California State Parks, even if paleontological resources are not discovered during monitoring. If fossils were discovered during construction, then a copy of the report shall also be submitted to the designated museum repository.</p>		

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
GEOLOGY AND SOILS		
<p>MM GEO-2. Conduct Design-level Geotechnical Investigation and Implement Recommendations</p> <p>Prior to commencement of construction activities, a registered civil or geotechnical engineer shall prepare a Design-level Geotechnical Investigation for the selected trail alignment. The Design-level Geotechnical Investigation will include a more detailed analysis of geologic and soil conditions along the trail alignment, which at a minimum shall include the following:</p> <ul style="list-style-type: none"> Additional soil test borings necessary to fully characterize geologic and soil conditions in the trail alignment, including but not limited to soil sampling at critical structure locations (such as retaining walls and reinforced soil slopes) and parking lots Specific and detailed recommendations for structural setbacks, foundation types and the related criteria to be used in their design, allowable settlement, seismic design considerations including seismically-induced settlement, retaining structures as needed, drainage improvements, and earthwork preparation Quantitative analysis of potentially liquefiable sediments in the trail alignment, including estimates of potential settlement, to assess their potential impact on foundations, slope stability, and lateral spreading potential Detailed geotechnical analysis and design standards for reinforced soil slopes, retaining walls, and other Project facilities on or near loose to very loose granular soils, including an assessment of the potential for static and seismically-induced settlement, soil preparation and compaction requirements, and foundation requirements Assessment of compaction needs for existing subgrades below buildings, site walls, and pavement sections to reduce settlement potential Geotechnical design criteria for engineered embankments or retaining walls, including lateral earth pressure values, foundation recommendations, bearing capacity, keyway dimensions and construction recommendations, appropriate slope gradients, slope setbacks, drainage requirements, and specifications and compaction requirements for engineered fill and geosynthetic reinforcement Detailed design recommendations for stabilization of coastal bluffs, including types of materials to be used, foundation requirements and structural connections to competent native materials, and measures to address undercutting of the bluff by wave action Drainage design recommendations to prevent discharge of stormwater onto unprotected slopes and minimize the potential for runoff to cause erosion or destabilize hillslopes (this issue may be addressed by the Design-level Drainage Analysis required by Mitigation Measure HWQ-1(d), in which case design recommendations shall be coordinated between the two analyses) Assessment of the potential for Project facilities to be damaged by strong seismic ground shaking and design recommendations in accordance with the requirements of the CBCS to minimize the potential for structural damage Additional geotechnical design recommendations as required for site preparation, grading and compaction, structure foundation design, retaining walls, slope setbacks, surface drainage, concrete slabs-on-grade, and design of structural pavement sections 	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
HAZARDS AND HAZARDOUS MATERIALS		
<p>MM HAZ-3. Identify and Verify Locations of Utility Infrastructure</p> <p>Prior to construction, the RTC and CFLs shall determine the presence and exact location of any underground utility lines that correspond to the trail alignment or could be affected by trail or parking lot construction. In addition, the presence of any above-ground utility lines in close proximity to the trail alignment and parking lots shall be determined. If any utility lines are found to be in proximity to the Proposed Project, the RTC shall contact the utility line operator about any regulations for grading and construction activities near the lines. Information concerning the size, color, and location of existing utilities must be confirmed before construction activities begin.</p> <p>The construction contract specifications shall require that the contractor provide updates on planned excavation for the upcoming week and identify when construction will occur near a high-priority utility. On days when this work will occur, construction managers shall attend tailgate meetings with contractor staff to review all measures – those identified in the Mitigation Monitoring and Reporting Program and in the construction specifications – regarding these excavations. The contractor’s designated health and safety officer shall specify a safe distance to work near high-pressure gas lines. Excavation closer to the pipeline shall not be authorized until the designated health and safety officer confirms and documents the following in the construction records:</p> <p>The line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device The location was verified by hand by the construction contractor The designated health and safety officer shall provide written confirmation to the RTC that the line has been adequately located and can be feasibly avoided, and excavations shall not start until this confirmation has been received by the RTC.</p> <p>If utility relocation is required, the RTC shall coordinate with all appropriate utility providers and local agencies to integrate with other construction projects and minimize disturbance to nearby communities, as required by California Water Code §11590. The RTC shall notify the public in advance of any relocation that is anticipated to disrupt utility service. The RTC shall contact utility owners if construction causes any damage and promptly reconnect disconnected cables and lines with approval of the owners.</p>	<p>Prior to construction</p>	<p>RTC and CFL</p>
<p>MM HAZ-4(a). Conduct Soil Sampling and Implement Necessary Remediation</p> <p>Based on further coordination with Environmental Health Division (EHS), if determined necessary, the RTCs shall prepare and submit Work Plan(s) for a Supplemental Soils Investigation to County of Santa Cruz Environmental Health. Following notification that County of Santa Cruz Environmental Health has received, reviewed, and accepted these Work Plan(s), the RTCs shall conduct a Supplemental Soils Investigation, which shall include soil sampling at selected locations within the limits of the Project corridor under the supervision of a professional geologist or professional civil engineer to identify the concentrations of anticipated contaminants which may include: pesticides, herbicides, TPHs, heavy metals, PAHs, and other reasonably anticipated contaminants of concern.</p> <p>The RTCs shall coordinate with County of Santa Cruz to develop and implement a program to remediate or manage known contaminated soil during construction. If necessary, any additional information gathered from the Supplemental Soil Investigation shall be used to identify locations along the corridor that may require remedial action in order to prevent exposure of construction workers, maintenance personnel, and trail users to these contaminants. The environmental data</p>	<p>Prior to and during construction</p>	<p>RTC and CFL</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>collected shall also be used to identify the appropriate disposal options for those soils or demolished materials that require off-site disposal.</p> <p>Disposal shall occur at an appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. Where possible, potentially contaminated soils and rail ballast shall be stockpiled and characterized to determine the appropriate means and location for proper disposal. The remediation/disposal program shall be approved by Santa Cruz County Environmental Health Services. RTCs shall submit any required correspondence to County of Santa Cruz Environmental Health Division prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed in accordance with applicable DTSC and CalOSHA regulations. Upon completion of the Supplemental Site Investigation, the environmental consultant shall prepare a report presenting the findings of the additional assessment. The report shall include figures depicting the boring locations, summary tables of analytical data, conclusions, and recommendations.</p>		
<p>MM HAZ-4(b). Prepare and Implement Soils Management Plan</p> <p>The RTCs shall ensure a Soils Management Plan (SMP) is developed by a qualified engineer and implemented in order to protect workers during ground-disturbing activities and to remove and/or mitigate exposure to hazardous-material-containing soil and ballast, where present in the trail corridor. Laboratory data for the impacted soil, identified as part of the soils and ballast assessment report prepared under Mitigation Measure HAZ-4(a), shall be used to profile excavated soil prior to transport, treatment, and recycling at a licensed treatment facility. Additional profiling of the export soils shall be performed as needed to satisfy requirements of the receiving facility. Removal, transportation, and disposal of impacted soil shall be performed in accordance with applicable DTSC and CalOSHA laws, regulations, and ordinances. The SMP shall include health and safety information for workers and the general public with an emphasis on potential adverse health effects and how to seek proper help if an accident is suspected, and inform the various contractors and workers of the presence of shallow soil impacted with contaminants and the appropriate measures to avoid exposure to contaminants. These measures may include, but would not be limited to, the following:</p> <ol style="list-style-type: none"> 1. Install temporary security fencing around the construction site and flag/cone off the areas of contaminated soils (Hot Spots) until the contaminants are removed 2. Providing all personnel entering a Hot Spot with site-specific awareness training 3. Requiring that all personnel whose work will involve the excavation or disturbance of soils in and around the Hot Spot must have successfully completed a 40-hour Hazardous Worker (HAZWOPER) training 4. Requiring a HAZWOPER supervisor to be on-site at all times during the excavation or disturbance of soils in a Hot Spot 5. Prohibiting personnel who cannot prove that they are authorized to enter a Hot Spot or do not have the appropriate personal protective equipment from entering a Hot Spot 6. Prohibiting eating, drinking, smoking, chewing gum or tobacco in Hot spots, and requiring consumable items and activities be confined to designated worker break areas. <p>In the event that contaminated soil and/or groundwater are identified where not previously anticipated during construction, the SMP shall also require that construction cease and that appropriate handling and disposal procedures be implemented. Contaminated soils and/or groundwater can be identified by discoloration or stains, distinctive odors, absence of plants and animals, subsequent erosion from the absence of plant life, or the presence of paint chips or other materials known to</p>	<p>Prior to and during construction</p>	<p>RTC and CFL</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>contaminate soils. Procedures for properly handling, storing, and disposing contaminated soils may include, but are not limited to, the following:</p> <ol style="list-style-type: none"> 1. Placing contaminated soils in properly labeled drums or lined hazardous waste storage/transportation conveyance units (i.e., roll-off waste boxes) in preparation of transportation and disposal 2. Avoiding temporary stockpiling of contaminated soils or hazardous materials 3. If temporary stockpiling is necessary: <ol style="list-style-type: none"> a) Covering the stockpile with plastic sheeting or tarps b) Installing a berm around the stockpile to prevent runoff from leaving the area c) Avoiding stockpiling in or near storm drains or watercourses 4. Monitoring the air quality during excavation operations at locations potentially exhibiting elevated concentrations of hazardous material 5. Collecting water from decontamination procedures and treating and/or disposing of it at an appropriate disposal site 6. Collecting non-reusable protective equipment and disposing at an appropriate disposal site 		
HYDROLOGY AND WATER QUALITY		
<p>MM HWQ-1(a). Prepare Accidental Spill Control Plan and Conduct Environmental Training prior to Construction Prior to commencement of construction activities, CFL or its contractors shall prepare a Spill Response Plan (SRP) and Spill Prevention, Control and Countermeasure Plan (SPCC) for the Project, which shall apply to the construction phase. These plans shall include procedures for quick and safe clean-up of accidental spills. The SRP and/or SPCC shall prescribe hazardous materials handling procedures for reducing the potential for a spill during construction, and shall include an emergency response program to ensure quick and safe clean-up of accidental spills and proper disposal of contaminants. Additionally, the contractor shall conduct environmental training program to communicate the risk for accidental spills, environmental concerns and appropriate work practices, including spill prevention and response measures to all field personnel prior to construction. A construction inspector or monitor shall ensure a copy of these plans are kept at construction staging areas or other location accessible and frequented by the construction crew, and shall ensure that the plans are followed during all construction activities.</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>
<p>MM HWQ-1(b). Maintain Vehicles and Equipment during Construction All construction vehicles and equipment, including all hydraulic hoses, shall be maintained in good working order to minimize leaks that could escape the vehicle or contact the ground. A vehicle and equipment maintenance log shall be maintained and updated on a monthly basis for the duration of Project construction. A construction inspector or monitor shall check the vehicles and equipment and ensure the logs are maintained.</p>	<p>During construction</p>	<p>CFL and RTC</p>
<p>MM HWQ-1(c). Conduct Design-level Drainage Analysis prior to Construction, and Implement Identified Measures to Minimize Runoff During Construction Prior to commencement of construction activities, a registered professional engineer shall conduct a design-level drainage analysis that identifies existing drainage patterns across the Project corridor, existing off-site stormwater discharge</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>locations, and stormwater control measures to implement during construction of the project. Where feasible, the drainage analysis shall quantify the existing and predicted post-construction peak runoff rates and amounts, both on-site and off-site immediately downgradient of the Project corridor. The drainage analysis shall identify any changes to the location of downgradient discharge of stormwater runoff and any potential impacts to off-site property that would result from those changes. The stormwater control measures to be implemented during construction shall include or be consistent with measures identified to satisfy the erosion and runoff control standards of the NPDES-required SWPPP. The identified stormwater control measures shall be installed when appropriate during the construction process, including during grading, initial site preparation, excavation, and construction as necessary to control stormwater runoff and erosion during all phases of the construction process.</p>		
<p>MM HWQ-1(d). Prepare Stormwater Control Plan prior to Construction and Implement Identified Stormwater Control Measures</p> <p>Prior to commencement of construction activities, the CFL or its contractor shall prepare a Stormwater Control Plan, prepared by a registered professional engineer, addressing the post-construction stormwater best management practices to be implemented along the Project corridor. The plan shall include the location of the stormwater control measures and details regarding their size and materials. Stormwater control measures shall be developed to maximize on-site infiltration of stormwater and minimize off-site stormwater discharge during operation of the Proposed Project. Examples of stormwater control measures include additional or expanded above-ground retention and/or detention basins, subsurface infiltration devices such as perforated pipes, permeable pavement, and vegetated swales. The Stormwater Control Plan shall be reviewed by a licensed Geotechnical Engineer to ensure conformance with the Design-level Geotechnical Study for the Proposed Project required by Mitigation Measure GEO-1. The plan shall be prepared by a registered Professional Engineer and include, at a minimum, the following:</p> <ul style="list-style-type: none"> ▪ A site map identifying all structural Stormwater Control Measures requiring O&M practices to function as designed ▪ O&M procedures for each structural Stormwater Control Measure including, but not limited to, bioswales, retention/detention basins, and culverts ▪ Short- and long-term maintenance requirements, frequency of maintenance recommendations, and cost for maintenance estimations <p>All recommended annual maintenance shall be completed by October 15 of each year of Project operation. The frequency of maintenance activities not required on an annual basis shall be specified in the Stormwater Control Plan. The Stormwater Control Plan shall demonstrate that with implementation and proper maintenance of the proposed stormwater control measures all NPDES post-construction stormwater requirements would be met.</p>	<p>Prior to and during construction</p>	<p>CFL and RTC</p>
<p>NOISE</p>		
<p>MM N-2(a). Provide Notification of Construction Vibration</p> <p>The construction contractor shall provide written notification at least three weeks prior to the start of any construction activities involving use of vibratory equipment (e.g., asphalt construction and unpaved shoulder construction) to all residential</p>	<p>During construction</p>	<p>CFL and RTC</p>

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
units located within 50 feet of the construction area that will produce the vibration. The notice shall inform residents of the estimated start date and duration of daytime vibration-generating construction activities		
<p>MM N-2(b). Limit Construction to Daytime Hours The construction contractor shall limit construction activities within 150 feet of a sensitive receptor (e.g., residence) to between the hours of 8:00 a.m. to 7:00 p.m. on weekdays and 9:00 a.m. to 4:00 p.m. on Saturday or Sunday.</p>	During construction	CFL and RTC
<p>MM N-4. Implement Noise-Reducing Measures for Construction Equipment Used within 150 feet of Residences During construction, the construction contractor shall employ the following noise-reducing measures where use of construction equipment occurs within 150 feet of residences (considered a sensitive receptor) on Coast Road, east and west of Old Dairy Gulch, and south of Panther/Yellowbank Beach): (1) Use acoustical shelters around air compressors, generators, and any other stationary construction equipment; (2) properly muffle and maintain all construction equipment powered by internal combustion engines; (3) prohibit unnecessary idling of internal combustion engines; and (4) whenever feasible, use electrical power to run air compressors and similar power tools.</p>	During construction	CFL and RTC
TRANSPORTATION/CIRCULATION		
<p>MM T-1. Public Outreach for Bicycling and Walking Prior to operation of the North Coast Rail Trail, the RTCs shall publish informational materials, in print and/or on-line, that explain how pedestrians and bicyclists can access the trail from within the City of Santa Cruz, including from other segments of the MBSST Network and other existing paved trails. The RTC also shall coordinate with the City of Santa Cruz to install signage in a highly visible location on the MBSST that includes a map of paved bicycle and pedestrian access routes to the North Coast.</p>	Prior to public use	RTC
<p>MM T-3(a). Design Roadway Crossings to Minimize Safety Hazards CFL or its contractor shall design trail crossings with public roadways to minimize potential safety hazards. This shall include the following:</p> <ul style="list-style-type: none"> ▪ Caution signs shall be installed along vehicular roadways preceding each trail crossing to warn motorists of trail users ▪ Right-of-way priority shall be given to the facility with the higher volume of traffic, and indicated with appropriate stop sign or yield sign given to the cross traffic <p>Crossings with public roads shall be designed so that the approaching driver and bicyclist or pedestrian have a view of each other within the appropriate stopping sight distance suggested by AASHTO Guidelines. This sight distance shall be provided through a combination of measures such as minor vegetation trimming and/or removal, sidewalk/shoulder curb extensions, roadway realignment or narrowing, etc.</p>	Prior to and during construction	CFL and RTC
<p>MM T-3(b). Install Agricultural Vehicle and Trail Warning Signs Informational signs shall be installed along the trail, preceding agricultural road crossings, warning trail users of the presence of agricultural vehicles. Informational signs shall also be installed on the roadways preceding the trail crossings and where agricultural access points intersect with adjacent roadways, warning operators about the presence of pedestrians and bicyclists.</p>	Prior to public use	CFL and RTC

MITIGATION MEASURE	Implementation Timing	Responsible Agency or Party
<p>MM T-3(c). Install Pedestrian Signage at Davenport Lot: South To minimize jaywalking behavior by new trail users and pedestrians leaving the Davenport Lot: South, informational signage shall be installed to direct pedestrians who desire to cross Highway 1 to the formalized pedestrian crossing of Highway 1 at Ocean Street, adjacent to the improved Davenport Lot: North.</p>	<p>Prior to public use</p>	<p>CFL and RTC</p>

CHAPTER 4: SECTION 4(F) PROPERTIES

4.1 Section 4(f)

This section provides an evaluation of the project relative to Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) and its implementing regulations, jointly codified by FHWA and the Federal Transit Administration in March 2008 as a Final Rule at 23 C.F.R. Part 744.

Section 4(f) states that it is the policy of the federal government “that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites” (49 USC 303). FHWA may not approve the use of a Section 4(f) property unless there is no feasible or prudent avoidance alternative and all possible planning to minimize harm has been included.

As defined in 23 CFR 774.17 and 774.15, where applicable and not excepted, the "use" of a protected Section 4(f) property can be classified as a direct use, a temporary occupancy, or a constructive use. In addition, a finding of *de minimis* impact can be made if the impact to a Section 4(f) property is determined to be minimal. These uses, including *de minimis* finding, are defined below.

- **Direct Use.** A direct use of a Section 4(f) property takes place when the land is permanently incorporated into a transportation facility.
- **Temporary Occupancy.** A temporary occupancy results in a use of a Section 4(f) property when there is a temporary impact to the Section 4(f) property that is considered adverse in terms of the preservationist purposes of the Section 4(f) statute.
- **Constructive Use.** Constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the resource are substantially diminished.
- ***De minimis.*** A finding of *de minimis* impact may be made for historic sites when no historic property is affected by the project or the project will have "no adverse effect" on the historic property in question. For parks, recreation areas, and wildlife and waterfowl refuges, a finding of *de minimis* impact may be made when impacts will not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). A *de minimis* impact finding may be made without the evaluation of avoidance alternatives typically required in a Section 4(f) evaluation.

4.2 Section 4(f) Properties

The study area used to identify Section 4(f) properties differed depending on the Section 4(f) property type. Recreational resources were identified using CA State Parks boundary and the County of Santa Cruz planning documents, while historic resources were identified using the RTC right-of-way, with wider areas to accommodate proposed localized improvements. No wildlife or waterfowl refuges are located within the Project corridor, and therefore were not considered. Table 4.1 lists 4(f) properties within the Project area and whether the Proposed Project would result in a “use” of the property.

Table 4.1 Section 4(f) Resources Located within the Project Area and Preliminary Section 4(f) Impact Determinations

Property	Official with Jurisdiction	Type of Resource	Anticipated Section 4(f) Impact
Wilder Ranch State Park	California Department of State Parks	State Park	Enhancement/Exception 23 CFR 774.13(g)
California Coastal Trail	California Department of State Parks	Recreational: Coastal bluff trail approximately 5.5 miles between Wilder Ranch and Davenport. There are approximately 26 access points to the coastal trail along the Project corridor.	Temporary occupancy/Exception 23 CFR 774.13(d)
Wilder Ranch Trails Old Cove Landing Trail	California Department of State Parks	Recreational: Old Cove Landing Trail is a coastal bluff trail approximately 1.5 miles long with two access locations along the Project corridor.	Temporary occupancy/Exception 23 CFR 774.13(d)
County Beaches Davenport Beach Bonny Doon Beach Panther/Yellowbank	Santa Cruz County	Recreational: Public beaches	Temporary occupancy/Exception 23 CFR 774.13(d)
Wilder Ranch State Park Beaches Shark Fin Cove Laguna Creek Four Mile Three Mile Strawberry Sand Plant Beach Fern Grotto	California Department of State Parks	Recreational: Public beaches	Temporary occupancy/Exception 23 CFR 774.13(d)
Santa Cruz Branch Rail Road	Santa Cruz Co. RTC	Historic property	No Section 4(f) impact
Town of Davenport	SHPO	Historic property	Anticipated <i>de minimis</i>
Wilder Ranch Old Coast Road	California Department of State Parks	Historic property	No Section 4(f) impact

Property	Official with Jurisdiction	Type of Resource	Anticipated Section 4(f) Impact
CA-SCR-56	SHPO	Historic site	No Section 4(f) impact
CA-SCR-58	SHPO	Historic site	No Section 4(f) impact

4.2.1 Wilder Ranch State Park

The 7.5-mile multi-use trail under the Proposed Project would be constructed predominantly on publicly-owned land, with the alignment within or adjacent to RTC-owned rail corridor and through land owned by the California Department of Parks and Recreation (State Parks), Wilder Ranch State Park, including the Coast Dairies property. Wilder Ranch State Park is rich in prehistoric, pre-modern, and agricultural history as well as providing several recreational resources that are adjacent to the rail corridor.

The Wilder Ranch State Park General Plan (California State Parks Department [State Parks] 1980) recognizes the potential of Wilder Ranch State Park, at the southern terminus of the Project, to help meet California's recreation demands. The plan establishes goals to provide recreational opportunities for day and overnight use, protect cultural and natural resources, and provide educational elements throughout the park for both cultural and natural resources. While preserving and enhancing natural resources, the plan also acknowledges the historical use of the site for agricultural purposes and plans for the retention of agricultural crop production in the park through management of lease holds to farmers. The plan establishes recreational provisions that include walking, hiking, mountain biking, and equestrian use interspersed with educational opportunities.

The proposed trail would extend predominantly through undeveloped open space and agricultural land. A portion of the proposed trail at the southern end of the project area would incorporate portions of a trail and roadway at Wilder Ranch that are used by the public and State Park staff. Overall, the Proposed Project would incorporate approximately 15.9 acres of State Park land for development of the trail.

Section 4(f) has various exceptions to the requirement for Section 4(f) approval (23 CFR 774.13). These exceptions include transportation enhancement projects and mitigation activities, where:

- The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.
- The official(s) with jurisdiction over the Section 4(f) resource agrees in writing to paragraph (g)(1) of this section.

The proposed action would result in the conversion of existing open space and recreational lands to a multi-use trail within Wilder Ranch State Park. The purpose of the Proposed project is to provide a safe and sustainable trail for recreationists of all abilities. The multi-use trail will improve pedestrian and bicycle safety and improve the trail system linkage with other existing and future planned trails in the area. Therefore, it has been determined the Proposed Project qualifies for the Section 4(f) exception per 23 CFR 774.13(g).

Coordination with the official with jurisdiction over Wilder Ranch State Park is on-going and will be completed prior to issuance of the decision document.

4.2.2 Recreational Resources

The Proposed Project multi-use trail would extend 7.5 miles along the coastal side of Highway 1 crossing through open space and agricultural land. The proposed multi-use trail would provide access to areas that are regularly used by recreators to access additional trails located adjacent to agricultural lands and along the coastal bluffs, local beaches, and the coastline. Recreational resources are identified in Figure 4.1a and 4.1b.

4.2.2.1 Trails

The Proposed Project alignment is adjacent to approximately seven miles of coastal bluff trails, including the Ohlone Bluff Trail and the Old Cove Landing Trail, which are managed for recreational use by California Department of State Parks. There are approximately 26 access points to the coastal bluff trails along the Project corridor. The proposed multi-use trail would provide direct access to the coastal bluff trails.

During construction, access to portions of the coastal bluff trails may be restricted thus resulting in temporary closures of trails. However, recreational activities such as hiking, biking, and sight-seeing, that warrant protection under Section 4(f) would not be adversely affected because there are miles of trails that can continue to be accessed and used. Closures to portions of the bluff trails would be temporary only lasting while construction of the multi-use trail is taking place in that location. The restricted access would not last the duration of construction. For the majority of the construction, access restrictions to a portion of the coastal bluff trails would be less than 30 days. In areas where construction activity is more complex, for example when building slope stabilization features, access restrictions in those areas may extend up to 60 days. The distance between coastal bluff trail access points ranges from 295 feet to nearly 5,000 feet (the length between access points for the Ohlone Bluff Trail). Coastal bluff trails in other portions of the Project corridor where construction activity is not underway would be accessible, within a relatively short distance, so that visitors could continue to experience hiking, biking and scenic views. Therefore, the activities that warrant protection under Section 4(f) aren't anticipated to be adversely affected.

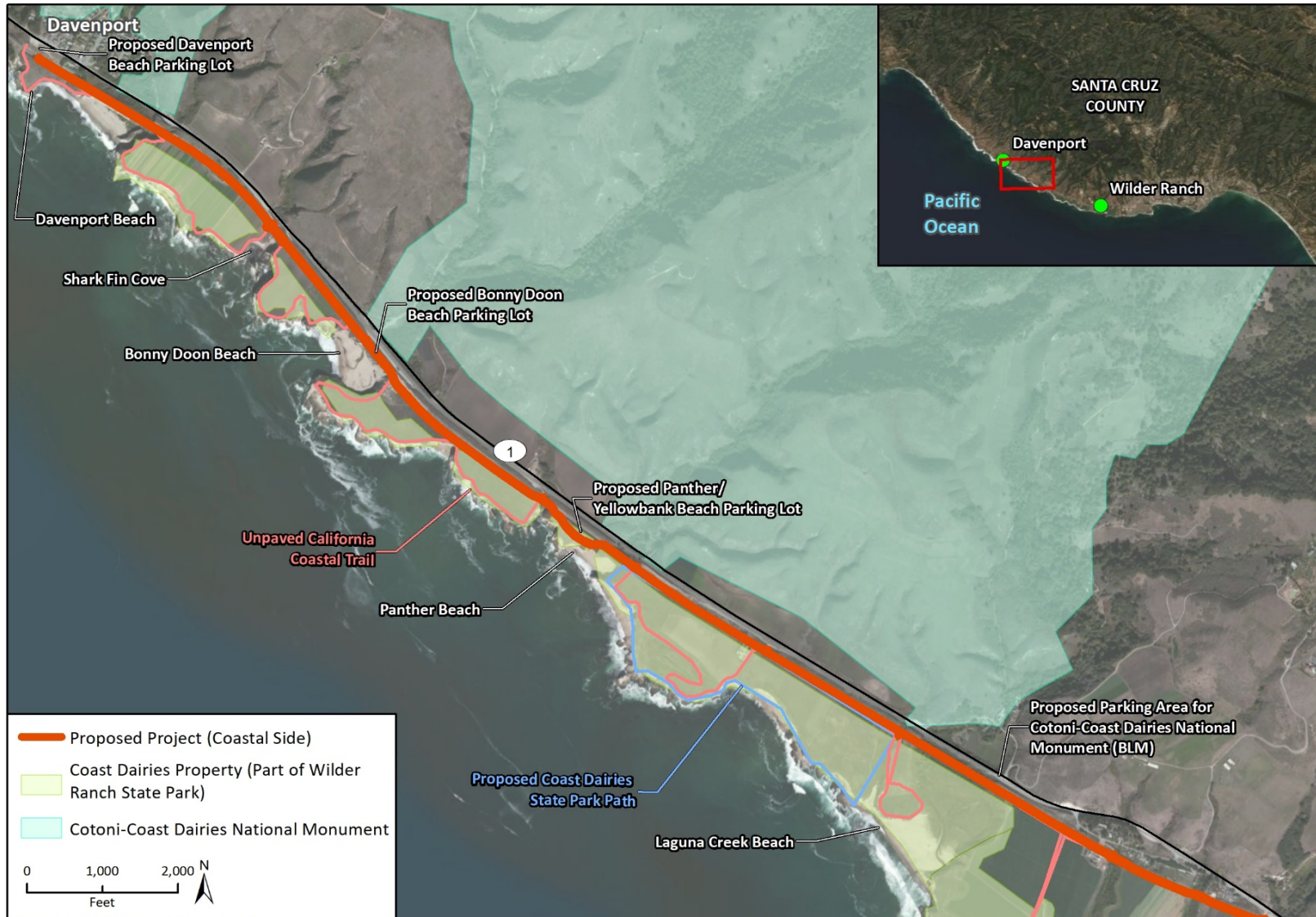
Recreational activities that warrant protection under Section 4(f) aren't adversely affected because there are many miles of trails that can still be accessed and used.

4.2.2.2 Beaches

Santa Cruz County beaches adjacent to the proposed multi-use trail include Davenport, Bonny Doon, and Panther/Yellowbank. The county beaches are managed under the North Coast Beaches Master Plan (Santa Cruz County 1990) for recreational uses. The beaches within Wilder Ranch State Park are managed for recreational purposes under the Wilder Ranch General Management Plan. These beaches include Shark Fin Cove, Laguna Creek, Four Mile, Three Mile, Strawberry, Sand Plant Beach and Fern Grotto. Wilder Beach is closed to the public as it is managed as a nature reserve. Since it is closed to the public it is not considered further in this evaluation.

Similar to the impacts to trails, access to beaches adjacent to the Project corridor may be temporarily restricted during construction. However, access would be permitted on weekends throughout the construction period, so that access is never restricted more than five days. With 10 beaches along the Project corridor, if any one is restricted, nine others would be available..

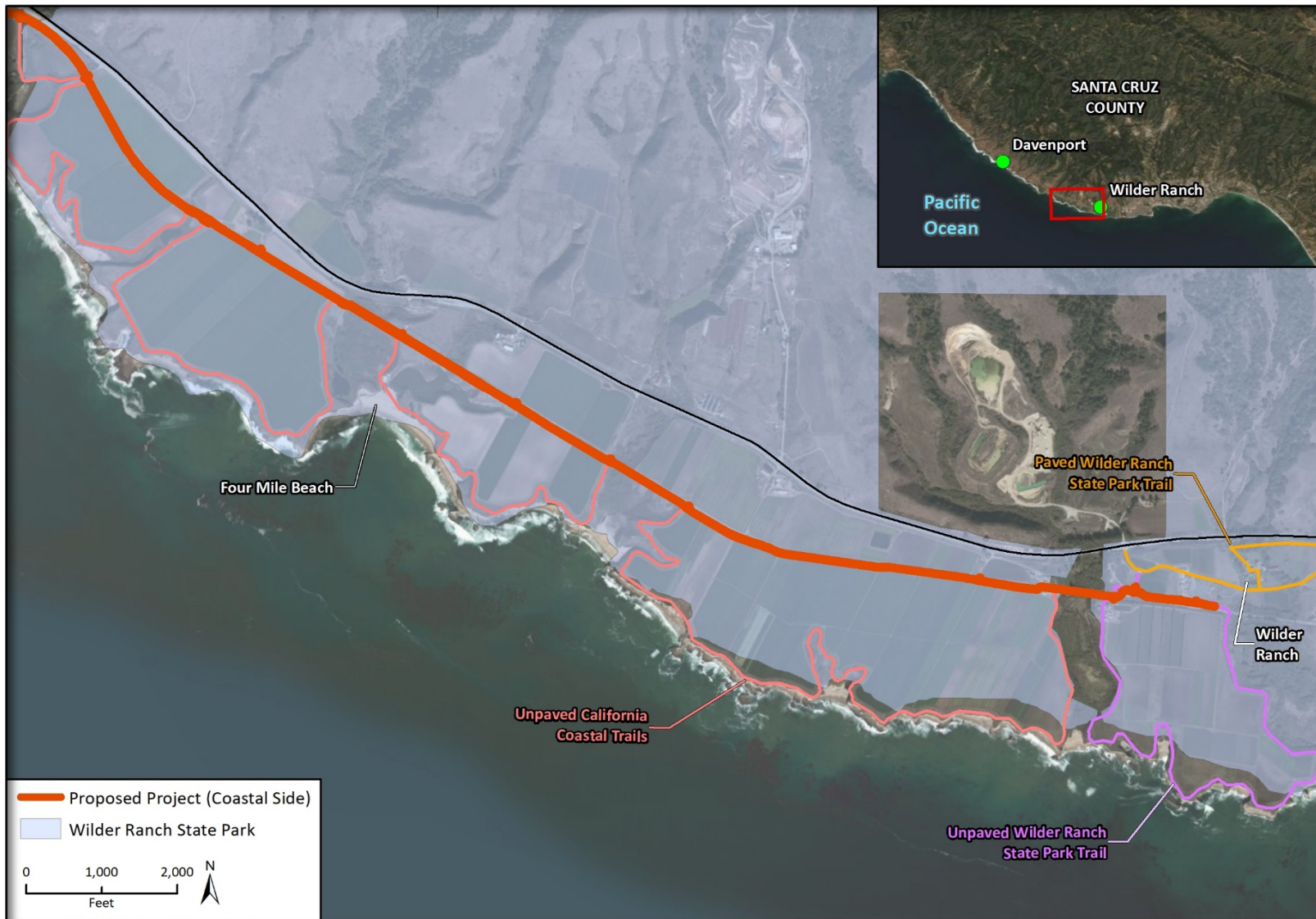
Figure 4-1a Recreational Facilities: North (Davenport to Scaroni Road)



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Fig 3.13-1a Recreational Facilities North

Figure 4-1b Recreational Facilities: South (Scaroni Road to Wilder Ranch)



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Fig 3.13-1b Recreational Facilities South

The maximum distance from a beach to the next nearest beach is 2.2 miles, in the case of Laguna Beach and Four Mile Beach. Therefore, given the continued access to beaches within a relatively short distance during construction, the activities that warrant protection under Section 4(f) aren't anticipated to be adversely affected.

There would be no long-term impacts to trail and beach recreation facilities

4.2.2.3 Temporary Access Conditions Being Met

23 CFR 774.13(d) states:

A temporary occupancy of land is so minimal that it does not constitute a use within the meaning of section 4(f) when the following conditions are satisfied:

- (i) Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;

The total timeline for construction of the Proposed Project would be approximately 12 months. The temporary impact to access to recreational trails is anticipated to be less than two months. The restriction to access to beaches would be no more than five days, as access to beaches would not be restricted during weekends.

- (ii) Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the section 4(f) resource are minimal;

There would be no physical changes to the beaches adjacent to the Project corridor. Access locations to the coastal bluff trails would be altered by grading to allow a safe transition from the Proposed multi-use trail to the bluff trails. These transitional areas would be less than 50 feet wide constituting a minor change.

- (iii) There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;

No permanent adverse physical impacts will occur. No interference with the protected activities will occur on either a temporary or permanent basis. As stated above, there would be trails and beaches open for recreational activities throughout construction adjacent to the Project corridor, even if a portion of another trail or a beach is closed during construction.

- (iv) The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project; and

Beaches will not be physically impacted as a result of the Proposed Project. In areas where coastal bluff trails intersect with the Proposed multi-use trail, the bluff trail access will be graded to allow for a safe transition, leaving the access point in a better condition than currently exists.

- (v) There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.

Coordination is on-going with Santa Cruz County and California Department of State Parks to obtain their concurrence that there will not be an adverse use of the recreational trails and beaches under the Proposed Project. Coordination with the officials with jurisdiction will be completed prior to issuance of the decision document.

Therefore, the temporary use of the trails and beaches is exempt from further Section 4(f) evaluation.

4.2.3 Historic Resources

Historic sites were identified through a cultural resource survey and evaluated for significance in terms of eligibility for inclusion in the National Register of Historic Places (NRHP). The Project study area contains four historic properties that were recommended eligible for inclusion in the NRHP. Two sites include two prehistoric archeological sites (CA-SCR-56 and CA-SCR-58) that were recommended eligible because of what can be learned by data recovery. Section 4(f) only applies to archeological sites that are on or eligible for the NRHP and that warrant preservation in place. Section 4(f) does not apply if FHWA determines, after consultation with the SHPO and Native American tribes, that the archeological resource is important chiefly because of what can be learned by data recovery (even if it is agreed not to recover the resource) and has minimal value for preservation in place (FHWA 2012). Therefore, Section 4(f) would not apply to those sites.

The Davenport Branch Rail Line is recommended eligible for listing on the NRHP for its direct association with the Santa Cruz Portland Cement Company in Davenport and its embodiment of a unique construction method relating to its earthen trestle embankment. However, FHWA has made a preliminary determination that this property would not be adversely impacted with implementation of the Proposed Project. FHWA has established a regulatory provision that Section 4(f) approval is not required when a historic transportation facility is not adversely impacted (23 CFR 774.13(a)). Therefore Section 4(f) will not apply to this historic property.

The Wilder Ranch Old Coast Road is recommended eligible for listing on the NRHP for its association with early coastal transportation and agriculture. FHWA has made a preliminary determination that this historic property would not be adversely impacted as result of the Proposed Project. Similar to the Davenport Branch Rail Line discussion above, Section 4(f) approval is not required for this historic transportation feature.

The Town of Davenport was also recommended eligible for listing on the NRHP based on its association with the nearby Santa Cruz Portland Cement Company. This property is discussed further regarding the potential use of the property for the Proposed Project. For addition information on these historical properties see *Section 3.5, Cultural Resources*.

4.2.3.1 Use of Historic Resources

As described in *Section 3.5, Cultural Resources*, multi-use trail development would not diminish the integrity of the Town of Davenport property and there would be no change in the eligibility of this property for listing on the National Register of Historic Places (NRHP).

The recorded boundary of the Town of Davenport is intersected by the Project area. The Town of Davenport buildings and structures are located on the northeast (inland) side of Highway 1. As a result of the Proposed Project, a portion of the property within the Town of Davenport's historic resource boundary would be incorporated into the right-of-way for the Project. None of the buildings would be directly altered in any way as part of the Proposed Project.

Improvements associated with the Proposed Project in the immediate vicinity of the town would be limited to one street crossing and parking lot improvements on the southwest (coastal) side of Highway 1. The Proposed Project would not alter the characteristics and

features that qualify the Town of Davenport for listing on the NRHP. Therefore, the Proposed Project would have no adverse impact to the Town of Davenport. FHWA anticipates making a *de minimis* determination for the Town of Davenport, pending ongoing SHPO consultation.

4.3 Avoidance, Minimization, and Mitigation Measures

The following measures have been incorporated into project design to reduce potential impacts to Section 4(f) properties:

- The area beyond the construction limits will not be disturbed.
- Temporarily disturbed areas will be restored to pre-existing conditions. Degraded areas impacted from construction-related activity will be replanted or reseeded with native plants from under guidance from California Department of State Parks biologists.
- Access to beaches will not be restricted during weekends.
- Access to trails will not be restricted longer than 30 days at a time.
- Install Historical Interpretive Exhibits Prior to Trail Use - On-site interpretive exhibit with materials concerning the history and engineering features of the former Davenport Branch Line and its character-defining features will be developed. The exhibits will be installed at key locations along the trail to specifically highlight the importance of the Davenport Branch Line, including its earthen embankments and association with the Santa Cruz Portland Cement Company.

4.4 Agency Coordination

To apply an exemption under Section 4(f) of the Transportation Act of 1966 requires agency coordination with the officials having jurisdiction over the Section 4(f) property. This project has been developed in coordination with California State Parks and Santa Cruz County through scoping efforts, and project design and environmental compliance reviews. Coordination with these agencies is on-going and concurrence on FHWA's application of these exemptions will be obtained prior to issuance of the decision document. In addition, consultation with the SHPO per Section 106 of the National Historic Preservation Act will also include the notification of the intent to make a *de minimis* finding. Written concurrence from SHPO on the finding of no adverse effect to historic properties will also be obtained prior project implementation.

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CHAPTER 5: COMMENTS AND COORDINATION

Continuous coordination with the public and project stakeholders is essential to the development of a project and the associated environmental document. Early coordination with both project stakeholders and the public can aid in identifying project-related concerns and potential environmental impacts. This chapter summarizes the coordination efforts for the project.

5.1 Public Involvement Summary

The North Coast Rail Trail Project is part of the larger Coastal Rail Trail Monterey Bay Sanctuary Scenic Trail Network project. Following extensive public outreach for the entire trail corridor, the RTC prepared and adopted a Master Plan, which provides cost estimates, designs, and divides the trail network into 20 segments to be built as funding becomes available. Public scoping and outreach efforts for the entire trail corridor are summarized within the Master Plan (RTC 2016). The North Coast Rail Trail Project that is the basis of this EA is Segment 5 of the Master Plan trail network.

Scoping and Stakeholder Meetings

The RTC, in partnership with FHWA-CFLHD, has made a diligent effort to involve the interested and affected public the environmental compliance process for the North Coast Rail Trail project. FHWA-CFLHD and RTC began public scoping for this project in May 2016 with a press release and open house announcement published and posted on the SCCRTC website. The open house public meeting was held at the Veteran's Memorial Building in Santa Cruz, California on May 24, 2016. Over 80 people were in attendance. During the open house, the public was invited to ask questions and record comments on a large-scale map of the project area. These comments expressed a range of questions, concerns, and suggestions on the following topics:

- locations and management of bathrooms and trash collection,
- linkages and access points to other trails and adjacent public lands,
- farmer access point,
- railroad crossing points,
- bike racks,
- fencing along the tracks,
- impacts to natural resources, and
- turn lanes on Highway 1 at trail access points.

In addition, stakeholder meetings were conducted to hold focused discussions on the Proposed Project. RTC and FHWA-CFLHD met with the director of Wilder Ranch State Park and agricultural operators that lease or own property along the Proposed Project alignment. Concerns raised during that meeting were conflicts between trail use and agricultural operations, farmer's access to agricultural fields, and waste and trash management. A stakeholder meeting of business owners and private land owners along with the California Coastal Commission and Caltrans staff was held in Davenport, CA on December 6, 2016.

Stakeholders discussed various topics concerning the development of a multi-use trail including access points, potential conflicts among user groups, trail amenities, parking, and visitor safety.

NCRT EIR Public Meetings

In 2017 the RTC began the preparation of an Environmental Impact Report (EIR) regarding the Proposed Project in compliance with the California Environmental Quality Act (CEQA). As part of the CEQA process, the RTC conducted public scoping to solicit input on the potential topics to be addressed, range of project alternatives, and possible mitigation measures. The RTC held two public meetings in September 2017 in Davenport and Santa Cruz, California. During the scoping process, the RTC received written comments from nine agencies and 132 members of organizations and the public. The comments received are included in the North Coast Rail Trail EIR, *Appendix B* and a summary provided in *Chapter 1, Introduction* (RTC 2019).

The predominant comments received during scoping included the following:

- Evaluation of a “third” alternative (Farmers’ Alternative) that would remove the rail and locate the trail along the same as the Alternative 1 (Trail Only) north of Scaroni Road, and would locate the trail along Highway 1 (instead of the rail corridor) south of Scaroni Road before returning to the rail corridor just north of Wilder Ranch
- Concerns about impacts on agricultural lands and conflicts with agricultural operation
- Concerns about retaining access to existing trails and farm roads
- Concerns about biological resources including listed species, wetlands, and Environmentally Sensitive Habitat Areas (ESHA) as defined by California Coastal Commission
- Concerns about inadequate parking, and safety across Highway 1

The Draft North Coast Rail Trail EIR (2018) addressed these concerns and an evaluation of alternatives in the EIR Chapter 5, *Alternatives*. The Draft EIR was circulated for a 45-day public review period from August 9 through September 24, 2018. The RTC also held public meetings on August 22 and 23, 2018. RTC revised the Draft EIR in response to the comments received and provided written responses addressing all significant environmental issues raised. The RTC published the Final EIR on February 7, 2019 and certified the Final EIR on March 7, 2019.

The public involvement that has been conducted for the NCRT EIR is incorporated by reference for this EA, which evaluates the EIR Preferred Alternative. The EA has focused on those issues and concerns that were raised throughout the public scoping and EIR public comment period as they relate to the Proposed Project Alternative.

5.2 Project Correspondence

Correspondence with various federal, state, and local agencies and organizations occurred throughout project development. Correspondence is categorized by subject below.

5.2.1 Cultural Resources

Cultural resources specialist from California State Parks were consulted prior to surveys within the Project study area, for identification of resources, and for preparation of the cultural resources report. Native American consultation was conducted by FHWA during the course of project development. FHWA-CFLHD is in the process of consulting with the SHPO regarding the area of potential effects, determinations of eligibility, and finding of adverse effects.

5.2.2 Biological Resources

Coordination with CA State Parks biologist began in 2016 with a request for technical assistance regarding sensitive species, general wildlife, and vegetation within the study area. FHWA-CFLHD has met on-site with the State Park biologist in June 2017, June 2018, and September 2019 to discuss potential impacts and mitigation opportunities within Wilder Ranch State Park. Coordination with the State Park biologist will continue throughout the project.

Consultation with USFWS began when an official species list was received through USFWS's Information for Planning and Consultation (IPaC) online system on April 15, 2016. The list of species was reviewed and verified again in November 2019. A representative from USFWS was in attendance at a field visit to the Project site in September 2019 to discuss potential impacts and mitigation measures to protect federal-listed species. In February 2020, FHWA-CFLHD initiated formal consultation with the agency (see Appendix 3x).

Consultation with NOAA NMFS began with a request for technical assistance in July 2016 regarding threatened and endangered species that may occur in the study area. A representative from NMFS was present at the September 2019 field visit to the Project site to review the Proposed Project and discuss potential impacts and consultation process. In February 2020, FHWA-CFLHD initiated informal consultation with the agency. NMFS requested additional information in February 2020 concerning culvert construction, which was then supplied by FHWA-CFLHD. On March 11, 2020, NOAA NMFS concurred with the finding that the project may affect, but is not likely to adversely affect federal-listed salmonid populations, designated critical habitats or EFH. Correspondence with NOAA NMFS is provided in Appendix F.

Discussion of species of special concern that may occur in the study area was initiated with CDFW during the CEQA EIR process. In September 2019, a representative of CDFW met with FHWA-CFLHD, RTC and other regulatory agencies for a field review of the Proposed Project. Coordination with CDFW is on-going.

5.2.3 Coastal Resources

The Proposed Project alignment occurs within the California Coastal Zone. California participates in the federal Coastal Zone Management Program established under the federal Coastal Zone Management Act (CZMA). This program encourages coastal states to develop and implement coastal zone management plans. California has developed a coastal zone management plan and enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA; they include the protection and expansion of public access and recreation, the protection, enhancement and restoration of environmentally sensitive areas, protection of agricultural lands, and the protection of scenic beauty. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Coordination with the California Coastal Commission was initiated in 2016 at the inception of the Project and has been on-going. The Commission staff have attended site visits and scoping and stakeholder meetings. They provided agency comment of the RTC North Coast Rail Trail EIR. And have been in discussion with FHWA-CFLHD and RTC regarding user access to the coast and sensitive coastal resources.

Analysis of the Proposed Project's consistency with the California Coastal Act will be based on the analysis of impacts in Chapter 3, *Environmental Consequences* of this EA and submitted to the California Coastal Commission for review following issuance of FHWA-CFLHD project decision.

5.2.4 Wetlands

Correspondence with the USACE was initiated on August 2016. Coordination and correspondence with the USACE will continue after completion of this EA to acquire the necessary CWA permits.

5.2.5 Section 4(f)

The Proposed Project would have impacts to resources identified as protected resources under Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303). In order to apply an exemption under Section 4(f) requires agency coordination with the officials having jurisdiction over the Section 4(f) property. Coordination with California Department of State Parks and Santa Cruz County is on-going and concurrence on FHWA's application of exemptions to park and recreational resources will be obtained prior to issuance of the decision document. In addition, consultation with the SHPO per Section 106 of the National Historic Preservation Act will also include the notification of the intent to make a *de minimis* finding regarding historic properties under Section 4(f).

CHAPTER 6: LIST OF PREPARERS

This EA was prepared by the Federal Highway Administration's Central Federal Lands Highway Division (CFLHD) and is the lead agency under the National Environmental Policy Act (NEPA). The Santa Cruz County Regional Transportation Commission (RTC), was the lead agency for the preparation of the North Coast Rail Trail Environmental Impact Report (NCRT EIR 2019) under the California Environmental Quality Act (CEQA).

The Environmental Assessment incorporated by reference technical analyses and information contained in the NCRT EIR 2019. The EIR was prepared by RTC's consultant team, Rincon Consultants, Inc. (Rincon) and Harris & Associates (Harris) with support from Ecosystem West (ESW), Kimley-Horn (K-H), Pacific Crest Engineering (PCE), and RRM Design Group. Key individuals associated with the management and preparation of the EIR can be found in Chapter 6: List of Preparers and References of the 2019 NCRT EIR.

Central Federal Lands Highway Division

- Dustin Robbins, PE, Project Manager
- Wendy Longley, PE, Former Project Manager
- Steve Short, Lead Design Engineer
- Doug Smith, Former Lead Design Engineer
- Timberley Belish, Environmental Protection Specialist
- Thomas Parker, Environmental Protection Specialist
- Dominic Monarco, Geotechnical Engineer
- Megan Frye, Hydraulics Specialist
- Kelly Wade, Environmental Team Lead

Santa Cruz County Regional Transportation Commission

- Guy Preston, Executive Director
- George Dondero, Former Executive Director
- Luis Mendez, Deputy Director
- Grace Blakeslee, Transportation Planner
- Cory Caletti, Former Senior Transportation Planner/Rail Trail Program Manager

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