State Route 9 Post Miles 1.0 and 4.0 Permanent Restoration

On State Route 9 in Santa Cruz County at 0.5 mile north of Vernon Street and 0.8 mile south of Glengarry Road

05-SCR-09-PM 1.0/4.0

Project ID 0518000125

State Clearinghouse Number 202110121

Initial Study with Negative Declaration and Section 4(f) Evaluation

Volume 1 of 2

Prepared by the

State of California Department of Transportation

Caltrans

General Information About This Document

This section has been updated since the circulation of the draft environmental document. The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Initial Study for the project in Santa Cruz County in California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document explains why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

The Initial Study circulated to the public for 31 days from November 6, 2020, to December 7, 2020. No comments were received during this period. Language has been added to indicate where a change has been made since the circulation of the draft environmental document. Minor editorial changes and clarifications have not been so indicated.

Any content changes that were made to the final environmental document after the public circulation of the draft environmental document are indicated with slashes. Within the final environmental document, the start of any content changes is marked with three slashes (///), and the end of any content changes is marked with two slashes (//). Minor editorial changes or clarifications are not identified in the document.

Additional copies of this document and the related technical studies are available for review at the Caltrans district office at 50 Higuera Street, San Luis Obispo, California, 93401, Monday through Friday from 8:00 a.m. to 5:00 p.m. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-5. Paper copies of the document can be provided upon request.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Matthew Fowler, Central Region Environmental, 50 Higuera Street, San Luis Obispo, California, 93401; 805-542-4603 (Voice), matt.c.fowler@dot.ca.gov, or use the California Relay Service 1-800-735-2929 (Teletype), 1-800-735-2929 (Voice), or 711.

State Clearinghouse Number 202110121
05-SCR-09-PM 1.0/4.0
Project ID Number 0518000125

Build sidehill viaducts to permanently restore two locations on State Route 9 in Santa Cruz County at 0.5 mile north of Vernon Street and 0.8 mile south of Glengarry Road

INITIAL STUDY
with Negative Declaration
and Section 4(f) Evaluation

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 49 U.S. Code 303

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agency: California Transportation Commission

John Luchetta
Environmental Office Chief, Central Coast
California Department of Transportation
CEQA Lead Agency

February 24, 2021
Date

The following individual can be contacted for more information about this document:

Matthew Fowler, Central Region Environmental, 50 Higuera Street, San Luis Obispo, California, 93401; 805-542-4603

Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: 202110121

District-County-Route-Post Mile: 05-SCR-09-PM 1.0/4.0

EA/Project Identification: EA 05-1K120 and Project ID 0518000125

Project Description

The California Department of Transportation (Caltrans) proposes to build two sidehill viaducts at post miles 1.0 and 4.0 along State Route 9 to permanently restore areas that have experienced landslides during rainstorms. The sidehill viaducts would support the northbound lane of State Route 9 and would span the existing unstable and oversteepened slopes. Each sidehill viaduct would be on a deep foundation system anchored into the underlying bedrock with cast-in-drilled-hole piles. Soldier pile and lagging retaining cutoff walls would first be built at each location to stabilize the slopes and provide access routes for heavy equipment during construction of the sidehill viaducts. The project would also involve drainage improvements at post mile 4.0.

Determination

An Initial Study has been prepared by the California Department of Transportation (Caltrans), District 5.

Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the project would not have a significant effect on the environment for the following reasons:

The project would have no effect on agriculture and forest resources, cultural resources, energy, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

The project would have no significant effect on aesthetics, air quality, biological resources, geology and soils, greenhouse gas emissions, noise, and public services.

John Luchetta
Environmental Office Chief, Central Coast
California Department of Transportation
CEQA Lead Agency

February 24, 2021
Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (known as Caltrans) proposes the State Route 9 Post Miles 1.0 and 4.0 Permanent Restoration project in Santa Cruz County, California. The project would involve the construction of sidehill viaducts at two locations on State Route 9 at post miles 1.0 and 4.0, which are north of the City of Santa Cruz and south of Felton, a census-designated town in Santa Cruz County. In this area, State Route 9 is a rural two-lane highway that winds through the Santa Cruz Mountains, roughly parallel to the San Lorenzo River and the San Lorenzo Big Trees and Pacific Railway. Location 1 at post mile 1.0 is within the Pogonip Open Space recreational area. Location 2 at post mile 4.0 is within Henry Cowell Redwoods State Park, about 2 miles south of Felton. The railroad is downslope from State Route 9.

Caltrans is the lead agency under the California Environmental Quality Act (known as CEQA).

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to stabilize the cut slopes and permanently restore State Route 9 to its previous function.

1.2.2 Need

The project is needed because heavy rainstorms in early 2017 caused slip outs and slope failures on the slopes above the northbound lanes of State Route 9 at post miles 1.0 and 4.0. Stabilizing the slopes is needed to permanently restore the facility and eliminate impacts to the traveling public.

1.3 Project Description

The project would involve the construction of sidehill viaducts to permanently restore two locations along State Route 9 at post miles 1.0 and 4.0 that were damaged during rainstorms. See Figure 1-1 for the project vicinity map and Figure 1-2 for the project location map. Preliminary project plans are included in Appendix B.

Figure 1-1 Project Vicinity Map

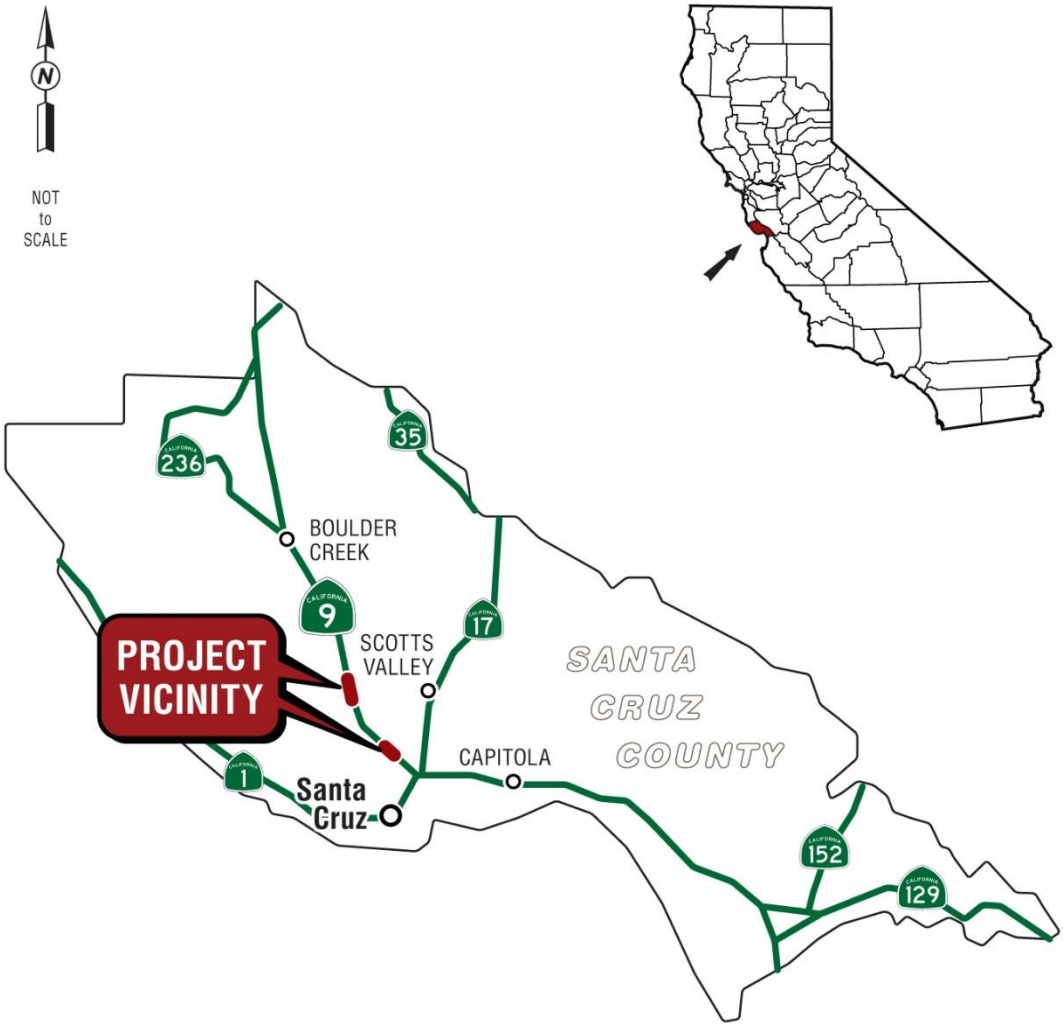
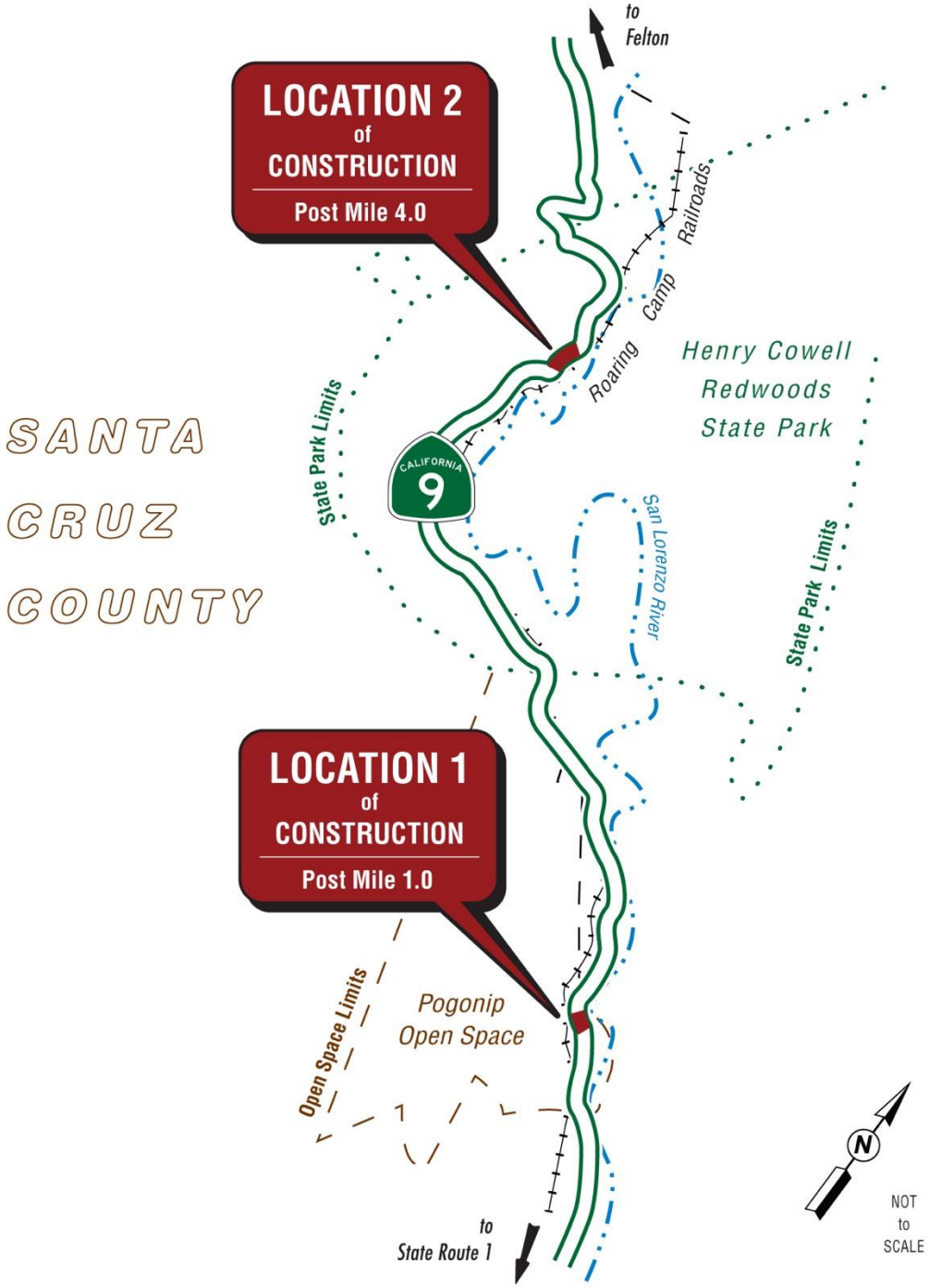


Figure 1-2 Project Location Map



The project is programmed under the 2018 State Highway Operation and Protection Program, with funding from the Major Damage (Permanent Restoration) Program (program code 201.131). Construction of the project would start in fall 2022 and is expected to take about one year (240 working days) to complete. A Build Alternative and a No-Build (No-Action) Alternative

were evaluated. The current programmed cost for construction of the Build Alternative is $13,065,000.

Elements of the project would include:

Build Sidehill Viaducts at Location 1 and Location 2: Sidehill viaducts would be built at Location 1 (post mile 1.0) and Location 2 (post mile 4.0). The sidehill viaducts would support the northbound lane of State Route 9 and would span the existing unstable and oversteepened slopes. Each sidehill viaduct would be on a deep foundation system anchored into the underlying bedrock with cast-in-drilled-hole piles. A 15-foot-tall cutoff retaining wall would be built at each location to stabilize the slopes and provide access routes for heavy equipment during the construction of the sidehill viaducts.

- Sidehill Viaduct at Location 1 (post mile 1.0): The sidehill viaduct at Location 1 would be 132 feet long and would restore the State Route 9 roadway to its previous configuration with 12-foot lanes, a 2-foot southbound shoulder, and an 8-foot northbound shoulder.
- Sidehill Viaduct at Location 2 (post mile 4.0): The sidehill viaduct at Location 2 would be 300 feet long and would widen both lanes from 10 feet to 12 feet and add 4-foot shoulders in both directions. Concrete retaining walls with concrete barriers would be built along the northbound shoulder to the north and south of the sidehill viaduct to tie in with the existing retaining walls along the highway. The southern retaining wall would be about 70 feet long, and the northern retaining wall would be about 35 feet long. The existing metal beam guardrail, where the retaining walls are proposed, would be removed.

Drainage Changes, Location 2: Building a sidewall viaduct at Location 2 would require changes to the drainage system. Currently, water is transported across State Route 9 by several culverts that have inlets within the southbound shoulder, buried reinforced concrete pipes that run beneath the roadway, and outlets downslope of the roadway. Two culverts that were damaged during a landslide and would conflict with the sidehill viaduct at Location 2 would be abandoned, and one new culvert would be built that runs parallel to State Route 9 within the southbound shoulder. The new culvert would connect to an existing culvert that would be south of the sidehill viaduct at Location 2. The new culvert would have inlets at the same location as the two abandoned culverts, and a new inlet would be installed at the southern culvert to connect the systems. Rock slope protection would be placed at the outlet of the southern culvert to protect the slope from erosion.

Construction Equipment and Storage at Location 1 and Location 2: Construction equipment storage would be limited to disturbed areas within the current Caltrans right-of-way along State Route 9. For construction activities that cannot be completed by equipment from the road, temporary work pads may be used. Temporary work pads would be cut into the slope to hold the

excavator or other equipment required. In other locations, the excavator may be driven off the pavement and parked in a location from which the work can be completed. After construction from work pads is complete, the disturbed area would be stabilized and restored. Soil would be replaced, compacted, stabilized, and replanted. Removed trees would be replanted in-kind.

Transportation Management Plan and Public Awareness Campaign: The northbound travel lane would be closed during construction at each location. Temporary traffic signals would be installed to direct reversing one-way traffic in the southbound lane. Vehicles and bicycles would share one 10-foot lane through each construction zone. Temporary full closure of State Route 9 at Location 2 at post mile 4.0 would be required during the construction of the retaining wall due to the narrow lanes and lack of shoulder at this location. The full closure is expected to last about 7.5 months (165 working days). A Transportation Management Plan would identify suitable detours to ensure consistent local access and access to facilities in Henry Cowell Redwoods State Park. The Transportation Management Plan would also include a public awareness campaign to keep the traveling public and visitors to local recreational facilities informed about the construction schedule and expected traffic delays, the dates and duration of the full closure of State Route 9 at Location 2, detours, and other pertinent travel information.

Best Management Practices: This project contains a number of standardized project measures and specifications that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the project. These measures are listed below in Section 1.6.

1.4 Project Alternatives

A Build Alternative and a No-Build (No-Action) Alternative were considered for this project.

Under the Build Alternative, the project would be built as outlined above in Section 1.3 Project Description.

Under the No-Build (No-Action) Alternative, the two slip-out locations would not be stabilized and permanently restored. The roadway would remain narrow, and the hillsides and highway would continue to deteriorate. The No-Build (No-Action) Alternative would not meet the purpose and need of the project.

1.5 Identification of a Preferred Alternative

A Build Alternative and a No-Build (No-Action) Alternative were considered for the project. After public circulation of the Initial Study, a Caltrans Project Development Team reviewed both alternatives and identified the Build Alternative as the preferred alternative. The preferred alternative was determined as the appropriate approach to address damages on the roadway and stabilize slopes. Identification of the preferred alternative came after considering the project's purpose and need, schedule, construction methods, and potential impacts on environmental resources. Although the Build Alternative will result in temporary disturbances to environmental resources during construction, it is not expected to cause permanent negative impacts on environmental resources; no environmental mitigation is required for the Build Alternative.

1.6 Alternatives Considered but Eliminated from Further Discussion

Two other restoration methods were evaluated alongside the sidehill viaduct method to stabilize the slopes: construction of geosynthetic reinforced embankment slopes and construction of soldier pile or lagging walls. Both restoration methods were eliminated from consideration due to geotechnical concerns, feasibility, and potential environmental impacts.

1.7 Standard Measures and Best Management Practices (BMPs) Included in All Alternatives

Caltrans has developed standard measures and Best Management Practices that are implemented on all or most Caltrans projects. The following is a list of standard specifications relevant to the project:

- 7-1.02A General: The contractor will comply with laws, regulations, orders, and decrees applicable to the project.
- 7-1.02C Emissions Reduction: The contractor will submit a certification acknowledging compliance with emissions reduction regulations managed by the California Air Resources Board.
- 7-1.02M(2) Fire Protection: Includes the development of a fire prevention plan, which would minimize the risk of starting a wildfire during construction.
- 13-2 Water Pollution Control Program: This section provides specifications for the development and implementation of a Water Pollution Control Program.

- 13-4 Job Site Management: This section includes specifications for performing job site management work such as spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities.
- 13-5 Temporary Soil Stabilization: This section includes specifications for placing temporary soil stabilization materials on stockpiles or disturbed soil areas.
- 13-6 Temporary Sediment Control: This section covers specifications for installing temporary sediment controls such as check dams and drainage inlet protection.
- 13-9 Temporary Concrete Washouts: This section covers specifications for installing temporary concrete washouts to receive and dispose of concrete waste.
- 13-10 Temporary Linear Sediment Barriers: This section covers specifications for installing temporary linear barriers to control sediment, like high-visibility fencing, fiber rolls, and temporary large sediment barriers.
- 14-1.02 Environmentally Sensitive Areas: Caltrans would mark environmentally sensitive areas, which cannot be entered into unless authorized. If an environmentally sensitive area is breached, work within 60 feet of the area would stop immediately, and the resident engineer would be notified.
- 14-2.03 Archaeological Resources: If archaeological resources are discovered within or near the construction limits, the resources would not be further disturbed, and all work within a 60-foot radius of the discovery would stop immediately. The area would be secured, and the resident engineer notified.
- 14-6.03 Species Protection: Includes instructions for the protection of regulated species and their associated habitat, including migratory and nongame birds. If a protected species is discovered, work would stop within 100 feet of the discovery, and a resident engineer would be notified so Caltrans biologists could investigate the discovery and take appropriate action.
- 14-7.03 Discovery of Unanticipated Paleontological Resources: If unexpected paleontological resources are discovered, the resources would not be further disturbed, and all work within a 60-foot radius of the discovery would stop immediately. The area would be secured, and the resident engineer notified.
- 14-8.02 Noise Control: Noise from work activities would be controlled and monitored. Noise would not exceed 86 A-weighted decibels at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

- 14-9.02 Air Pollution Control: The project would comply with applicable air pollution control rules, regulations, ordinances, and statutes.
- 14-10.02 Solid Waste Disposal and Recycling Report: The types and amounts of solid waste taken to or diverted from landfills or reused on the project would be tracked and reported each calendar year.
- 14-11.03 Hazardous Waste Management: Outlines the procedures for the handling, storage, transport, and disposal of hazardous waste, which would comply with the California Code of Regulations, Title 22, Division 4.5.
- 14-11.04 Dust Control: Excavation, transportation, and handling of material containing hazardous waste or contamination must result in no visible dust migration. When clearing, grubbing, and performing earthwork operations in areas containing hazardous waste or contamination, a water truck or tank would be provided on the job site.
- 14-11.06 Contractor-Generated Hazardous Waste: Provides instructions to the contractor for the management of hazardous wastes that may be generated during construction, such as petroleum materials, paints, stains, and wood preservatives. Instructions for the management of contaminated soils that may be created due to accidental leaks or spills are also included.
- 14-11.12 Removal of Yellow Traffic Stripes and Pavement Marking with Hazardous Waste Residue: Includes instructions for removing, handling, and disposing of yellow traffic stripes and pavement markings, which may contain lead chromate and would be handled as hazardous waste. A lead compliance plan would be developed, implemented, and include testing of the collected residue to determine the proper disposal strategy.
- 84-9.03C Remove Traffic Stripes and Pavement Markings Containing Lead: Includes instructions for the removal of yellow traffic stripes if the stripes would be removed using a cold plane or grinding operation.
- 14-11.14 Treated Wood Waste: Includes instructions for handling, storing, transporting, and disposing of treated wood waste.
- 14-12.02 State Parks: Includes instructions for working in areas under the jurisdiction of California State Parks, including complying with California State Parks' regulations and the protection of natural and cultural features within the parks.

1.8 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation supporting a Categorical Exclusion determination will be prepared in accordance with the National Environmental Policy Act (NEPA). When needed for clarity, or as required by CEQA, this

document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—in other words, species protected by the Federal Endangered Species Act).

1.9 Permits and Approvals Needed

No permits and approvals are required for this project. The project limits are outside of jurisdictional areas, no Section 7 consultation for endangered and protected species is expected, and no 2081 Incidental Take Permit is expected, as outlined in Section 2.1.4, Biological Resources.

See Appendix C for a discussion of recreational resources evaluated relative to the requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966.

Chapter 2 CEQA Evaluation

2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. Potential impact determinations include Potentially Significant Impact, Less Than Significant with Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.

“No Impact” determinations in each section are based on the scope, description, and location of the project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

Considering the information included in the Scenic Resource Evaluation and Visual Impact Assessment Memorandum dated December 2019, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	**No Impact**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Aesthetics
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	**Less Than Significant Impact**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**No Impact**

Affected Environment

The visual setting for the project is a mostly two-lane highway that curves through a heavily forested landscape along the banks of the San Lorenzo River. The dense vegetation contributes greatly to the visual quality of the highway. The San Lorenzo River parallels the highway to the east at the base of the steep slopes of the river canyon. For the most part, the river is not visible to highway travelers because of the dense vegetation and steep topography. The area is prone to landslides, so areas of exposed earth, erosion scarring, and downed trees are noticeable, especially at the proposed sidehill viaduct locations at post miles 1.0 and 4.0.

State Route 9 is sparsely developed through the project limits due to its location on the northern outskirts of the City of Santa Cruz and south of the community of Felton. At post mile 1.0, State Route 9 travels through Pogonip Open Space, and at post mile 4.0, it travels through Henry Cowell Redwoods State Park. Human-made features associated with State Route 9 that are visible along the corridor include shoulders that are up to 4 feet wide, occasional retaining walls, and both metal beam and concrete type barriers. At post miles 1.0 and 4.0, temporary concrete barriers and crash cushions have been placed along the edge of the northbound lanes.

Environmental Consequences

The project would moderately affect the visual environment along the State Route 9 corridor. The proposed concrete bridge railing and deck slab would be the most noticeable visual changes to highway travelers. The new white concrete slabs of the sidehill viaducts would stand out against the darker asphalt lanes. This change would make the sidehill viaduct structures more noticeable and is inconsistent with the aesthetic character of the corridor. The concrete bridge railing would also be noticeable, but because the use of

concrete bridge railing along State Route 9 is common, it would not introduce an unexpected visual element.

From the perspective of recreational users, particularly hikers on paths to the east of State Route 9, the outside concrete bridge rail and sides of the sidehill viaducts would be highly visible. The sidehill viaduct columns and retaining walls would be less noticeable because they would be beneath the bridge deck and in the shade most of the time.

Removing native trees and other vegetation would not substantially change the visual environment because of the heavily forested setting surrounding each sidehill viaduct location. However, tree removals may create voids in the forest, which would cause the sidehill viaducts to become more visible to recreational users.

Avoidance and Minimization Measures

The following avoidance and minimization measures would reduce potential impacts on the visual environment of the project area.

VIS-1: The following elements at both Location 1 and Location 2 should be colored or stained to minimize contrast and noticeability for roadway travelers and recreational users on trails downslope from State Route 9. A Caltrans District 5 landscape architect shall determine and approve the specific color or stain.

- Color or stain concrete bridge rails, the edge of the barrier slab, and concrete vegetation control (if used);
- Color or stain metal bicycle and/or pedestrian rails associated with the concrete bridge rail;
- Color or stain all metal roadside elements such as guardrail and end treatments;
- Color or stain the exposed top surface of the sidehill viaduct deck slab to match the color of the nearby asphalt roadway.

VIS-2: Disturbed areas at Location 1 and Location 2 should be replanted with native trees to the greatest extent possible. A Caltrans District 5 biologist, in consultation with a Caltrans District 5 landscape architect, should determine the species of trees.

2.1.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether

impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

The Santa Cruz County zoning map indicates there are no farmlands or timberlands within the project limits or next to the project. Therefore, the following significance determinations have been made.

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

2.1.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Considering the information included in the Air Quality, Greenhouse Gas, and Noise Technical Memorandum dated August 2020, the following significance determinations have been made:

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

Affected Environment

The project is in a rural portion of Santa Cruz County, within the North Central Coast Air Basin that encompasses Monterey, Santa Cruz, and San Benito Counties. The Monterey Bay Unified Air Pollution Control District regulates air quality in the North Central Coast Air Basin. The basin is considered an attainment area for all National Ambient Air Quality Standards and most state air quality standards. The basin is considered a non-attainment, transitional area with respect to the California Ambient Air Quality Standards for ozone (i.e., one-hour and eight-hour) and non-attainment for airborne particulate matter smaller than 10 micrometers.

Environmental Consequences

The project would not add lanes or capacity to the highway, and therefore would not change long-term air emissions. The project would be consistent with the Monterey Bay Unified Air Pollution Control District's State Implementation Plan (the 2012-15 Air Quality Management Plan) because it is a project that would not further degrade air quality.

Minimal temporary increases in air emissions and fugitive dust may occur during project construction. Air emissions would be generated by the exhaust from construction equipment, which generally includes carbon monoxide, hydrocarbons, oxides of nitrogen, suspended particulate matter, and odors. The most noticeable pollutant expected during project construction would be windblown, fugitive dust generated when construction equipment performs

ground-disturbing activities, hauls loads, or drives over dirt roads. Ground-disturbing activities expected for this project would include trenching, minor grading, cutting, and filling for the construction of temporary access roads and retaining walls.

Because of the relatively small scope of work and the project's location in a rural part of Santa Cruz County, this project presents little potential to subject surrounding sensitive receptors to inhalable construction emissions that would be considered significant. Temporary air quality effects would mostly be experienced by recreational users in Pogonip Open Space and Henry Cowell Redwoods State Park, particularly hikers using the Ox Fire Road trail downslope from Location 2 to access the Garden of Eden swimming hole (see Appendix C).

Implementation of Caltrans' Standard Specifications pertaining to dust control and dust palliative requirements (e.g., Section 14-9.02, Air Pollution Control) would effectively reduce and control emissions during construction. The project-level Water Pollution Control Program would also address water pollution control measures that correlate with standard dust emissions minimization measures, such as covering soil stockpiles, watering haul roads, and watering excavation and grading areas.

Avoidance and Minimization Measures

Implementation of Caltrans Best Management Practices, Standard Specifications, and the project-level Water Pollution Control Program would avoid and minimize potential temporary impacts on air quality during construction. No additional measures are proposed.

2.1.4 Biological Resources

Considering the information included in the Natural Environment Study (Minimal Impacts) dated March 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric Administration Fisheries?	**Less Than Significant Impact**

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

Affected Environment

The project is in the redwood forests of the Santa Cruz Mountains, a region characterized by warm, dry summers and mild, wet winters, with most of the rainfall occurring between November and March. Developed areas within Locations 1 and 2 include State Route 9 and the railroad downslope from Location 2. Disturbed areas are present along highway shoulders and within areas affected by landslides.

Figures 2-1 and 2-2 show the habitats mapped at each project location and the areas of potential temporary and permanent impacts.

Figure 2-1 Habitat Map for Location 1 at Post Mile 1.0

Figure 2-2 Habitat Map for Location 2 at Post Mile 4.0

Natural Communities

The only type of natural community that may be affected by the project is redwood forest (*Sequoia sempervirens* Forest Alliance), which surrounds State Route 9 at Locations 1 and 2. Bigleaf maple forest and riverine habitat occur downslope from each project location but are outside the area of potential impact. Both project locations are well above the ordinary high-water mark of the San Lorenzo River, and no wetlands or other waters are present within the area of potential impacts.

Redwood forest is considered by the California Department of Fish and Wildlife to be a sensitive habitat community. The redwood forest is dominated by coast redwood trees, which can grow to over 300 feet tall and typically grow in stands. Redwood forest canopy is usually continuous, with an underlayer of shrubs or forbs that may be infrequent or common.

Special-Status Plant and Animal Species

The term special-status species refers to plants or animals that are federally or state listed as endangered, threatened, or rare; species that are candidates or proposed for federal or state listing, and species considered special concern species by federal or state agencies. There is potential for 42 special-status plant species and 52 special-status animal species to occur near the project. However, none of these species were documented during appropriately timed biological field surveys.

Though no special-status species were discovered during surveys, potential habitat was documented for 11 special-status plant species and 12 special-status animal species, including migratory nesting birds. Critical habitat for the marbled murrelet, a small migratory seabird that nests in old-growth forests, is present at Location 2.

The San Lorenzo River downslope from the project locations contains federally designated critical habitat for Central California Coast steelhead, Central California Coast coho salmon, and federally designated Essential Fish Habitat for Central California Coast coho salmon.

Invasive Species

Biological surveys identified 18 plant species within the area that are listed as invasive by the online California Invasive Plant Council Database. The most dominant invasive species were English ivy and Himalayan blackberry, which are both highly invasive, and the moderately invasive periwinkle. Invasive species are most prevalent in areas where there are openings in the tree canopy and where human disturbance is greatest, such as along trails and near pullouts on the highway.

Environmental Consequences

Natural Communities

The project would temporarily impact 0.59 acre and permanently impact 1.13 acres of developed areas and ruderal/disturbed habitats along the road surface, road shoulders, and within landslide areas. The project would temporarily impact about 0.08 acre and permanently impact about 0.07 acre of the redwood forest in the project area. No impacts are expected for other communities or habitat types.

The most noticeable impact to the redwood forest in the project area would be the removal of 15 trees: a single redwood tree at Location 1 and the remaining trees at Location 2 (see Figures 2-1 and 2-2). The redwood tree at Location 1 is estimated to be about 50 to 60 years in age, is about 5 feet in diameter at breast height, and is therefore considered a heritage tree by the City of Santa Cruz. Steps were taken to try and design the project around this tree, but it was determined that construction would damage the tree's root system, which extends beneath the shoulder and roadway, and that the tree would not survive. It is also expected that some tree trimming would be required for the relocation of a Pacific Gas and Electric Company utility pole at Location 1.

The trees that would be removed at Location 2 include six coast redwood trees, four Douglas fir trees, and four tanoak trees. Most of these trees are between 1 to 3 feet in diameter at breast height. Removal of the 15 trees is considered an insignificant amount compared to the overall countywide distribution of these tree species. None of the trees are in riparian areas.

Trees removed because of project construction would be replanted.

Special-Status Plant and Animal Species

With the proper implementation of the avoidance and minimization measures listed below, the project would not impact federally or state-listed species, species of concern, or critical habitats. The Federal Endangered Species Act Section 7 effects determination states that there will be no effect on federally listed species, federally designated critical habitat, or federally designated Essential Fish Habitat. The California Endangered Species Act impact assessment states that the project will not impact any state-listed species, and therefore no Section 2081 Incidental Take Permits from the California Department of Fish and Wildlife would be required.

Though marbled murrelet critical habitat is present at Location 2, the project is not expected to impact these seabirds or their critical habitat. Marbled murrelets use the wide, moss-covered branches or lichen-covered branches of old-growth trees as nesting platforms. The trees that would be removed at Location 2 are not old-growth trees (most trees are 1 to 3 feet in diameter at breast height) and do not have branches with suitable nesting platforms.

Removal of these trees would not substantially change the canopy height or density of the surrounding forest.

The project would avoid the San Lorenzo River. Therefore, there would be no impacts to critical habitat for Central California Coast steelhead and Central California Coast coho salmon, or Essential Fish Habitat for coho salmon.

Invasive Species

The spread of invasive species would be managed with the implementation of the avoidance and minimization measures listed below.

Avoidance and Minimization Measures

The avoidance and minimization measures listed below would reduce impacts to biological resources and manage the spread of invasive species. Additionally, it should be noted that Caltrans implements an extensive list of Best Management Practices and standard specifications on all construction projects that would further protect biological resources.

BIO-1: Before any activities begin on the project, all construction personnel will attend an environmental awareness training presented by a Caltrans biologist or their designee. A training brochure describing project contacts, special-status species, nesting birds covered under the Migratory Bird Treaty Act, project avoidance and minimization measures, and potential consequences of impacts to special-status species and habitats will be distributed to the crew members during the training.

BIO-2: A Caltrans biologist or their designee will conduct a pre-construction survey before crews access any vegetated areas to flag workspace boundaries and to identify any occurrences of special-status species. In the unlikely event that a special-status species is encountered during the pre-construction survey or project activities, a Caltrans biologist would be notified immediately, and all work within a 100-foot radius will stop until the special-status species leaves the work area of its own accord. If a federally or state-listed species is seen in the work area, Caltrans will notify the appropriate regulatory agencies.

BIO-3: Before ground-disturbing activities start, erosion control measures shall be implemented. Silt fencing, fiber rolls, and barriers shall be installed as needed between the project site and jurisdictional waters, in accordance with the Caltrans National Pollutant Discharge Elimination System permit and associated Best Management Practices.

BIO-4: Before ground-disturbing activities start, environmentally sensitive area fencing shall be installed where needed. Caltrans-defined environmentally sensitive areas shall be noted on design plans and delineated in the field before the start of construction activities.

BIO-5: During construction, all project-related hazardous material spills within the project site shall be cleaned up immediately. Readily accessible spill prevention and cleanup materials shall be kept by the contractor onsite at all times during construction.

BIO-6: During construction, the staging areas shall conform to Best Management Practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles shall be checked and maintained by the contractor on a daily basis to ensure proper operation and avoid potential leaks or spills.

BIO-7: During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.

BIO-8: If the use of imported fill material is necessary, the imported material will be obtained from a source that is known to be free of invasive plant species; or the material will consist of purchased clean material such as crushed aggregate, sorted rock, or similar.

BIO-9: Project sites shall be revegetated with an assemblage of native vegetation suitable for the area. Project plans will avoid the use of plant species considered to be invasive or potentially invasive by the California Department of Food and Agriculture, California Department of Fish and Wildlife, and California Invasive Plant Council, or other resource organizations that consider them to be invasive or potentially invasive.

BIO-10: During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the workplace, and disposed of at the end of each workweek. Following construction, all trash and debris shall be removed from work areas.

BIO-11: All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat.

BIO-12: Removal and trimming of trees and shrubs shall be scheduled to occur from October 1 to January 31, outside of the typical nesting bird season, to avoid potential impacts to nesting birds. If tree and shrub removal and/or other project activities must be scheduled to occur during the nesting bird season (February 1 to September 30), a qualified biologist would conduct a pre-construction survey for nesting birds no more than three days before construction starts. If any active nests are detected during pre-construction surveys or construction, Caltrans shall determine an appropriate buffer area based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that young birds have fledged and are no longer reliant on the nest site.

2.1.5 Cultural Resources

Considering the information included in the Cultural Resources Screening Memorandum dated July 2019, which indicates there are no built environment resources or archaeological resources near the project, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**No Impact**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**No Impact**
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**No Impact**

2.1.6 Energy

Caltrans incorporates energy efficiency, conservation, and climate change measures into transportation planning, project development, design, operations, maintenance of transportation facilities, fleets, buildings, and equipment to minimize the use of fuel supplies and energy sources and reduce greenhouse gas emissions. The project is not capacity-increasing, and therefore the operation would not increase energy usage.

Energy usage would be required during construction but would be minimized whenever possible through the recycling of materials and the implementation of greenhouse gas reduction strategies. The permanent restoration of the damaged slopes is necessary to maintain the safety and reliability of the State Route 9 corridor.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	**No Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**No Impact**

2.1.7 Geology and Soils

Considering the information included in the Preliminary Foundation Report for post mile 1.0 and Preliminary Foundation Report for post mile 4.0, both dated December 2017, and the Paleontological Review Memorandum dated November 2019, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: ii) Strong seismic ground shaking?	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: iii) Seismic-related ground failure, including liquefaction?	**Less Than Significant Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: iv) Landslides?	**Less Than Significant Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**No Impact**
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	**No Impact**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	**No Impact**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**No Impact**

Affected Environment

The project is within the Santa Cruz Mountains, which are the westernmost mountains of the California Coast Ranges. The Santa Cruz Mountains are densely vegetated with steep-sided valleys carved out by flowing rivers, including the San Lorenzo River that flows along State Route 9. Many faults that are oriented in a northwest to southeast direction cut across the Santa Cruz Mountains, including the San Andreas Fault Zone, which is about 15 miles to the northeast. No active faults cross the State Route 9 roadway through the project limits.

Near the project area, the Santa Cruz Mountains are composed mostly of metamorphic and igneous bedrock. These types of crystalline bedrock formed deep within the earth's crust, and over time, were uplifted as the overlying rock layers eroded away, exposing them to the surface. More recently, the rivers that carve through the Santa Cruz Mountains deposited alluvial sediments in the river valleys. Landslides are common along the steep mountain slopes that receive an average of between 20 inches to 60 inches of rain per year.

Landslides caused by heavy rainfall occurred at post miles 1.0 and 4.0, resulting in unstable slopes at both locations, which have encroached upon the roadway. At post mile 1.0, a landslide occurred on the east-facing slope below State Route 9 between the highway and the San Lorenzo River. The landslide partially undermined the roadway, causing sagging of the guardrail along the northbound shoulder and displacement of the aboveground and buried utilities. The area along the northbound shoulder affected by the landslide is about 100 feet wide and extends all the way downslope into the river.

At post mile 4.0, the landslide originated on the slope above the southbound lane of State Route 9 and deposited debris across the roadway. The landslide affected an area that is about 250 feet wide along the roadway. The landslide removed portions of the northbound shoulder and extended downslope to about the edge of the railroad tracks. Open tension cracks have been documented on the slope above State Route 9.

Environmental Consequences

The slopes at post miles 1.0 and 4.0 become unstable following landslide events. Future rain events could cause additional landslides or slip-outs if these locations are not permanently restored. Future earthquakes could also trigger slope instability at these locations. Ground shaking during the 1989 Loma Prieta earthquake generated numerous landslides in the Santa Cruz Mountains.

The purpose of this project is to stabilize the slopes at post miles 1.0 and 4.0 and prevent future instability, particularly during intense rain events or earthquakes. Construction of the Build Alternative would, therefore, aim to prevent potential hazards from landslides and seismic-related ground failure. The project would be designed according to Caltrans Seismic Design Criteria, as provided in the Highway Design Manual, and following the recommendations in the Preliminary Foundation Reports prepared for the project. Therefore, from a geotechnical perspective, project construction would result in improved conditions at post mile 1.0 and post mile 4.0.

Avoidance and Minimization Measures

No avoidance or minimization measures are proposed.

2.1.8 Greenhouse Gas Emissions

Considering the information included in the Climate Change Technical Report dated August 2020 and the Air Quality, Greenhouse Gas, and Noise Technical Memorandum dated August 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**Less Than Significant Impact**

Affected Environment

Regulatory agencies take greenhouse gas emissions inventory estimates to track the amount of greenhouse gasses discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air Resources Board does so for the state, as required by California Health and Safety Code Section 39607.4.

The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation Plan/Sustainable Communities Strategy to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The project is in Santa Cruz County; therefore, the Metropolitan Planning Organization is the Association of Monterey Bay Area Governments. Their regional reduction targets are 3 percent by 2020 and 6 percent by 2035. The Association of Monterey Bay Area Governments' Regional Transportation Plan/Sustainable Communities Strategy is called Moving Forward Monterey Bay 2040. The project is not included in this Regional Transportation Plan/Sustainable Communities Strategy.

Other relevant regional plans and strategies include the Santa Cruz County Regional Transportation Commission's 2040 Santa Cruz County Regional Transportation Plan and Santa Cruz County's 2013 Climate Action Strategy.

The 2040 Santa Cruz County Regional Transportation Plan identifies the three main approaches for reducing greenhouse gases from transportation as:

- Improvements in vehicle technology, creating greater fuel efficiencies.
- Improving in low carbon fuels.
- Reduction in the number of vehicle miles traveled.

The Santa Cruz County's Climate Action Strategy includes the following adaptation goals:

- Encourage and support actions that reduce risks and vulnerabilities now while recognizing the importance of identifying, making decisions about, and preparing for impacts and risks that may develop in the future.
- Support the reduction of risks from other environmental hazards, noting the strong interrelationships and benefits between reducing risk from climate change, non-climate change-related disasters, and most other environmental hazards.

- Build resilience into all programs, policies, and infrastructures.

Environmental Consequences

Operational Emissions

Long-term changes in greenhouse gas emissions are not expected for the project because it would not increase the capacity or vehicle miles traveled on State Route 9. Non-capacity increasing projects generally cause minimal or no increase in operational greenhouse gas emissions in the long term.

Construction Emissions

Short-term increases in greenhouse gas emissions are expected during project construction. Construction greenhouse gas emissions would result from material processing and operation of onsite construction equipment. There may also be a slight increase in greenhouse gas emissions produced by vehicles due to construction-related traffic delays and the use of detours which may require vehicles to take longer alternate routes or backtrack. These greenhouse gas emissions would be produced at different levels throughout the construction phase.

The expected construction-generated greenhouse gas emissions were quantified based on project-specific construction data provided for the project, using the Caltrans Construction Emissions Tool. Greenhouse gas emissions would total about 129 tons of carbon dioxide equivalents throughout project construction. Carbon dioxide equivalent is a measure used to compare emissions from a variety of greenhouse gasses based on their global warming potential. For this project, the carbon dioxide equivalent calculation considers carbon dioxide and the converted equivalent amounts of carbon monoxide, methane, nitrogen dioxide, and hydrofluorocarbons.

The frequency and occurrence of greenhouse gas emissions during the construction period would be reduced by following Caltrans' Standard Plans and Standard Specifications and Best Management Practices. All construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all California Air Resources Board emission reduction regulations. All construction contracts also include Caltrans Standard Specifications Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions that reduce construction vehicle emissions, also help reduce greenhouse gas emissions.

Additionally, certain project features would help reduce or offset greenhouse gas emissions. The staged construction for the project and the Transportation Management Plan would both be designed to limit the length of lane closures and full closure of State Route 9 and to minimize unnecessary traffic delays.

Wider shoulders would improve the facility for bicyclists, supporting the use of alternate forms of transportation. Replanting trees would sequester carbon. Finally, greenhouse gas emissions during construction would also be partially offset by the expected decrease in maintenance and rehabilitation activities that would result from permanently restoring the facility at post miles 1.0 and 4.0.

Overall, though some greenhouse gas emissions during construction would be unavoidable, implementation of Caltrans' Standard Specifications, Best Management Practices, and avoidance and minimization measures would reduce impacts.

Avoidance and Minimization Measures

The following avoidance and minimization measures would help offset greenhouse gas emissions during project construction.

GHG-1: Reduce construction waste and maximize the use of recycled materials.

GHG-2: Salvage large removed trees for lumber, landscaping, or other onsite beneficial uses, as determined appropriate by the project landscape architect.

GHG-3: Reduce the need for transport of earthen materials by balancing cut and fill quantities.

GHG-4: Conduct construction environmental training to educate construction personnel on project-specific environmental issues and best practice methods to minimize impacts. Training shall include a module on methods to reduce greenhouse gas emissions related to construction.

GHG-5: Improve carbon sequestration rates through the use of compost before seeding in disturbed areas and use of compost filter socks in place of straw wattles.

2.1.9 Hazards and Hazardous Materials

Considering the information included in the Initial Site Assessment for the project prepared in March 2018, the following significance determinations have been made:

The Initial Site Assessment indicates there are no known hazardous waste issues or hazardous materials sites pursuant to Government Code Section 65962.5 within the project limits. Potential hazardous waste issues that may be encountered during project construction include treated wood waste and lead paint in the yellow traffic stripes along the roadway. These materials, if encountered, would be appropriately handled, transported, and disposed of through Caltrans' Standard Specifications and Best Management Practices

and would not create a substantial hazard to the public or environment. More detailed hazardous waste investigations would occur in the project's design phase.

The project is along a rural highway with few public services aside from recreational opportunities. There are no schools or airports within 0.25 mile and 2 miles, respectively, of the project. State Route 9 does not have any formal emergency response or evacuation plans that the project would disrupt. The project would not change the fire risk in this area and is expected to improve the resilience of State Route 9 to wildfires.

Question—Would the project:	**CEQA Significance Determinations for Hazards and Hazardous Materials**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**No Impact**
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	**No Impact**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	**No Impact**
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**No Impact**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	**No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**No Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**No Impact**

2.1.10 Hydrology and Water Quality

The project would be designed to avoid impacts to the San Lorenzo River; all project elements would be above the floodplain of the river. The Standard Measures and Best Management Practices outlined in Section 1.6 would ensure impacts to water quality are avoided during construction.

Considering this information, and the information included in the Water Quality Technical Report dated November 2019, Stormwater Data Report dated July 2020, Hydraulics Memorandum dated July 2020, and Federal Emergency Management Agency flood maps 06087C0331E (May 16, 2012) and 06087C0218E (May 16, 2012), the following significance determinations have been made:

Question—Would the project:	**CEQA Significance Determinations for Hydrology and Water Quality**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**No Impact**
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	**No Impact**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation onsite or offsite;	**No Impact**
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	**No Impact**
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	**No Impact**
(iv) impede or redirect flood flows?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**No Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**No Impact**

2.1.11 Land Use and Planning

The project would not conflict with existing or proposed land use designations, plans, or regulations because it involves repairing an existing roadway. The repairs would not change the capacity or function of State Route 9 through the project limits and would not physically divide an established community. Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
a) Physically divide an established community?	**No Impact**
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	**No Impact**

2.1.12 Mineral Resources

The Santa Cruz County General Plan (1994) indicates that within the project limits, there are no mineral resource lands that have been classified by the State Geologist and designated by the State Mining and Geology Board as containing significant mineral resources. The project would rehabilitate an existing facility and, therefore, would not change the availability of any known mineral resources. Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	**No Impact**
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	**No Impact**

2.1.13 Noise

Considering the information included in the Air Quality, Greenhouse Gas, and Noise Technical Memorandum dated August 2020, the following significance determinations have been made:

Question—Would the project result in:	CEQA Significance Determinations for Noise
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**Less Than Significant Impact**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**Less Than Significant Impact**
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	**No Impact**

Affected Environment

The project is along a rural, two-lane mountain highway that crosses the Santa Cruz Mountains alongside the San Lorenzo River. No homes are within or next to the project limits. Both sidehill viaduct locations occur in recreational areas. Location 1 is within Pogonip Open Space, and Location 2 is within Henry Cowell Redwoods State Park.

Environmental Consequences

The project would not add lanes or capacity to the highway and, therefore, would not change long-term local noise levels generated by motorists.

Short-term noise levels would increase due to construction activities and would primarily affect recreational users near the project, including visitors to Pogonip Open Space near post mile 1.0 and the Garden of Eden swimming hole near post mile 4.0 (see Appendix C). Construction noise would be temporary and intermittent and would vary based on the type of activity and equipment used.

Implementation of Caltrans' Best Management Practices and Standard Specifications pertaining to noise (e.g., Section 14-8.02) would require the contractor to control and monitor construction noise. Caltrans' policy states that normal construction equipment should not emit noise levels greater than 86 A-weighted decibels at 50 feet from the source from 9:00 p.m. to 6:00 a.m. Standard noise reduction strategies include ensuring heavy equipment is outfitted with noise abatement features (e.g., mufflers, baffles, engine covers, engine vibration isolators) and shielding loud pieces of stationary construction equipment.

Avoidance and Minimization Measures

The following minimization measure is proposed to minimize temporary noise impacts associated with project construction:

NOI-1: The District 5 Public Information Office would coordinate with California State Parks and the City of Santa Cruz to alert recreational users at least 2 weeks before the start of construction of potentially elevated noise levels due to construction. Notification may include (but would not be limited to) publishing notices in local news media, on recreation websites, the Caltrans project webpage, and/or providing information at park kiosks.

2.1.14 Population and Housing

The project would permanently restore State Route 9 through the project limits and would not change the capacity or function of the highway. Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Population and Housing
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	**No Impact**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**No Impact**

2.1.15 Public Services

The project would not change the capacity or configuration of State Route 9 or trigger the need for new or modified public services. However, considering the potential effects of the Transportation Management Plan that would be implemented for the project, the following significance determinations have been made:

Question:	CEQA Significance Determinations for Public Services
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	**Less Than Significant Impact**
Police protection?	**Less Than Significant Impact**
Schools?	**No Impact**
Parks?	**Less Than Significant Impact**
Other public facilities?	**No Impact**

Affected Environment

State Route 9 originates at State Route 1 in the City of Santa Cruz and winds northward through several small communities in the San Lorenzo Valley, including Felton, Ben Lomond, and Boulder Creek until reaching Santa Clara County. State Route 9 serves as a recreational route through the park facilities in the Santa Cruz Mountains and a commuter corridor route to the City of Santa Cruz, the region's main commercial and employment center. Traffic along State Route 9 can be heavy but flowing during morning and evening peak commute hours. Parallel routes between Felton and Santa Cruz include Graham Hill Road and State Route 17 to Mount Hermon Road to the east and Empire Grade to Felton Empire Road to the west.

Fire stations are in Felton to the north of the project, within the City of Santa Cruz, and on the University of California, Santa Cruz campus to the south of the project. Police and sheriff's offices include the Santa Cruz Police Department, the University of California Santa Cruz Police Department, the Scotts Valley Police Department, and the San Lorenzo Valley Sheriff's Service Center.

Environmental Consequences

The project would reduce State Route 9 to one lane at post miles 1.0 and 4.0 for the majority of the construction period and would require the full closure of the highway at Location 2 at post mile 4.0 for about 7.5 months during construction of the retaining wall. Detours would be provided using parallel routes but may require some out-of-direction travel and could increase drive times between Santa Cruz and Felton. Lane reductions and detours could result in delays for emergency service vehicles, visitors to Henry Cowell Redwoods State Park, and members of the traveling public.

The Transportation Management Plan developed for the project would ensure that emergency service vehicles would be given priority, and the associated public awareness campaign would inform fire, police, and other public services of the expected traffic delays.

Avoidance and Minimization Measures

With the implementation of the Traffic Management Plan and public awareness campaign outlined in Section 1.3 Project Description, no additional avoidance and minimization measures are proposed.

2.1.16 Recreation

The project would permanently restore State Route 9 through the project limits and would not change the capacity or function of the highway. The project would, therefore, not influence the use of local recreational facilities. See Appendix C for a Section 4(f) evaluation that further analyzes potential temporary construction impacts to recreational facilities in the project limits.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Recreation
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	**No Impact**
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	**No Impact**

2.1.17 Transportation

The project includes permanent restoration of damaged facilities and, therefore, would increase the reliability of the State Route 9 corridor. The project would not increase the capacity of the highway.

Project construction would improve State Route 9 for cyclists by widening the northbound shoulder to 8 feet at Location 1 and widening the lanes and shoulders to 12 feet and 4 feet, respectively, at Location 2. Improving multimodal transportation, where environmentally feasible, is a goal identified in the Transportation Concept Report for State Route 9 completed by the Santa Cruz County Regional Transportation Commission and its partners. Providing wider lanes and shoulders is consistent with the report.

As outlined in Section 1.3 Project Description, the Transportation Management Plan implemented during construction would include lane closures at post miles 1.0 and 4.0, which may result in temporary traffic delays. Full closure of State Route 9 would be required at Location 2 at post mile 4.0 during the construction of the retaining wall, which is expected to take about 7.5 months. The Traffic Management Plan includes a public awareness campaign to keep the public and emergency services informed about expected traffic delays, road closures, and detours.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**No Impact**
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	**No Impact**
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**No Impact**
d) Result in inadequate emergency access?	**No Impact**

2.1.18 Tribal Cultural Resources

Considering the information included in the Cultural Resources Screening Memorandum dated July 2019, which indicates there are no tribal cultural resources near the project, the following significance determinations have been made:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Question:	CEQA Significance Determinations for Tribal Cultural Resources
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	**No Impact**

Question:	CEQA Significance Determinations for Tribal Cultural Resources
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**No Impact**

2.1.19 Utilities and Service Systems

The project would restore an existing facility and, therefore, would not create demand for new or expanded utilities or services. No excess solid waste would be generated.

Relocation of one Pacific Gas and Electric Company power pole may be required at post mile 1.0 to shift the overhead lines and provide room for heavy equipment to build the retaining wall and sidehill viaduct. The precise relocation details would be determined during the design phase of the project and are not expected to cause significant environmental effects or an extended disruption in service.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	**No Impact**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**No Impact**
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	**No Impact**
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**No Impact**

2.1.20 Wildfire

Considering the information included in the Climate Change Technical Report prepared in August 2020, as well as the 1994 Santa Cruz County General Plan, the significance determinations listed below have been made. The project is not in areas or lands designated as very high fire hazard severity zones and is expected to improve the resilience of State Route 9 to wildfires because it would reduce the risk of landslides at two locations with unstable slopes (see Section 2.1.7 Geology and Soils).

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	**No Impact**
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Wildfire
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	**No Impact**
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	**No Impact**

2.1.21 Mandatory Findings of Significance

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

a) The project would temporarily impact about 0.08 acre and permanently impact about 0.07 acre of redwood forest (a California Department of Fish and Wildlife sensitive habitat community), including removal of 15 trees, as

described in greater detail in Section 2.1.4 Biological Resources. However, these tree removals would be considered insignificant compared to the overall number and distribution of trees in Santa Cruz County and would not substantially degrade forest habitat for fish and wildlife species. Removed trees would be replanted, and avoidance and minimization measures would be implemented to reduce further impacts to the redwood forest and related plant and animal communities. The project is not expected to impact federally or state-listed species, species of concern, critical habitats, or Essential Fish Habitat.

Overall, with the implementation of avoidance and minimization measures, the project would not substantially degrade the quality of the environment.

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

November 2019

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

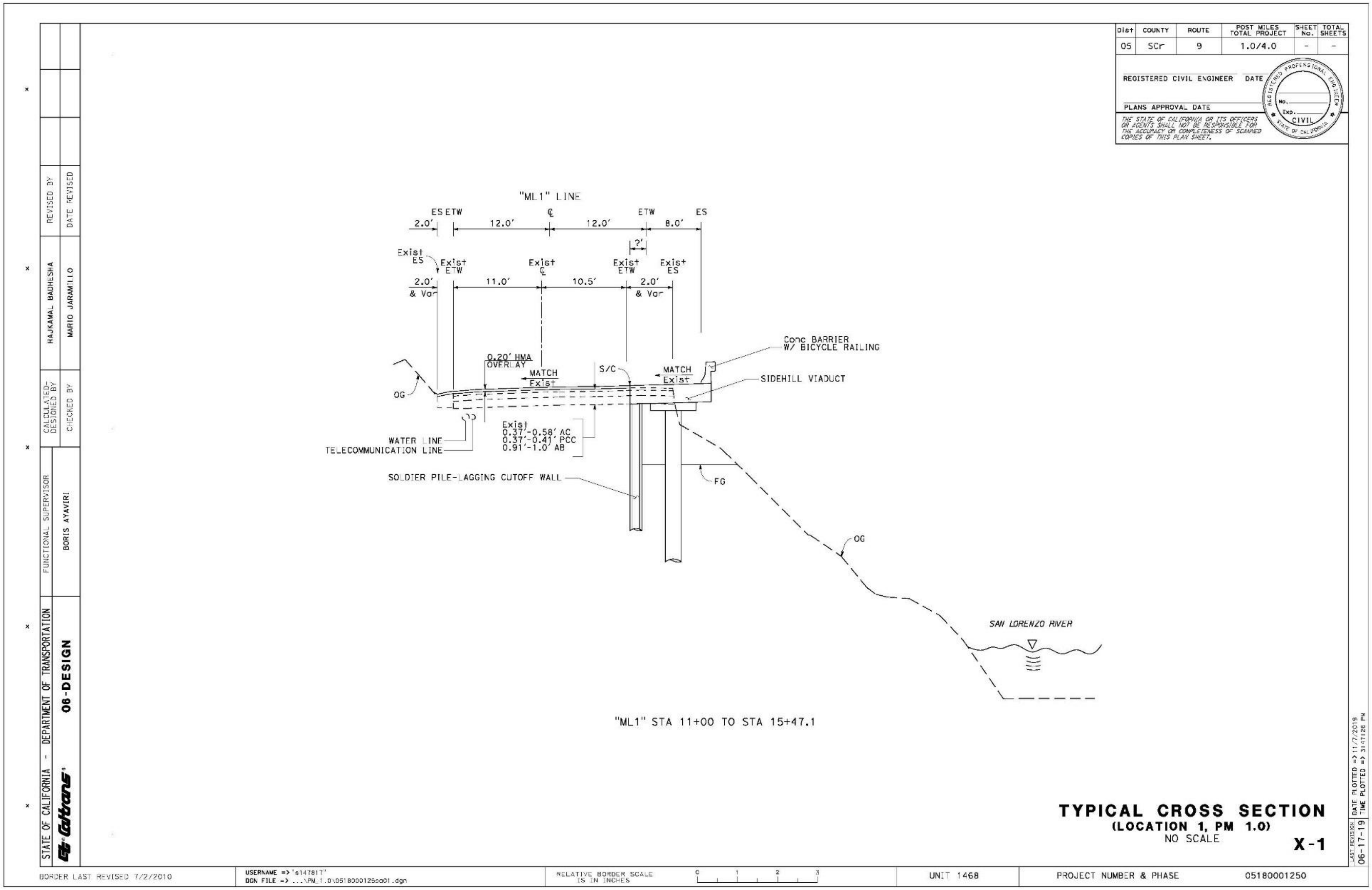
"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Appendix B Preliminary Project Plans

This appendix contains preliminary project plans that show the proposed viaducts in cross-section, layout, and profile views.

Acronyms used in the plans include:

- AB is aggregate base
- Abut is abutment
- AC is asphalt concrete
- BB is beginning of bridge
- BC is begin horizontal curve
- CIDH is cast-in-drilled-hole
- Conc is concrete
- EB is end of bridge
- EC is end horizontal curve
- ES is edge of shoulder
- ETW is edge of traveled way
- Exist is existing
- FG is finish grade (proposed ground surface after construction)
- HMA is hot-mix asphalt
- MBGR is metal beam guard railing
- MGS is Midwest guardrail system
- ML is mainline (standard travel lane)
- OG is original grade (original ground surface, before construction)
- PCC is Portland cement concrete
- PM is post mile
- Rt is right
- RW is retaining wall
- S/C is saw cut line
- STA is station
- Var is variable



"ML1" LINE
TYPICAL CROSS SECTION
(LOCATION 1, PM 1.0)
NO SCALE
X-1
"ML1" STA 11+00 TO STA 15+47.1
Conc BARRIER W/ BICYCLE RAILING
SIDEHILL VIADUCT
SOLDIER PILE-LAGGING CUTOFF WALL
WATER LINE
TELECOMMUNICATION LINE
SAN LORENZO RIVER
0.20' HMA OVERLAY
PROJECT NUMBER & PHASE
05180001250
UNIT 1468

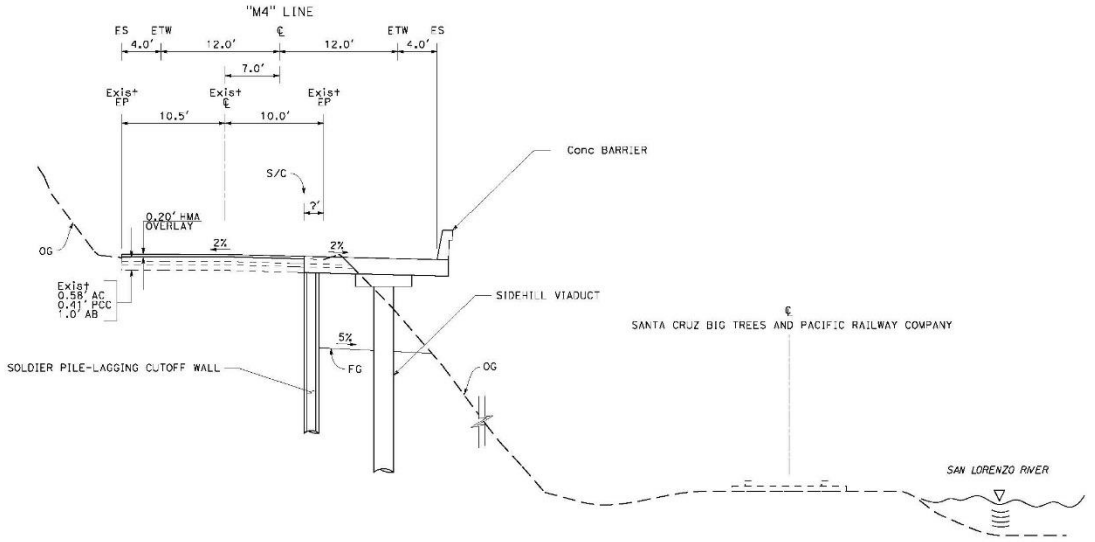
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCr	9	1.0/4.0	?	??

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — EXP. — CIVIL — STATE OF CALIFORNIA



"M4" STA 10+70 TO STA 13+70

TYPICAL CROSS SECTION
(LOCATION 2, PM 4.0)
NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
06-DESIGN
FUNCTIONAL SUPERVISOR: BORIS AYAVIRI
CALCULATED-DESIGNED BY: HAJKAMAL BADHESHA
CHECKED BY: MARIO JARAMILLO
REVISED BY
DATE REVISED

LAST REVISED: DATE PLOTTED => 5/11/2020
02-05-20 TIME PLOTTED => 1:00:38 PM

BORDER LAST REVISED 7/2/2010

USERNAME => 's147817'
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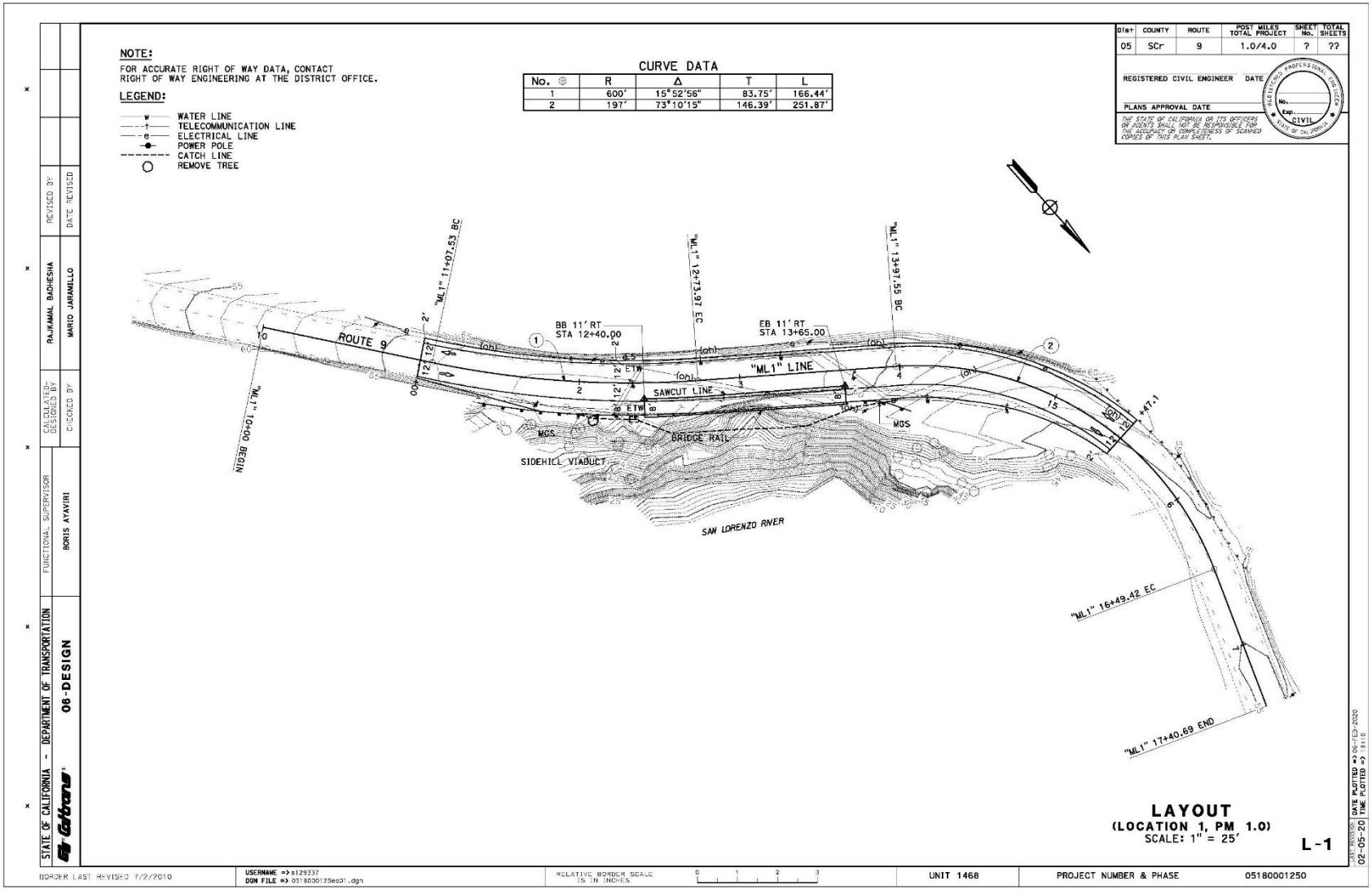
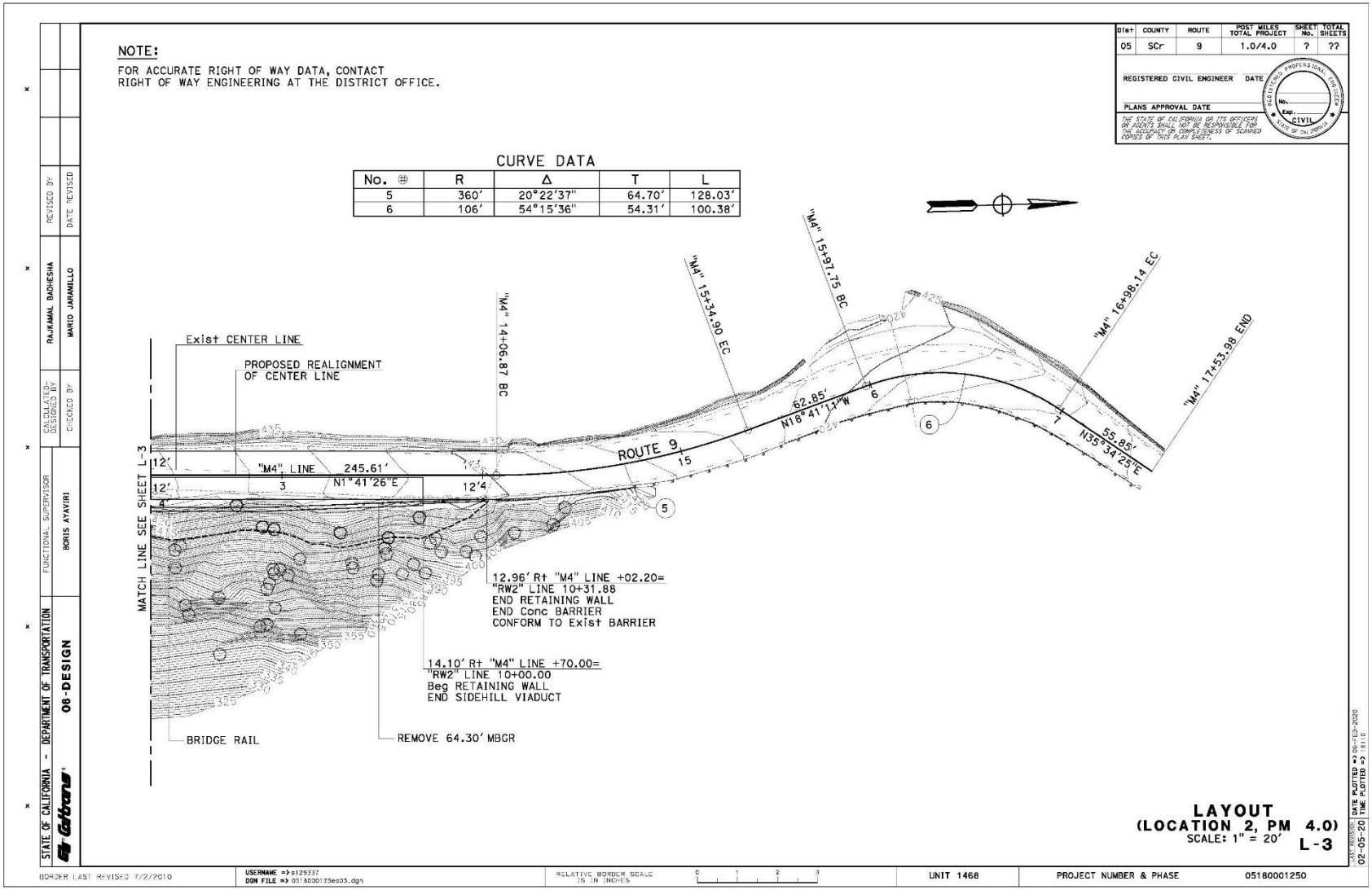
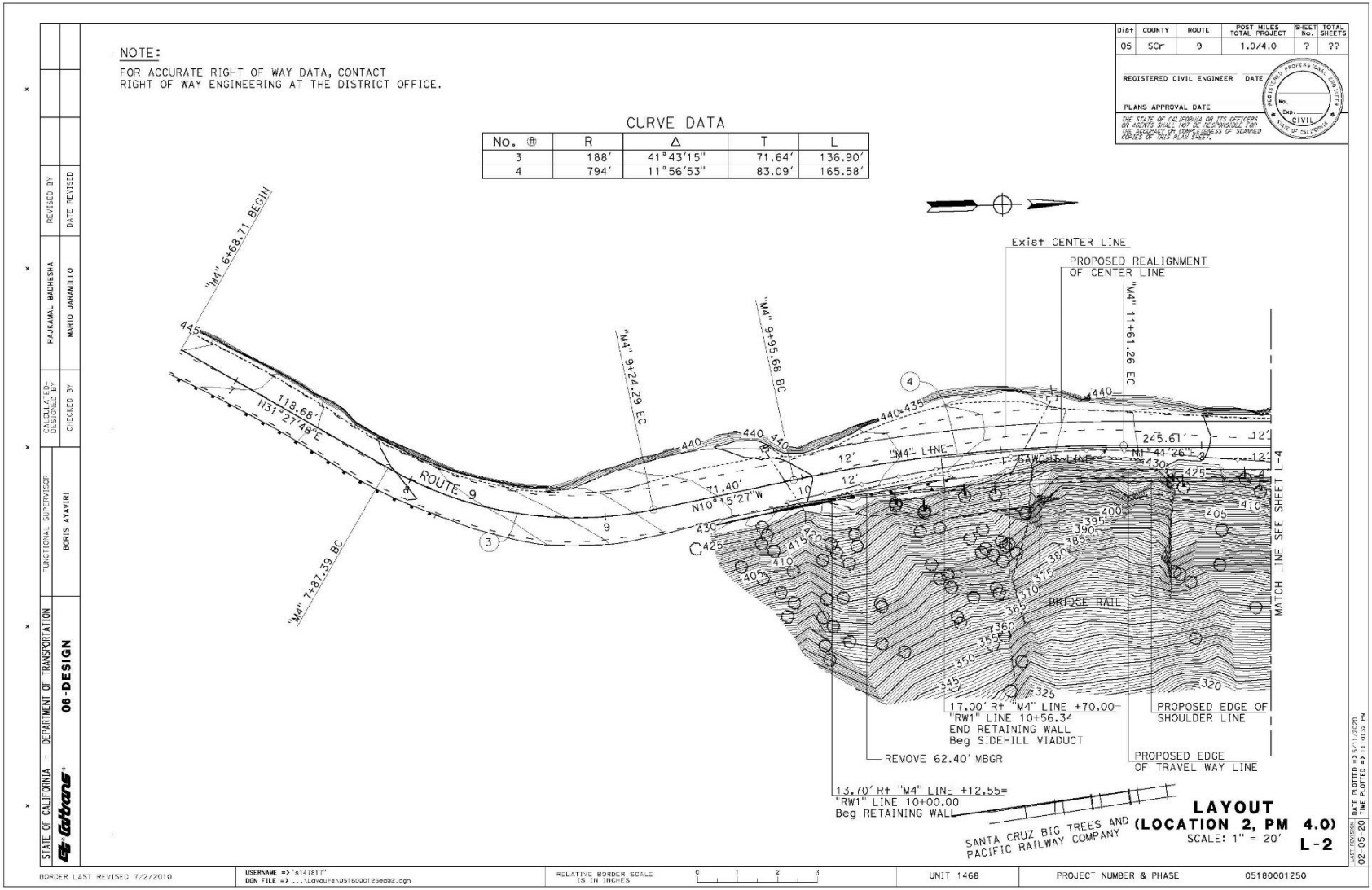
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1468

PROJECT NUMBER & PHASE 05180001250


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
LEGEND:
WATER LINE
TELECOMMUNICATION LINE
ELECTRICAL LINE
POWER POLE
CATCH LINE
REMOVE TREE
CURVE DATA
No. | R | Δ | T | L
1 | 600' | 15°52'56" | 83.75' | 166.44'
2 | 197' | 73°10'15" | 146.39' | 251.87'
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
05 | SCr | 9 | 1.0/4.0 | ? | ??
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
CIVIL
"ML1" 10+00 BEGIN
"ML1" 11+07.53 BC
"ML1" 12+73.97 EC
"ML1" 13+97.55 BC
"ML1" 16+49.42 EC
"ML1" 17+40.69 END
ROUTE 9
BB 11' RT STA 12+40.00
EB 11' RT STA 13+65.00
"ML1" LINE
SAWCUT LINE
MGS
BRIDGE RAIL
SIDEHILL VIADUCT
SAN LORENZO RIVER
LAYOUT
(LOCATION 1, PM 1.0)
SCALE: 1" = 25'
L-1
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
FUNCTIONAL SUPERVISOR
BORIS AYAVIRI
CALCULATED/DESIGNED BY
RAJKAMAL BADHESHIA
CHECKED BY
MARIO JARAMILLO
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
USERNAME => s129332
DGN FILE => 05180012Sea01.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 1468
PROJECT NUMBER & PHASE 05180001250
DATE PLOTTED => 26-FEB-2020
TIME PLOTTED => 1810


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
CURVE DATA
No. | R | Δ | T | L
5 | 360′ | 20°22′37" | 64.70′ | 128.03′
6 | 106′ | 54°15′36" | 54.31′ | 100.38′
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
05 | SCr | 9 | 1.0/4.0 | ? | ??
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
Exist CENTER LINE
PROPOSED REALIGNMENT OF CENTER LINE
"M4" 14+06.87 BC
"M4" 15+34.90 EC
"M4" 15+97.75 BC
"M4" 16+98.14 EC
"M4" 17+53.98 END
ROUTE 9
"M4" LINE 245.61′ N1°41′26"E
62.85′ N18°41′11"W
55.85′ N35°34′25"E
MATCH LINE SEE SHEET L-3
12.96′ Rt "M4" LINE +02.20= "RW2" LINE 10+31.88
END RETAINING WALL
END Conc BARRIER
CONFORM TO Exist BARRIER
14.10′ Rt "M4" LINE +70.00= "RW2" LINE 10+00.00
Beg RETAINING WALL
END SIDEHILL VIADUCT
BRIDGE RAIL
REMOVE 64.30′ MBGR
LAYOUT
(LOCATION 2, PM 4.0)
SCALE: 1" = 20′
L-3
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
FUNCTIONAL SUPERVISOR BORIS AYAYIRI
CALCULATED-DESIGNED BY RAJKAMAL BADHESHIA
CHECKED BY MARIO JARAMILLO
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
USERNAME => s129332
DGN FILE => 05180001250sa03.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 1468
PROJECT NUMBER & PHASE 05180001250
DATE PLOTTED => 26-FEB-2020
TIME PLOTTED => 1810


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
CURVE DATA
No. | R | Δ | T | L
3 | 188' | 41°43'15" | 71.64' | 136.90'
4 | 794' | 11°56'53" | 83.09' | 165.58'
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
05 | SCr | 9 | 1.0/4.0 | ? | ??
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
Exist CENTER LINE
PROPOSED REALIGNMENT OF CENTER LINE
"M4" 6+68.71 BEGIN
"M4" 9+24.29 EC
"M4" 9+95.68 BC
"M4" 11+61.26 EC
"M4" 7+87.39 BC
"M4" LINE
SAWCUT LINE
ROUTE 9
118.68'
N31°27'48"E
71.40'
N10°15'27"W
245.61'
N11°41'26"E
BRIDGE RAIL
MATCH LINE SEE SHEET L-4
17.00' R+ "M4" LINE +70.00=
'RW1' LINE 10+56.34
END RETAINING WALL
Beg SIDEHILL VIADUCT
REVOVE 62.40' VBGR
PROPOSED EDGE OF SHOULDER LINE
PROPOSED EDGE OF TRAVEL WAY LINE
13.70' R+ "M4" LINE +12.55=
'RW1' LINE 10+00.00
Beg RETAINING WALL
SANTA CRUZ BIG TREES AND PACIFIC RAILWAY COMPANY
LAYOUT
(LOCATION 2, PM 4.0)
SCALE: 1" = 20'
L-2
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
FUNCTIONAL SUPERVISOR
BORIS AYAYIRI
CALCULATED-DESIGNED BY
HAJKAMAL BADHESHA
CHECKED BY
MARIO JARAMILLO
REVISED BY
DATE REVISED
BORDER LAST REVISED 7/2/2010
USERNAME => 's147817'
DGN FILE => ...\Layouts\05180001250sh02.dgn
RELATIVE BORDER SCALE IS IN INCHES
UNIT 1468
PROJECT NUMBER & PHASE 05180001250
DATE PLOTTED => 5/11/2020
TIME PLOTTED => 11:01:32 PM
LAST REVISED 02-05-20

Appendix C Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S. Code 303, declares that “it is the policy of the U.S. 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.”

This appendix discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties or 4) the project does not permanently use the property and does not hinder the preservation of the property.

Description of the Proposed Project

Caltrans proposes to build two sidehill viaducts at post miles 1.0 and 4.0 along State Route 9 to permanently restore areas that experienced landslides during rainstorms. The sidehill viaducts would support the northbound lane of State Route 9 and would span the existing unstable and oversteepened slopes. Each sidehill viaduct would be on a deep foundation system anchored into the underlying bedrock with cast-in-drilled-hole piles. Cantilever soldier pile retaining walls would first be built at each location to stabilize the slopes and provide access routes for heavy equipment during the construction of the sidehill viaducts. Temporary work pads would be cut into the slope to hold the excavator or other equipment required. Construction of the sidehill viaduct at post mile 4.0 would also involve the construction of a new culvert within the southbound shoulder, replacement of three culvert inlets, and placement of rock slope protection at one drainage outlet downslope of State Route 9.

The project would stay entirely within a Caltrans right-of-way and has been designed to avoid impacts to San Lorenzo Creek and the Santa Cruz Big Trees and Pacific Railway downslope from post mile 4.0. Construction is expected to last about two and a half years.

During construction at each location, the northbound travel lane would be closed. Temporary traffic signals would be installed to direct reversing one-way traffic in the southbound lane. Vehicles and bicycles would share one 10-foot lane through each construction zone. Temporary full closure of State Route 9 at Location 2 at post mile 4.0 would be required during the construction of the retaining wall due to the narrow 10-foot lanes and lack of shoulder at this location. A full closure is expected to last about 7.5 months.

A Transportation Management Plan would be developed for the project and would identify suitable detours to ensure consistent local access and access to facilities in Henry Cowell Redwoods State Park during State Route 9 closures. The Traffic Management Plan would also include a public awareness campaign to keep the traveling public and visitors to local recreational facilities informed about the construction schedule and expected traffic delays, the dates and duration of the full closure of State Route 9 at Location 2, detours, and other pertinent travel information.

Description of Section 4(f) Resources near the Project

Pogonip Open Space

Location 1 of the project at post mile 1.0 is within Pogonip Open Space, a greenbelt the City of Santa Cruz maintains. Pogonip Open Space contains 640 acres of open meadows, woodlands, and creeks with 11.5 miles of trails that are primarily used by hikers, walkers, and runners. Bicyclists and equestrians can also use select trails. The trail system connects with trails in Henry Cowell Redwoods State Park, the upper part of the University of California, Santa Cruz campus, and Harvey West Park. There are no parking facilities within Pogonip Open Space, but visitors can park on Golf Club Drive, Harvey West Park, or in the nearby residential neighborhood and walk in. Visitors to Pogonip Open Space mostly come from the City of Santa Cruz due to its proximity to the urban center.

Location 1 is in the southern part of Pogonip Open Space, and the nearest trail is the Emma McCrary Trail, about 275 feet upslope to the west of the project, on the other side of the railroad tracks. The Sycamore Grove Nature Trail has its northern terminus about 350 feet to the east of Location 1. The main portion of the Sycamore Grove is further to the southeast. Given the density of trees, the construction site would not be particularly visible from either trail.

Construction at Location 1 of the project would have the following effects on Pogonip Open Space:

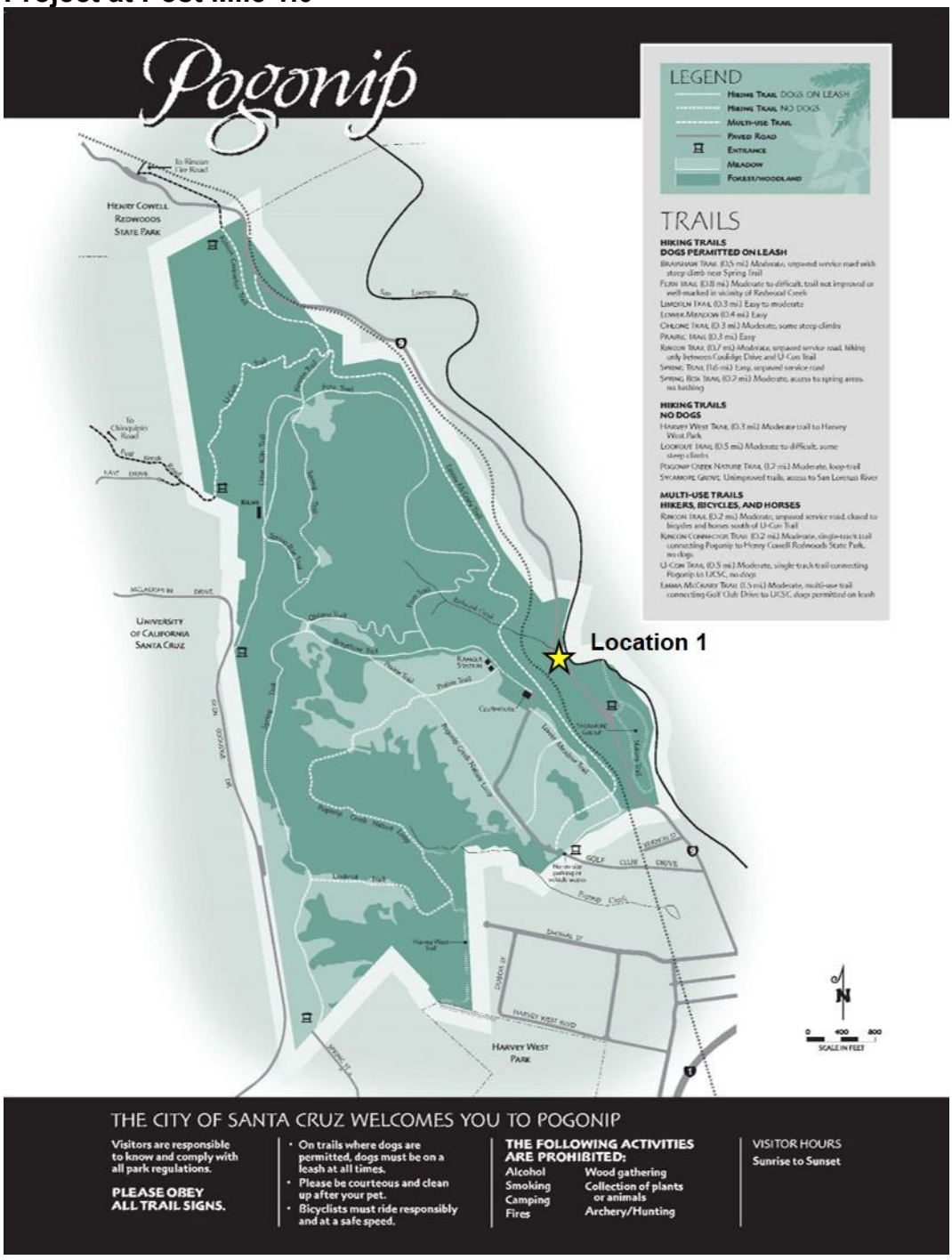
- Traffic Delays and Detour: Most visitors to Pogonip Open Space would not be affected by the construction detours since access points for visitors traveling from the City of Santa Cruz are to the south of the project. However, visitors traveling from the north may experience traffic delays due to the reduction of State Route 9 to one lane at post mile 1.0 and post mile 4.0. The use of a temporary detour would be required during the full closure of State Route 9 at Location 2 at post mile 4.0 while the retaining wall is being built. Despite potential delays, Pogonip Open Space would remain open and accessible throughout the construction period.
- Air Quality: Construction activities may create localized and temporary increases in fugitive dust, as described in Section 2.1.3 Air Quality.

- Noise: Temporary construction noise from loud heavy equipment and equipment backup devices may disturb visitors to Pogonip Open Space (see Section 2.1.13 Noise). Visitors that would be most affected by construction noise are users of the portions of the Emma McCrary Trail near the construction area and visitors to the Sycamore Grove Nature Trail.

Caltrans would implement a public awareness campaign that would help keep visitors to Pogonip Open Space informed about ongoing construction. The main purpose of the campaign would be to communicate information about traffic delays, suggested detours, and the project schedule. The campaign would also include a component that reaches out to the City of Santa Cruz so that construction notices could be placed on its website.

The following map in Figure C-1 shows where Location 1 at post mile 1.0 is within Pogonip Open Space. The map is from the City of Santa Cruz's website.

Figure C-1 Map of Pogonip Open Space Showing Location 1 of the Project at Post Mile 1.0



Henry Cowell Redwoods State Park

Location 2 of the project at post mile 4.0 is within the boundaries of Henry Cowell Redwoods State Park. The park includes 4,650 acres of forested and open land within the Santa Cruz Mountains. One of the main attractions is the 40-acre grove of old-growth redwood trees, which visitors can explore on a

0.8-mile loop trail. Other visitor activities include hiking 30 miles of trails throughout the park, mountain biking, horseback riding, swimming at swimming holes along the San Lorenzo River, fishing, picnicking, wildlife viewing, and camping. The campground contains 107 sites and is accessed from Graham Hill Road. The main entrance to the park is from North Big Trees Park Road off of State Route 9 near Felton. The Roaring Camp Railroad—a tourist railroad business that takes visitors through the redwood forest on an 1880s steam engine—runs through Henry Cowell Redwoods State Park from Roaring Camp to Bear Mountain.

Location 2 is about 2 miles south of the Henry Cowell Redwoods State Park entrance and 0.2 mile north of a vista point on State Route 9. The railroad tracks are downslope from the proposed sidehill viaduct at Location 2. At this location, the Ox Fire Road runs alongside the tracks and is used by hikers accessing the Garden of Eden swimming hole. The Garden of Eden swimming hole is within the San Lorenzo River and is about 0.2 mile south-southeast of Location 2. The Garden of Eden can be accessed from two trailheads—the Ox Fire Road turnout or the day-use area near the park entrance. Access from the day-use area is only available during the summer months when the seasonal bridge across the San Lorenzo River is in place. Both trailheads eventually merge.

Construction at Location 2 of the project would have the following effects on the Henry Cowell Redwoods State Park:

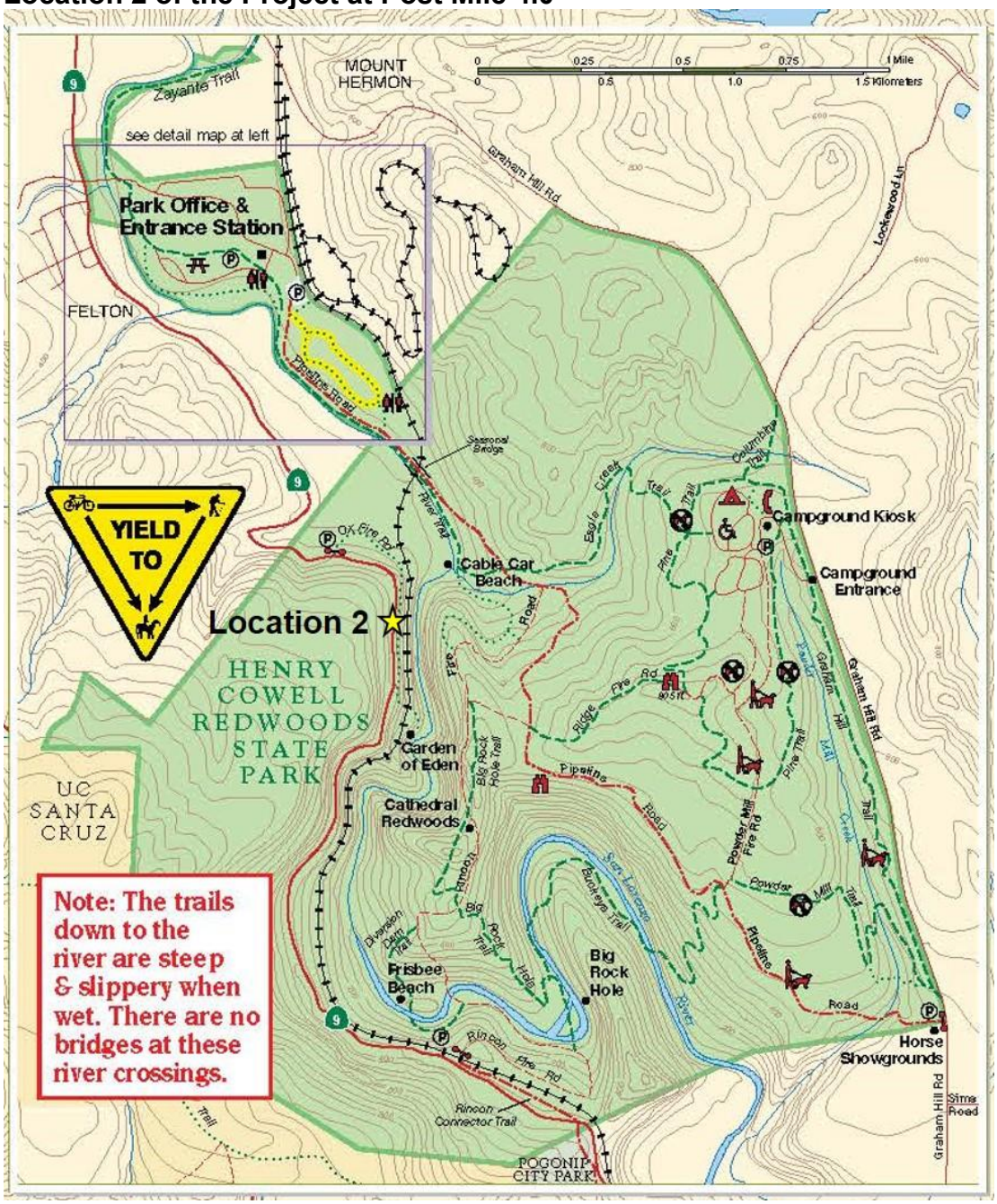
- Traffic Delays and Detour: Traffic delays for park visitors would be expected due to the reduction of State Route 9 to one lane at post mile 1.0 and post mile 4.0. Use of a temporary detour along Graham Hill Road would be required during the full closure of State Route 9 at Location 2 at post mile 4.0 while the retaining wall is being built. Despite potential delays, Henry Cowell Redwoods State Park would remain open, and all features would remain accessible throughout the construction period.
- Air Quality: Construction activities may create localized and temporary increases in fugitive dust, as described in Section 2.1.3 Air Quality.
- Noise: Temporary construction noise from loud heavy equipment and equipment backup devices may disturb recreational users of Henry Cowell Redwoods State Park (see Section 2.1.13 Noise). The park users that would be most affected by construction noise would be hikers using Ox Fire Road. Construction noise may also be detected at the Garden of Eden swimming hole (about 1,000 feet away).

Caltrans would implement a public awareness campaign that would help keep visitors to Henry Cowell Redwoods State Park informed about ongoing construction. The main purpose of the campaign would be to communicate information about traffic delays, suggested detours, and the project schedule. The campaign would also include a component that reaches out to the California Department of Parks and Recreation so that construction notices

could be placed on its website, including warnings about construction noise and dust on the webpage for the Garden of Eden swimming hole.

The following map in Figure C-2 shows Location 2 at post mile 4.0 within Henry Cowell Redwoods State Park and is from the State Park's brochure. Figure C-2 does not show the northern Fall Creek Unit of Henry Cowell Redwoods State Park.

Figure C-2 Map of Henry Cowell Redwoods State Park Showing Location 2 of the Project at Post Mile 4.0



Conclusion of Section 4(f) Resources Evaluation

Despite the expected temporary impacts to Pogonip Open Space and Henry Cowell Redwoods State Park, Caltrans does not expect "use" of either property during project construction based on the following: 1) no portion of the public facilities would be permanently incorporated into the transportation project; 2) no temporary occupancy would occur during construction because no encroachment onto park property is necessary; 3) there would be no constructive use of either park facility. The impacts related to air quality or loud noises would be temporary and minimized to the maximum extent feasible, and access to both parks would be maintained at all times using a Traffic Management Plan and detours. Therefore, there would be no "use" of either Section 4(f) property, and the provisions of Section 4(f) do not apply.

Discussion of Section 6(f)

The Land and Water Conservation Fund Act was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. The Land and Water Conservation Fund program provides matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities. Section 6(f) of this act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior's National Park Service.

Henry Cowell Redwoods State Park received funding through the Land and Water Conservation Fund to acquire a 307-acre property on the eastern side of the park. The project would not temporarily or permanently convert any portion of this property to a land use other than public outdoor recreation. Therefore, the project would not "use" any Section 6(f) properties, and the provisions of Section 6(f) do not apply.

Appendix D Comments and Responses

The Initial Study with Proposed Negative Declaration was made available for public review from November 6, 2020, to December 7, 2020. Hard copies of the document were made available at Caltrans District 5 Office. Digital copies were made available on Caltrans District 5 website. A public notice announcing the availability of the document and the public comment period was published in the Santa Cruz Sentinel.

No public comments were received for the permanent restoration project in Santa Cruz County.

List of Technical Studies Bound Separately (Volume 2)

Air Quality, Greenhouse Gas, and Noise Technical Memorandum, August 2020

Climate Change Technical Report, September 2020

Water Quality Assessment, November 2019

Stormwater Data Report, July 2020

Natural Environment Study Minimal Impacts, March 2020

Location Hydraulic Study, July 2020

Cultural Resources Screening Memorandum, July 2019

Paleontology Review Memorandum, November 2019

Initial Site Assessment, March 2018

Scenic Resource Evaluation/Visual Assessment, December 2019

Preliminary Foundation Report, Post Mile 1.0, December 2017

Preliminary Foundation Report, Post Mile 4.0, December 2017

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

Matthew Fowler
Central Region Environmental, California Department of Transportation
50 Higuera Street, San Luis Obispo, California, 93401

Or send your request via email to: matt.c.fowler@dot.ca.gov
Or call: 805-542-4603

Please provide the following information in your request:
State Route 9 Post Miles 1.0 and 4.0 Permanent Restoration Project
05-SCR-09-PM 1.0/4.0
Project ID Number 0518000125