

# **DAMNATION CREEK SAFETY PROJECT INITIAL STUDY**

**with Negative Declaration  
and Section 4(f) Evaluation**



**DEL NORTE COUNTY, CALIFORNIA**

**DISTRICT 1 – DN – 101 Post Miles 15.60 to 16.20**

**EA 01-0K950 / EFIS 0121000034**

**Prepared by the  
State of California Department of Transportation**



**March 2024**



## General Information About This Document

### *What is in this document?*

The California Department of Transportation (Caltrans) has prepared this Initial Study with Negative Declaration (IS/ND) which examines the potential environmental effects of the proposed project on U.S. Highway 101 in Del Norte County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance and minimization measures. This IS/ND was circulated to the public for more than 30 days between December 22, 2024, and January 29, 2024. A virtual public meeting was held on January 9, 2024, to solicit additional comments and answer questions about the project. Comments received during this period are discussed in Appendix E. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated.

Additional copies of this document and the related technical studies are available for review at the District 1 Office at 1656 Union Street, Eureka Ca 95501. This document may also be downloaded at the following website: <https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs/d3-del-norte-county>.

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: Myles Cochrane, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 445-6600 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.



# **DAMNATION CREEK SAFETY PROJECT**

Widen the lanes on U.S. Highway 101 in Del Norte County,  
from Post Miles 15.60 to 16.20 north of Klamath

## **INITIAL STUDY**

### **with Negative Declaration and Section 4(f) Evaluation**

**Submitted Pursuant to: (State) Division 13, California Public Resources Code  
(Federal) 49 United States Code 303**

**THE STATE OF CALIFORNIA  
Department of Transportation**

3/29/2024

\_\_\_\_\_  
Date of Approval

*Liza Walker*

\_\_\_\_\_  
Liza Walker, Office Chief  
North Region Environmental–District 1  
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# NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

## *Project Description*

The California Department of Transportation (Caltrans) proposes a safety project which would include roadway grade improvements, road widening, and curve realignment on U.S. Highway 101 in Del Norte County between Post Miles 15.60 and 16.20. Additional project features include installation of approximately 350 feet of new Midwest Guardrail System (MGS) guardrail, installation of approximately 150 feet MGS Special guardrail, replacement of an existing drainage inlet, construction of a new downdrain, and installation of approximately 1,130 feet of hot-mix asphalt dikes.

## *Determination*

Caltrans has prepared an Initial Study for this project and, following public review, has determined the project would have less than significant impacts on the environment based on the following:

The project would have *No Effect* on:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

The project would have *Less than Significant Impacts* to:

- Biological Resources
- Greenhouse Gas Emissions

*Liza Walker*

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Liza Walker, Office Chief  
North Region Environmental–District 1  
California Department of Transportation

3/29/2024

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Date

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# Acronyms and Abbreviated Terms

| Acronym/Abbreviation | Description  |
|----------------------|--|
| AB                   | Assembly Bill  |
| ACE                  | Areas of Conservation Emphasis                           |
| BMPs                 | Best Management Practices                                |
| BC                   | Black carbon   |
| BSA                  | Biological Study Area                                    |
| CAA                  | Clean Air Act  |
| CAFE                 | Corporate Average Fuel Economy                           |
| CAL-CET              | Caltrans Construction Emissions Tool                     |
| CAL FIRE             | California Department of Forestry and Fire Protection    |
| Cal-IPC              | California Invasive Plant Council                        |
| Cal/OSHA             | California Occupational Safety and Health Administration |
| Caltrans             | California Department of Transportation                  |
| CAPTI                | Climate Action Plan for Transportation Infrastructure    |
| CARB                 | California Air Resources Board                           |
| CCC                  | California Coastal Commission                            |
| CCR                  | California Code of Regulations                           |
| CDFW                 | California Department of Fish and Wildlife               |
| CEHC                 | California Essential Habitat Connectivity Project        |
| CEQ                  | Council on Environmental Quality                         |
| CEQA                 | California Environmental Quality Act                     |
| CESA                 | California Endangered Species Act                        |
| CFGC                 | California Fish and Game Code                            |
| CFR                  | Code of Federal Regulations                              |
| CGP                  | Construction General Permit                              |
| CH <sub>4</sub>      | methane  |
| CIA                  | Cumulative Impact Analysis                               |
| CNPS                 | California Native Plant Society                          |
| CNPPA                | California Native Plant Protection Act                   |
| CO <sub>2</sub>      | carbon dioxide   |
| CO <sub>2e</sub>     | carbon dioxide equivalent                                |
| CTP                  | California Transportation Plan                           |
| CWA                  | Clean Water Act  |
| dB                   | Decibels   |
| DBH                  | Diameter-at-Breast-Height                                |
| DI                   | Drainage Inlet   |
| Department           | Caltrans   |
| DNLTC                | Del Norte Local Transportation Commission                |
| DOT                  | Department of Transportation                             |

| Acronym/Abbreviation | Description  |
|----------------------|--|
| DP                   | Director's Policy  |
| DPP                  | Design Pollution Prevention                              |
| DPS                  | Distinct Population Segment                              |
| DSA                  | Disturbed Soil Area                                      |
| ECAs                 | Essential Connectivity Areas                             |
| ECL                  | Environmental Construction Liaison                       |
| EIR                  | Environmental Impact Report                              |
| EO(s)                | Executive Order(s)                                       |
| EPA                  | Environmental Protection Agency                          |
| ESA                  | Endangered Species Act                                   |
| ESA(s)               | Environmentally Sensitive Area(s)                        |
| ESL                  | Environmental Study Limits                               |
| ESU                  | Evolutionarily Significant Unit                          |
| °F                   | degrees Fahrenheit                                       |
| FED                  | Final Environmental Document                             |
| FESA                 | Federal Endangered Species Act                           |
| FHWA                 | Federal Highway Administration                           |
| FHSZ                 | Fire Hazard Severity Zone                                |
| FP                   | Fully Protected – listing status                         |
| FR                   | Federal Register   |
| GDP                  | Gross Domestic Product                                   |
| GHG                  | Greenhouse Gas   |
| GWP                  | Global Warming Potential                                 |
| H&SC                 | Health & Safety Code                                     |
| HFCs                 | hydrofluorocarbons                                       |
| HMA                  | Hot Mix Asphalt  |
| HVF                  | High-Visibility Fencing                                  |
| IPaC                 | Information for Planning and Consultation                |
| IPCC                 | Intergovernmental Panel on Climate Change                |
| IS                   | Initial Study  |
| IS/ND                | Initial Study / Negative Declaration                     |
| LCFS                 | low carbon fuel standard                                 |
| MAMU                 | Marbled murrelet   |
| MBTA                 | Migratory Bird Treaty Act                                |
| MGS                  | Midwest Guardrail System                                 |
| MLD                  | Most Likely Descendent                                   |
| MMT                  | million metric tons                                      |
| MSA                  | Magnuson-Stevens Fishery Conservation and Management Act |
| MGS                  | Midwest Guardrail System                                 |
| MPO                  | Metropolitan Planning Organization                       |
| N <sub>2</sub> O     | nitrous oxide  |

| Acronym/Abbreviation | Description  |
|----------------------|--|
| NAAQS                | National Ambient Air Quality Standards                         |
| NAGPRA               | Native American Graves Protection and Repatriation Act of 1990 |
| NAHC                 | Native American Heritage Commission                            |
| NCRWQCB              | North Coast Regional Water Quality Control Board               |
| NCUAQMD              | North Coast Unified Air Quality Management District            |
| ND                   | Negative Declaration   |
| NEPA                 | National Environmental Policy Act                              |
| NES                  | Natural Environment Study                                      |
| NHTSA                | National Highway Traffic and Safety Administration             |
| NMFS                 | National Marine Fisheries Service                              |
| NOAA                 | National Oceanic and Atmospheric Administration                |
| NPDES                | National Pollutant Discharge Elimination System                |
| NRCS                 | Natural Resources Conservation Service                         |
| O <sub>3</sub>       | ozone  |
| OHWM                 | Ordinary High Water Mark                                       |
| OPC                  | Ocean Protection Council                                       |
| OPR                  | Governor's Office of Planning and Research                     |
| PDT                  | Project Development Team                                       |
| PIR                  | Project Initiation Report                                      |
| PLOC                 | Programmatic Letter of Concurrence                             |
| PM(s)                | post mile(s)   |
| Porter-Cologne Act   | Porter-Cologne Water Quality Control Act                       |
| Project              | Damnation Creek Safety Project                                 |
| PRC                  | Public Resources Code (California)                             |
| PS&E                 | Plans, Specifications and Estimates                            |
| RCP                  | Representative Concentration Pathways 8.5 Emissions Scenario   |
| RECP                 | Rolled Erosion Control Products                                |
| RSP                  | Rock Slope Protection  |
| RTP                  | Regional Transportation Plan                                   |
| RTPA                 | Regional Transportation Planning Agency                        |
| RWQCB                | Regional Water Quality Control Board                           |
| SB                   | Senate Bill  |
| SCS                  | Sustainable Communities Strategy                               |
| SF <sub>6</sub>      | sulfur hexafluoride  |
| SEL                  | Sound Exposure Level   |
| SHOPP                | State Highway Operation and Protection Program                 |
| SHPO                 | State Historic Preservation Officer                            |
| SHS                  | State Highway System   |
| SLR                  | Sea Level Rise   |
| SNC(s)               | Sensitive Natural Community(ies)                               |
| SO <sub>2</sub>      | sulfur dioxide   |

| Acronym/Abbreviation | Description   |
|----------------------|---|
| SPCC Plan            | Spill Prevention, Control, and Countermeasures Plan |
| SR                   | State Route   |
| SRA                  | State Responsibility Area                           |
| SRZ                  | Structural Root Zone                                |
| SS                   | Standard Specification                              |
| SSC                  | Species of Special Concern                          |
| SWMP                 | Storm Water Management Plan                         |
| SWPPP                | Stormwater Pollution Prevention Plan                |
| SWRCB                | State Water Resources Control Board                 |
| THVF                 | Temporary High Visibility Fencing                   |
| TMP                  | Transportation Management Plan                      |
| U.S. or US           | United States                                       |
| U.S. 101             | U.S. (United States) Highway 101                    |
| USACE                | United States Army Corps of Engineers               |
| USC                  | United States Code                                  |
| USCD                 | U.S. Climate Data                                   |
| U.S. DOT             | U.S. Department of Transportation                   |
| U.S. EPA             | U.S. Environmental Protection Agency                |
| USFWS                | U.S. Fish and Wildlife Service                      |
| USGS                 | United States Geological Survey                     |
| VA                   | Value Analysis                                      |
| VIA                  | Visual Impact Assessment                            |
| VMT                  | Vehicle Miles Traveled                              |
| WOTUS                | Waters of the United States                         |
| WPCP                 | Water Pollution Control Program                     |

# Chapter 1. Proposed Project

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## 1.1 Project History

The California Department of Transportation proposes the Damnation Creek Safety Project in response to collision analysis by Caltrans District 1 Traffic Safety. Approval was initially granted for State Highway Operation and Protection Program (SHOPP) funding to improve superelevation, apply Open Graded Asphalt Concrete and install/extend Midwest Guardrail System (MGS) between Post Miles (PM) 15.70 and 16.20 on U.S. Highway 101 in Del Norte County as this site had a collision rate 6 times higher than average for similar facilities. After reexamination of the site, the post miles were lengthened, extending from PM 15.60 to PM 16.20, and shoulder widening support components were added.

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA).

## 1.2 Project Description

As part of a safety project, Caltrans proposes roadway grade improvements, road widening, and curve realignment on U.S. Highway 101 (U.S. 101) in Del Norte County between Post Miles 15.60 and 16.20 (Figures 1 and 2). Additional project features include installation of approximately 350 feet of new Midwest Guardrail System (MGS) guardrail, installation of approximately 150 feet MGS Special guardrail, replacement of an existing drainage inlet (DI), construction of a new down drain, and installation of approximately 1,130 feet of hot-mix asphalt (HMA) dikes.

### *Purpose*

The purpose of this project is to reduce the frequency and severity of collisions along this segment of the state highway.

### *Need*

This project was initiated by District 1 Traffic Safety in response to collision analysis. The analysis indicates a concentration of collisions mostly northbound approaching PM 16.00. The collisions were mainly due to northbound drivers speeding and attempting to overtake adjacent vehicles in the northbound passing lane.

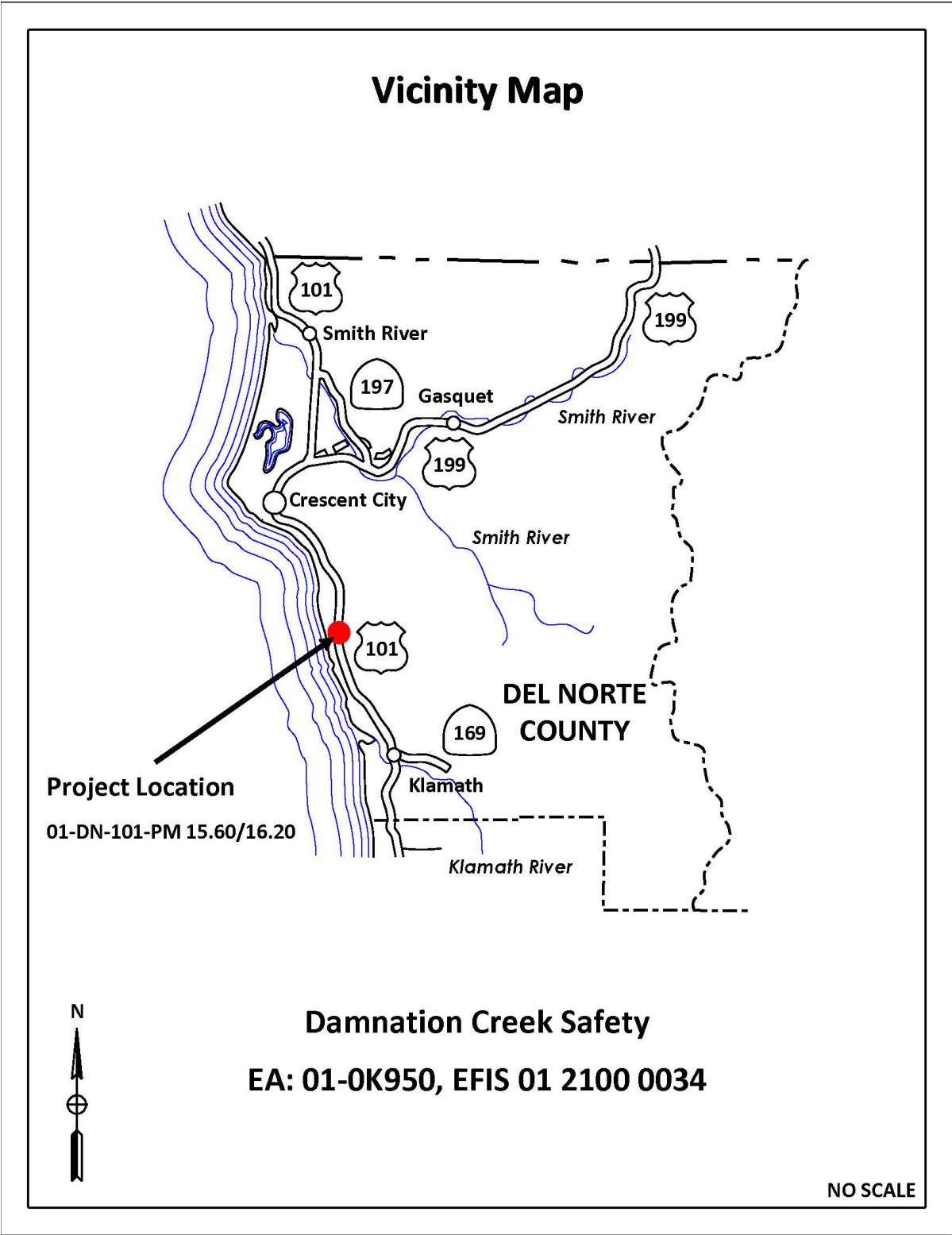


Figure 1. Project Vicinity Map



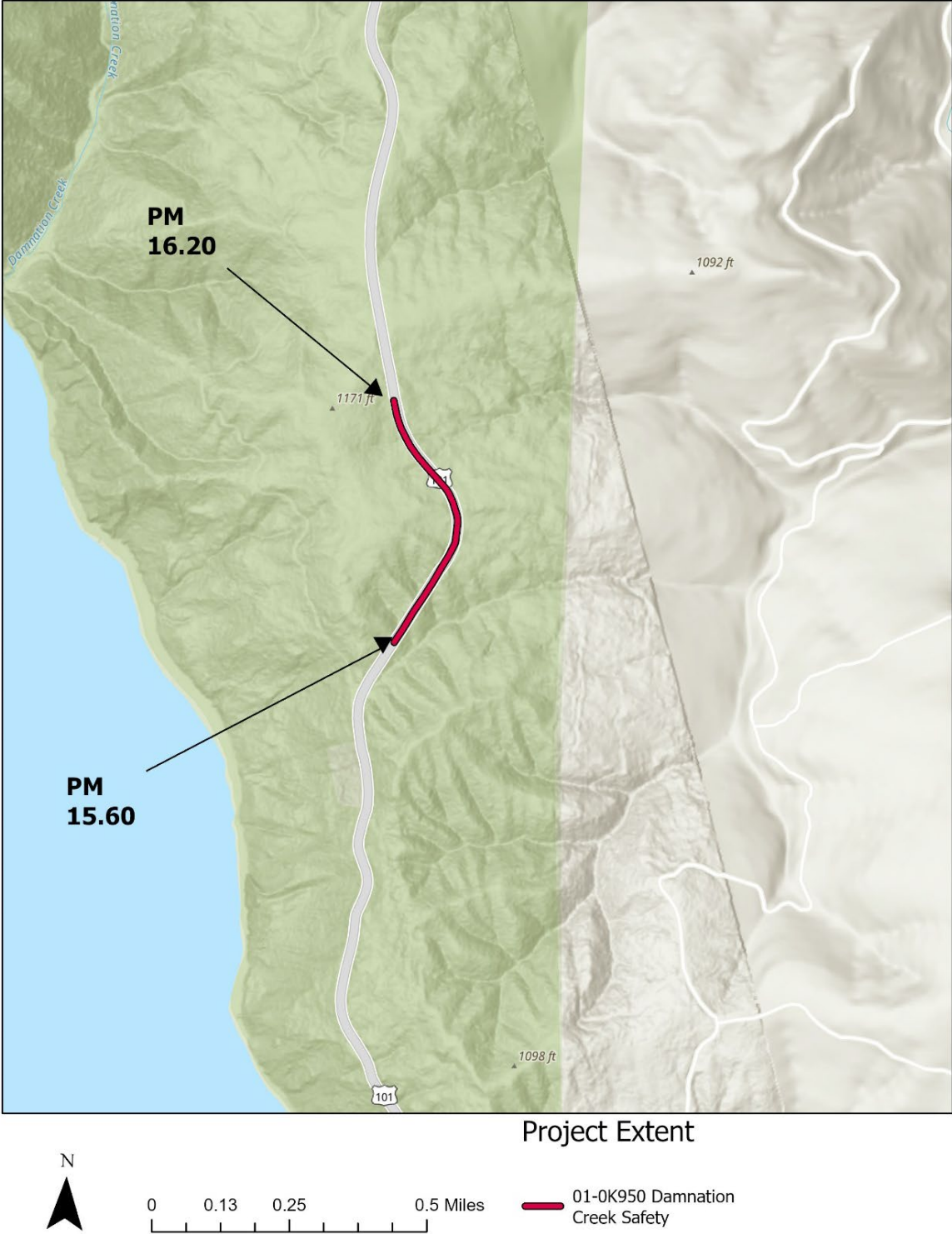


Figure 2. Project Location Map

### ***Proposed Project***

In addition to the grade improvements and road widening, the project proposes HMA leveling course, grinding/cold planing existing pavement, and importing of fill material to raise the road grade approximately 4 feet, repaving with HMA, and overlaying the paved surface with an open graded friction course pavement. Please see projects plans in Appendix A for more details.

Roadway grade changes and road widening activities would require removal of minor roadside vegetation and one large coast redwood snag. The project would also require shallow excavation under the current road surface along portions of the project footprint.

Construction of the proposed project is anticipated to begin in March 2026 and end in December 2026 and is estimated to take 110 working days. Except for a drainage easement for the new down drain, the project is entirely within the existing Caltrans right of way. The drainage easement is anticipated to be a rectangle 26 feet by 30 feet off the northbound side of the highway at approximately PM 16.05. The expected lifespan of the road surface would be approximately 30 years, while down drains are expected to last 20 years.

### ***No-Build Alternative***

The No-Build Alternative would maintain the facility in its current condition and would not meet the purpose and need of the project. For each potential impact area discussed in Chapter 2, the No-Build Alternative has been determined to have no impact. Under the No-Build Alternative, no alterations to the existing conditions would occur and the proposed improvements would not be implemented.

### ***General Plan Description, Zoning, and Surrounding Land Uses***

The proposed project area is entirely surrounded by Del Norte Coast Redwoods State Park. This land is mainly used for hiking and recreation.

### 1.3 Permits and Approvals Needed

The following table indicates the permitting agency, permits/approvals and status of permits required for the project.

**Table 1. Agency, Permit/Approval and Status**

| Agency                                 | Permit/Approval                            | Status                                       |
|--|--|--|
| U.S. Fish and Wildlife Service (USFWS) | Programmatic Letter of Concurrence (PLOC)  | Obtained September 19, 2023                  |
| California State Parks                 | Section 4(f) <i>de minimis</i> Concurrence | Approved March 15, 2024                      |
| California State Parks                 | Right of Entry Permit                      | In progress, required prior to construction. |

For projects that have federal funds involved, Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits the Federal Transit Administration and other USDOT agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and water fowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use. This project has federal funds and would require the temporary use of a Section 4(f) resource. See Appendix D for more information.

### 1.4 Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, “mitigation” is defined as avoiding, minimizing, rectifying, reducing/eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. They are measures that typically result from laws, permits, agreements, guidelines, resource management plans, and resource agency directives and policies. For this reason, the measures and practices are not considered “mitigation” under CEQA; rather, they are included as part of the project description in environmental documents.

The following section provides a list of project features, standard practices (measures), and Best Management Practices (BMPs) that are included as part of the project description. Standard measures relevant to the protection of natural resources deemed applicable to the proposed project include:

### ***Aesthetics Resources***

- AR-1:** Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.
- AR-2:** Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.
- AR-3:** Where feasible, construction lighting would be temporary, and directed specifically on the portion of the work area actively under construction.
- AR-4:** Where feasible, the removal of established trees and vegetation would be minimized. Environmentally sensitive areas (ESAs) would have Temporary High Visibility Fencing (THVF) and/or flagging installed before start of construction to demarcate areas where vegetation would be preserved and root systems of trees protected.

### ***Biological Resources***

#### **BR-1: General**

Before start of work, as required by permit or consultation conditions, a Caltrans biologist or Environmental Construction Liaison (ECL) would meet with the contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report regulated species within the project areas.

**BR-2: Animal Species**

- A. To protect nesting or roosting northern spotted owl and marbled murrelet, suitable northern spotted owl or marbled murrelet nesting trees would be removed between September 16 and January 31. No construction activities generating sound levels 20 or more decibels (dB) above ambient sound or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (with the exception of backup alarms) would occur between February 1 and August 5. Between August 6 and September 15, work that generates sound levels equal to or greater than 10 dB above ambient sound levels or above 90 dB max would observe a daily work window beginning 2 hours post-sunrise and ending 2 hours pre-sunset. Sound-related work windows would be lifted between September 16 and January 31.

No human activities (including use of drones) would occur within a visual line-of-sight of 328 feet (100 meters) or less from a known nest site, or from unsurveyed suitable nesting habitat containing potential murrelet nest trees within 328 feet (100 meters) of proposed activities or, for NSO, from unsurveyed suitable nesting/roosting habitat containing potential owl nest trees. These visual disturbance restrictions would be lifted after September 15; after which the USFWS considers visual disturbance as having “no effect” on nesting adults or dependent young. The 328-foot (100 meters) visual disturbance distance may be reduced or eliminated through technical assistance with the USFWS if site-specific information suggests that ambient visual disturbance within the action area is already high enough to likely preclude species from nesting within 328 feet (100 meters) of the project footprint, or vegetation near the roadway is sufficiently dense to shield the view from habitat farther from the roadway.

- B. No suitable marten denning/resting habitat or potentially suitable marten den or rest trees will be removed or altered (i.e., to the extent the tree or habitat are no longer suitable for denning or resting) during the denning season (i.e., from March 1 through September 15). Suitable marten habitat may be removed or altered outside the denning season (i.e., from September 16 through the following February 28/29) provided the remaining habitat retains suitability for denning and resting after the removal or alteration.

Habitat suitability includes maintenance of the dense, mesic shrub layer at or above 70 percent. Removal or alteration of known natal or maternal den trees (or more rare den structures such as rockpiles, snags, logs) at any time of year is not covered by this consultation.

- C. No human activities (including use of drones) will occur within a visual line-of-sight of 328 feet (100 meters) or less from a known natal or maternal den site (USFWS 2020). The 100-meter visual disturbance distance may be reduced or eliminated through technical assistance with USFWS (the Service) if site-specific information suggests that ambient visual disturbance within the action area is already high enough to likely preclude species from denning within 328 feet (100 meters) of the project footprint, or vegetation near the roadway is sufficiently dense to shield the view from habitat farther from the roadway.
- D. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist five days prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.
- E. To prevent attracting corvids (birds of the Corvidae family which include jays, crows, and ravens) and other predators such as coyotes and raccoons, no trash or foodstuffs would be left or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife.

**BR-3: Invasive Species**

Invasive non-native species control would be implemented. Measures would include:

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.
- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* (CDFW 2016) for all field gear and equipment in contact with water.

**BR-4: Plant Species, Sensitive Natural Communities, and ESHA**

- A. Seasonally appropriate, pre-construction floristic surveys for sensitive plant species would be completed (or updated) by a qualified biologist prior to construction in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).
- B. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, rare plant occurrences, intermittent streams and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.
- C. Where feasible, the structural root zone (SRZ) would be identified around each large-diameter tree (>2-foot diameter-at-breast height [DBH]) directly adjacent to project activities, and work within the zone would be limited.
- D. When possible, excavation of roots of large diameter trees (>2-foot DBH) would not be conducted with mechanical excavator or other ripping tools. Instead, roots would be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots would be pruned away to make sharp, clean cuts.

- E. Upon completion of construction, all superfluous construction materials would be completely removed from the site. The site would then be restored by regrading and stabilizing with a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan.

### ***Cultural Resources***

- CR-1:** If unanticipated cultural materials are unearthed during construction, work activity within a 60- foot radius of the discovery would be temporarily halted and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with local tribes, Caltrans Cultural Studies Office, and the State Historic Preservation Officer (SHPO).
- CR-2:** If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code (H&SC) § 7050.5. which requires that no further excavation or disturbance occur in the area and that the Del Norte County Coroner would be contacted immediately to confirm the remains are not modern. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner will contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would then appoint a Most Likely Descendent (MLD) who, within 48 hours of being granted access to the site of the late discovery, would provide recommendations for the appropriate and dignified treatment and disposition of the human remains and associated items.

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (23 United States Code [USC] 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery will be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.



### ***Geology, Seismic/Topography, and Paleontology***

- GS-1:** The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and Best Management Practices (BMPs). New earthen slopes would be vegetated to reduce erosion potential.
- GS-2:** In the unlikely event that paleontological resources (fossils) are encountered, all work within a 60-foot radius of the discovery would stop, the area would be secured, and the work would not resume until appropriate measures are taken.

### ***Greenhouse Gas Emissions***

- GHG-1:** Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality (Caltrans Standard Specification [SS] 14-9).
- GHG-2:** Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.
- GHG-3:** Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB) (Caltrans SS 7-1.02C).
- GHG-4:** Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.
- GHG-5:** All areas temporarily disturbed during construction would be revegetated with appropriate native species, as appropriate. Landscaping reduces surface warming and, through photosynthesis, decreases CO<sub>2</sub>. This replanting would help offset any potential CO<sub>2</sub> emissions increase.
- GHG-6:** Pedestrian and bicycle access would be maintained on U.S. Highway 101 during project activities.

### ***Hazardous Waste and Material***

- HW-1:** Per Caltrans requirements, the contractor(s) would prepare a project-specific *Lead Compliance Plan* (California Code of Regulations [CCR] Title 8, § 1532.1, the “Lead in Construction” standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of materials containing lead.
- HW-2:** When identified as containing hazardous levels of lead, traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision “Remove Yellow Traffic Stripes and Pavement Markings with Hazardous Waste Residue” (SSP 14-11.12).
- HW-3:** If treated wood waste (such as removal of sign posts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification “Treated Wood Waste.”

### ***Traffic and Transportation***

- TT-1:** Pedestrian and bicycle access would be maintained during construction.
- TT-2:** The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones.
- TT-3:** A Transportation Management Plan (TMP) would be applied to the project.

### ***Utilities and Emergency Services***

- UE-1:** All emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. Highway 101 throughout the construction period.

## ***Water Quality and Stormwater Runoff***

**WQ-1:** The project would comply with the provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2022-0033-DWQ), effective January 1, 2023. If the project results in a land disturbance of one acre or more, coverage under the Construction General Permit (CGP) (Order 2022-0057-DWQ) is also required.

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2022-0057-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction. For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of those permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

The SWPPP or WPCP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Caltrans Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

The project SWPPP or WPCP would be continuously updated to adapt to changing site conditions during the construction phase.

Construction may require one or more of the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (e.g., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities would be removed by dewatering.
- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.

**WQ-2:** The project would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water Management Plan*. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2022-0033-DWQ).

The project design may include one or more of the following:

- Vegetated surfaces would feature native plants, and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.
- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

## 1.5 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. 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 National Marine Fisheries Service and the United States Fish and Wildlife Service—in other words, species protected by the Federal Endangered Species Act).



## Chapter 2. CEQA Environmental Checklist

### *Environmental Factors Potentially Affected*

The environmental factors noted below would be potentially affected by this project. Please see the CEQA Environmental Checklist on the following pages for additional information.

| Potential Impact Area              | Impacted: Yes / No |
|------------------------------------|--------------------|
| Aesthetics                         | No                 |
| Agriculture and Forest Resources   | No                 |
| Air Quality                        | No                 |
| <b>Biological Resources</b>        | <b>Yes</b>         |
| Cultural Resources                 | No                 |
| Energy                             | No                 |
| Geology and Soils                  | No                 |
| <b>Greenhouse Gas Emissions</b>    | <b>Yes</b>         |
| Hazards and Hazardous Materials    | No                 |
| Hydrology and Water Quality        | No                 |
| Land Use and Planning              | No                 |
| Mineral Resources                  | No                 |
| Noise                              | No                 |
| Population and Housing             | No                 |
| Public Services                    | No                 |
| Recreation                         | No                 |
| Transportation                     | No                 |
| Tribal Cultural Resources          | No                 |
| Utilities and Service Systems      | No                 |
| Wildfire                           | No                 |
| Mandatory Findings of Significance | No                 |

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A “NO IMPACT” answer in the last column of the checklist reflects this determination. The words “significant” and “significance” used throughout the CEQA Environmental Checklist are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental 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, as well as standardized measures applied to all or most Caltrans projects (such as Best Management Practices [BMPs] and measures included in the Standard Plans and Specifications or as Standard Special Provisions [Section 1.4]), are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

### ***Project Impact Analysis Under CEQA***

CEQA broadly defines “project” to include “*the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment*” (14 CCR § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project’s possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a “statement of the objectives sought by the proposed project” (14 CCR § 15124(b)).



CEQA requires the identification of each potentially “significant effect on the environment” resulting from the project, and ways to mitigate each significant effect. Significance is defined as “*Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project*” (14 CCR § 15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

The legal standard for determining the significance of impacts is whether a “fair argument” can be made that a “substantial adverse change in physical conditions” would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in an area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency will consider impacts to be significant, and below which it will consider impacts to be less than significant. Given the size of California and its varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts in the project area based on their location and the effect of the potential impact on the resource as a whole. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a “less than significant” determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered “significant.”

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study. CEQA allows for a “Mitigated Negative Declaration” in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§ 15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation", Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. CODE § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

### ***No-Build Alternative***

For each of the following CEQA Environmental Checklist questions, the "No-Build" Alternative has been determined to have "No Impact". Under the "No-Build" Alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The "No-Build" Alternative will not be discussed further in this document.

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## ***Definitions of Project Parameters***

When determining the parameters of a project for potential impacts, the following definitions are provided:

***Project Area:*** This is the general area where the project is located. This term is mainly used in the Environmental Setting section (e.g., watershed, climate type, etc.).

***Project Limits:*** This is the beginning and ending post miles for a project. This is different than the ESL in that it sets the beginning and ending limits of a project along the highway. It is the limits programmed for a project, and every report, memo, etc. associated with a project should use the same post mile limits. In some cases, there may be areas associated with a project that are outside of the project limits, such as staging and disposal locations.

***Project Footprint:*** The area within the Environmental Study Limits (ESL) the project is anticipated to impact, both temporarily and permanently. This includes staging and disposal areas.

***Environmental Study Limits (ESL):*** The project engineer provides the Environmental team the ESL as an anticipated boundary for potential impacts. The ESL is *not* the project footprint. Rather, it is the area encompassing the project footprint where there could *potentially* be direct and indirect disturbance by construction activity. The ESL is larger than the project footprint in order to accommodate any future scope changes. The ESL is also used for identifying the various Biological Study Areas (BSAs) needed for different biological resources.

***Biological Study Area (BSA):*** The BSA encompasses the ESL plus any areas outside of the ESL that could potentially be affected by a project (e.g., noise, visual, Coastal Zone, etc.). Depending on resources in the area, a project could have multiple BSAs. Each BSA should be identified and defined. If the project is within the Coastal Zone, this area would also include the required 100 foot buffer. For this project, two BSAs were defined: one to account for auditory/visual impacts (BSA #1) and the other encompasses waterbodies within the project study area that may have suitable habitat for special status fish species (BSA #2).

## 2.1 Aesthetics

| Except as provided in the Public Resources Code Section 21099:   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Have a substantial adverse effect on a scenic vista?   |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?  |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>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? |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?   |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Visual Impact Assessment (VIA)* (Caltrans 2023h). This project is located within Del Norte Coast Redwoods State Park in which the main resource focus is old-growth redwood forest. The section of U.S. 101 between PMs 11.0 and 23.1, which includes the project site, has officially been designated a scenic highway within the California State Scenic Highway System.

Redwood National and State Parks was added to the list of World Heritage Sites and International Biosphere Reserves in 1980.

Changes to visual resources due to the proposed project would be minimal overall. It is anticipated that post-project conditions will be very similar to the existing conditions, resulting in few noticeable changes to the visual environment. The project scope includes superelevation improvements, which are not expected to impact views to or from the roadway. The view distance is constrained on both sides of the highway due to the forest density and the terrain elevation changes.

Temporary visual impacts would be present during construction owing to the presence of construction equipment and alterations to the road surface. Additionally, minor temporary changes would occur to the roadside vegetation post-construction, subsiding once natural vegetation reoccupies the site. Upgrades would overall be compatible with the existing visual quality and character of the project corridor.

This review indicates that the project would have “*no impact*” on any “Designated Scenic Resources” as defined by CEQA statutes or guidelines, or by Caltrans policy. No mitigation is required.

## 2.2 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; the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>c) Conflict with existing zoning for, or cause rezoning of forest land (as defined by 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))?</p> |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>  |                                    |  |                              | ✓         |

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>                     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?</p> |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Project locations are predominately within the existing Caltrans right of way or bordered by property zoned for public lands.

Most of the construction is within the existing Caltrans right of way. It is anticipated that one small easement would be needed from State Parks to install the new drainage outlet at PM 16.01. The drainage easement is approximately 10 feet wide by 10 feet long. The location of the easement is not easily accessible because it is on the side of the road on a steep slope with no trail access. The construction of the drainage outlet would occupy a small footprint approximately 10 feet long by 24 inches wide. The anticipated easement will not change the use of the land or the public’s access to it.

Potential impacts to agriculture and forest resources are not anticipated as the improvement of existing roadway and use of the easement area would not cause a change in zoning or land use or result in the loss or conversion of forest or agricultural land. The loss or conversion of farmland to non-agricultural use or forest land to non-forest use is not anticipated.

Given the above, Caltrans anticipates the project would have “no impact” on agriculture and forest resources. No mitigation is required.

### 2.3 Air Quality

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

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Conflict with or obstruct implementation of the applicable air quality plan?   |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>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? |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>c) Expose sensitive receptors to substantial pollutant concentrations?  |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?   |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality, GHG and Energy Analyses* (Caltrans 2023a) and *Air Quality Update* (Caltrans 2023b) memorandums. Del Norte County is classified as an “attainment” area for all current National Ambient Air Quality Standards; therefore, transportation conformity requirements do not apply. There are no sensitive receptors in the immediate vicinity of any of the project's construction areas. Potential long-term impacts to air quality are not anticipated because the project would not result in changes to traffic volumes, capacity, vehicle miles traveled (VMT), fleet mix, speed, location of existing facilities, or any other factor that would increase long-term operational emissions.



The project may result in temporary air quality impacts during construction, including fugitive dust and exhaust from construction equipment. Fugitive dust, or PM<sub>10</sub>, may be generated during excavation, grading, and hauling activities. However, both fugitive dust and pollutants from construction equipment would be temporary in nature. Dust and emissions would be reduced and controlled in conformance with Caltrans standard specifications.

A discussion of greenhouse gas emissions is provided in Section 2.8. Given the above, Caltrans anticipates the project would have “*no impact*” on air quality. No mitigation is required.

## 2.4 Biological Resources

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>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 NOAA Fisheries?</p> |                                    |  | ✓                            |           |
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  | ✓                            |           |
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  |                              | ✓         |

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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?</p> |                                    |  |                              | ✓         |

### **Regulatory Setting**

Within this section of the document (Section 2.4. Biological Resources), the topics are separated into Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as “threatened” or “endangered” are covered within the Threatened and Endangered sections. Other special status plant and animal species, including U.S., Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) candidate species, California Department of Fish and Wildlife (CDFW) Fully Protected (FP) species, Species of Special Concern (SSC), and California Native Plant Society (CNPS) rare plants are covered in the respective Plant and Animal sections. This section of the document focuses on the issues covered in Chapter 4 of the Natural Environment Study (NES) (Caltrans 2023e).

### **Natural Communities**

In this section, the focus is on biological communities, not individual plant or animal species. CDFW maintains a list of sensitive natural communities (SNCs). SNCs are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

### **Wetlands and Other Waters**

Waters of the United States (including wetlands) and State are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal: Clean Water Act (CWA)–33 United States Code (USC) 1344
- Federal: Executive Order for the Protection of Wetlands (Executive Order [EO] 11990)
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act–Sections 3000 et seq.

### **Plant Species**

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special status plant species. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA)–USC 16 Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402
- California Endangered Species Act (CESA)–California Fish and Game Code Section 2050, et seq.
- Native Plant Protection Act–California Fish and Game Code Sections 1900–1913
- National Environmental Policy Act (NEPA)–40 CFR Sections 1500 through 1508
- California Environmental Quality Act (CEQA)–California Public Resources Code (PRC) Sections 21000–21177

### **Animal Species**

The USFWS, NMFS, and CDFW have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

- NEPA–40 CFR Sections 1500 through 1508
- CEQA–California Public Resources Code Sections 21000–21177
- Migratory Bird Treaty Act–16 USC Sections 703–712

- Fish and Wildlife Coordination Act–16 USC Section 661
- California Fish and Game Code Sections 1600–1603
- California Fish and Game Code Sections 4150 and 4152

### **Threatened and Endangered Species**

The primary laws governing threatened and endangered species include:

- FESA–USC 16 Section 1531, et seq. See also 50 CFR Part 402
- CESA–California Fish and Game Code Section 2050, et seq.
- CESA–California Fish and Game Code Section 2080
- CEQA–California Public Resources Code, Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, as amended–16 USC Section 1801

### **Invasive Species**

The primary laws governing invasive species are Executive Order (EO) 13112 and NEPA.

### **Affected Environment**

A Natural Environment Study (NES) (Caltrans 2023e) was prepared for the project. Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from USFWS, NMFS, CDFW, California Coastal Commission, California State Parks and the County of Del Norte. See Chapter 3 for a summary of these coordination efforts and professional contacts.

The Environmental Study Limits (ESL), provided by the Caltrans Design team at the beginning of the environmental study process, is the area encompassing the project footprint where there could *potentially* be direct and indirect disturbance by construction activity. The Affected Environment describes the project area’s physical conditions (including climate, topography, geology/soils, habitat, hydrology, watercourses, and level of human or natural disturbance) and biological conditions (including vegetation, special status species, common wildlife, habitat connectivity, dispersal/migration corridors, aquatic resources, and invasive species).

The Biological Study Areas (BSAs) for the proposed project encompass the ESL plus resource-specific areas outside of the ESL that could potentially be affected by the project. These BSAs were determined based on elements of construction that may reach beyond the immediate project footprint, such as elevated noise/hydroacoustic levels, visual disturbances, modifications to surface and subsurface hydrology, and/or downstream water quality impacts.

The following BSAs were identified to assess potential impacts of the proposed project to nearby biological resources:

- **BSA #1 (Auditory/Visual)** – This BSA encompasses the ESL plus a 0.25-mile buffer to account for potential construction-related auditory and/or visual impacts to special status animal species and their habitats.
- **BSA #2 (Waters)** – This BSA encompasses any waterways or waterbodies downstream of the project ESL that may have suitable habitat for special status fish species. This includes a tributary to Wilson Creek, and the portion of Wilson Creek downstream of the project ESL. These waters were assessed for potential indirect impacts as a result of potential sedimentation and/or pollutant contamination from project-related activities.

The project ESL includes U.S. 101 and Del Norte Coast Redwoods State Park, which borders the roadway on both sides, between PM 15.60 and PM 16.20, approximately 7 miles south of Crescent City. The project ESL is entirely within the Childs Hill 7.5-minute U.S. Geological Survey (USGS) quadrangle. Under the Public Land Survey System, the project is within Section 31 in Township 15 North, Range 1 East.





Figure 3. Environmental Study Limits and Biological Study Areas

### ***Physical Conditions***

The project ESL is entirely within the *Coast Range* ecoregion that includes an inland coastal mountain range which is dominated by highly productive evergreen forests. The project ESL is along U.S. 101, a north-south trending highway with intermittent passing lanes and occasional paved or graveled pullouts.

### ***Climate***

The project ESL is entirely within the warm-summer Mediterranean climate subtype, known for its cool, wet winters and warm, dry summers (U.S. Climate Data 2023). Based on over 100 years of records, monthly average temperatures range from 44 to 60 degrees Fahrenheit (°F). Average annual rainfall in the immediate region is approximately 71.24 inches, with the majority falling between the months of December and March.

### ***Land Use***

Land within the project ESL includes U.S. 101, associated Caltrans right of way, and lands managed by Del Norte Coast Redwoods State Park. The California Coastal Trail intersects the far southern end of the project ESL and parking for the Damnation Creek Trailhead is on the western side of U.S. 101 near PM 16.1, within the project ESL.

### ***Topography***

The project ESL is on a gradual incline from south to north, with elevations ranging between 800 and 1,000 feet above mean sea level.

### ***Geology/Soils***

The project ESL is within the Northern Coast Ranges subset of the Coast Ranges Geomorphic Province. The Coast Ranges are north-west trending mountain ranges (typically 2,000 to 4,000 feet elevation) and valleys that run subparallel to the San Andreas Fault. The province is bordered to the west by the Pacific Ocean, to the east by the Great Valley Geomorphic Province, to the south by the Transverse Ranges of southern California, and to the north by the Klamath Mountain Range.



Natural Resources Conservation Service (NRCS) soil survey data for Del Norte County indicated three soil map unit types mapped in the survey area (NRCS 2023) (Table 2).

**Table 2. Soil Map Units within the Biological Study Area**

| Soil Unit Name                         | Description  |
|--|--|
| Sasquatch-Yeti-Footstep complex        | Parent material consists of colluvium and residuum derived from sandstone and mudstone. Typically found on narrow or broad ridges and upper mountain slopes. |
| Sasquatch-Sisterrocks-Ladybird complex | Parent material consists of colluvium and residuum derived from sandstone and mudstone. Typically found on mountain slopes.                                  |
| Sisterrocks-Sasquatch-Footstep complex | Parent material consists of colluvium and residuum derived from sandstone and mudstone. Typically found on mountain slopes.                                  |

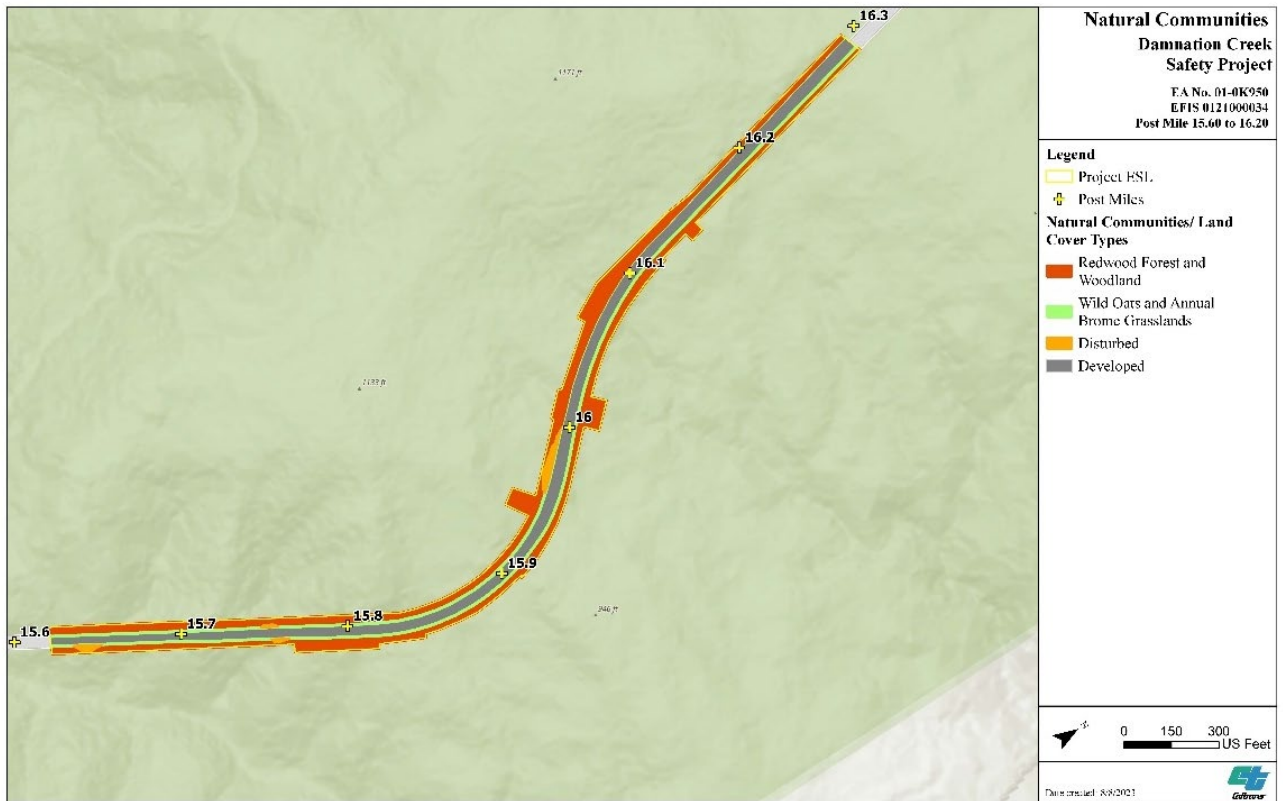
Source: NRCS 2023

***Hydrology/Watershed***

The project area is entirely within the Wilson Creek–Frontal Pacific Ocean watershed, which encompasses approximately 26 square miles (17,125 acres) (USGS 2019). Intermittent streams that eventually flow into Wilson Creek to the east intersect the project ESL in several locations. Smaller roadside ditches that convey run-off are also present on either side of U.S. 101 within the project ESL.

***Natural Communities and Land Cover Types***

Two natural community types were identified within the project ESL: Redwood Forest and Woodland (4.03 acres) and Wild Oats and Annual Brome Grasslands (.49 acres). Additional land cover types include developed land and disturbed areas.



**Figure 4. Natural Communities and Land Cover Types**

***Redwood Forest and Woodland***

The Redwood Forest and Woodland natural community (4.03 acres) is found throughout the majority of the project ESL and BSAs. The overstory is dominated by coast redwood (*Sequoia sempervirens*). Other trees may include Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), bigleaf maple (*Acer macrophyllum*), California bay (*Umbellularia californica*), and/or red alder (*Alnus rubra*).

***Wild Oats and Annual Brome Grassland***

Wild Oats and Annual Brome Grasslands (0.49 acres) are present along the shoulders of U.S. 101, which is primarily dominated by weedy annual grasses and forbs. Species include introduced and native annual grasses such as wild oats (*Avena barbata*, *A. fatua*) and brome grasses (*Bromus* spp.), sweet vernal grass (*Anthoxanthum odoratum*), velvet grass (*Holcus lanatus*), bluegrass (*Poa* spp.), fescue (*Festuca* spp.), orchard grass (*Dactylis glomerata*), and other native and non-native forbs. Wild Oats and Annual Brome Grasslands is not a ranked community and is not considered sensitive by CDFW.

### ***Developed and Disturbed***

Developed land includes the paved portions of U.S. 101 (2.97 acres). Disturbed land includes dirt and gravel pullouts adjacent to U.S. 101 (.13 acres). Besides intermittent sparse annual grasses or forbs, the disturbed land area is mostly devoid of vegetation.

### ***Sensitive Natural Communities***

Sensitive Natural Communities (SNCs) are natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat. High priority SNCs are globally (G), and state (S) ranked 1 to 3, where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. Global and state ranks of 4 and 5 are considered apparently secure and demonstrably secure, respectively (CDFW 2023c).

Redwood Forest and Woodland is an S3/G3 ranked community and is considered sensitive by CDFW. Within the project ESL, Redwood Forest and Woodland, an S3 ranked SNC, encompasses 4.03 acres.

The proposed project would require minor vegetation removal immediately adjacent to the roadway, including the removal of annual grasses and forbs and one redwood snag.

### ***Wetlands and Other Waters***

Wetland delineations were performed to survey for potentially jurisdictional wetland and non-wetland Waters of the U.S. and State within and adjacent to the project construction footprint at each location. No wetlands were found within the project ESL.

Proposed drainage improvements only include modifications to roadside stormwater facilities and would not occur within jurisdictional waterways.

### *Habitat Connectivity*

Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Stream courses and their associated riparian areas are often used as migration corridors by aquatic and terrestrial species. If corridors are degraded, habitat fragmentation can result. Habitat fragmentation is the process by which habitat loss results in the division of large, continuous habitats into smaller, more isolated remnants, thereby lessening its biological value.

The California Essential Habitat Connectivity Project (CEHC) was commissioned by Caltrans and the CDFW to identify and describe wildlife movement corridors in California (CDFW 2023d). The CEHC identifies large parcels of intact habitat or natural landscape that support native biodiversity and areas essential for ecological connectivity between them (Essential Connectivity Areas [ECAs]). Additionally, the CEHC models linkages between the ECAs that need to be maintained for use as wildlife corridors. The goal of the project is to integrate natural resource considerations into transportation and land use planning processes.

The project ESL and BSAs are entirely within the Gold Bluffs–Siskiyou Mountains ECA.

Similarly, the CDFW Areas of Conservation Emphasis (ACE) is a tool that utilizes a compilation of statewide spatial information on items such as biodiversity, rarity, significant habitats, and connectivity to produce a ranking of an area’s connectivity importance. The BSAs are within an area that has an ACE ranking of “3” and is not considered an area of known importance for connectivity (CDFW 2023d).

There are no waters within the project ESL suitable for fish passage; project-related impacts to fish passage are not expected.

### *Special Status Plant Species*

Seasonally appropriate botanical surveys were conducted within the ESL to identify any special status plant species that may be impacted by project activities. Botanical surveys were conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Resources used to identify plants included *The Jepson Manual, second edition* and internet resources, such as Calflora (Calflora 2023).

Caltrans biologists initially conducted floristic surveys in 2022 and 2023. Surveys were timed to coincide with the flowering periods of the special status plant species that could potentially occur within the ESL.

For the purposes of this evaluation, “special status plants” are those species that are legally protected or prioritized under the regulations. For this survey, special status plants include:

- Species listed or proposed for listing as threatened or endangered under FESA
- Species that are candidates for possible future listing as threatened or endangered under the FESA
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA
- Species that meet the definitions of rare or endangered under CEQA
- Plant species listed as rare under the California Native Plant Protection Act (CNPPA)
- Plants listed by CNPS per the California Rare Plants Ranks (CRPR)

The project ESL contains suitable habitat for 25 special status plant species described in Appendix C, none of which were observed within the project ESL during botanical surveys.

The USFWS, CDFW-CNDDDB, and CNPS databases list two federal and/or state listed plant species that could occur near the project ESL, including sand dune phacelia (*Phacelia argentea*; federal proposed threatened) and western lily (*Lilium occidentale*; federal endangered and state endangered). The sand dune phacelia grows on coastal dunes with an elevation range between 10–80 feet and the western lily grows between 5–605 feet elevation which are outside of the project elevation range of 800–1,000 feet. While not observed within the project ESL, federal and state listed plant species identified during the records search are discussed briefly below.

### ***Special Status Animal Species***

For the purposes of this evaluation, special status wildlife species are those species that are legally protected or prioritized. Special status wildlife species reviewed in this Initial Study include:

- Species listed or proposed for listing as threatened or endangered under FESA
- Species that are candidates for possible future listing under FESA

- Species listed or proposed for listing by the State of California as threatened or endangered under CESA
- Species that meet the definitions of rare or endangered under CEQA
- CDFW Species of Special Concern (SSC) and Fully Protected (FP) Species

The BSAs described in this section were assessed for the potential to support special status wildlife species and/or their habitats via desktop review of aerial imagery and records of occurrences, site visits, and through discussions with agency personnel and species experts. General habitat assessments were conducted for all special status wildlife species provided by the aforementioned records search.

The project BSAs may provide suitable habitat for 17 of the special status animal species described in Appendix C. A background of these species, potential project impacts, and is provided below. Species with similar habitat requirements, behaviors, and/or life histories are combined into one assessment where appropriate.

The project BSAs lack suitable habitat for the remaining 28 species described in Appendix C. As these species are not expected to occur within the project BSAs, they would not be impacted by the proposed project, and no further discussion is included in this assessment.

## **AMPHIBIANS AND REPTILES**

### ***Foothill Yellow-legged Frog, Northern red-legged Frog, Pacific tailed Frog, Southern Torrent Salamander, and Western Pond Turtle***

Foothill yellow-legged frog (*Rana boylei*)—Northwest clade, northern red-legged frog (*Rana aurora*), Pacific tailed frog (*Ascaphus truei*), southern torrent salamander (*Rhyacotriton variegatus*), and northwestern pond turtle (*Actinemys marmorata*) are CDFW Species of Special Concern (SSC) that could occur within the project BSAs. The western pond turtle is also a proposed species to be included in the federally threatened species list, and is discussed further below.

***Foothill yellow-legged frogs—Northwest clade*** are characteristically found very close to water in association with perennial streams and ephemeral creeks that retain perennial pools through the end of summer. This species is associated with partly shaded, shallow streams and riffles with rocky substrate in a variety of habitats. During cold weather, individuals seek cover under rocks in the streams or on shore within 6 feet of water. This species is rarely encountered far from permanent water.

Eggs are attached to gravel or rocks in moving water near stream margins. Mating and egg-laying occurs exclusively in streams and rivers (not in ponds or lakes).

**The northern red-legged frog** is a medium to large sized frog that is found in humid forests, woodlands, grasslands, and stream sides with dense riparian cover. It is most common in lowlands or foothills and is frequently found in woods adjacent to streams but can be wide-ranging and highly terrestrial in damp woods and meadows during the non-breeding season. It requires permanent water sources, such as ponds and lakes, for breeding.

**Pacific tailed frogs** typically occur in mature or late-successional conifer-dominated habitats, including coast redwood and Douglas-fir forests. They can be found in cool, perennial streams with steep banks and dense vegetation. Tailed frogs are usually found in streams with large stones, cobbles, and stable boulders, which can be used for shelter from rapid current. Quieter side pools are also needed so eggs are not washed away.

**Southern torrent salamander** is found in coastal drainages from Oregon south to Mendocino County. It inhabits cold streams and seeps that are shaded by tree or shrub canopy, typically with moist rock and talus. Suitable cold shaded streams are usually found on north-facing slopes.

**Northwestern pond turtles** prefer creeks and ponds with quiet water, as well as streams with boulders or fallen trees that provide cover. The species is often associated with areas that provide basking habitat, such as aquatic vegetation and/or logs.

Protocol-level special status amphibian and reptile surveys were not conducted within the project BSAs. However, it is assumed that the intermittent streams (adjacent to the project ESL) and Wilson Creek (BSA #2) may provide suitable aquatic breeding habitat for foothill yellow-legged frog, northern-red legged frog, Pacific tailed frog, and/or southern torrent salamander., and/or western pond turtles. While it is unlikely that these species would occur within the project ESL (which lacks suitable aquatic habitat), these species may use areas within the project ESL as dispersal corridors to and from more suitable aquatic breeding habitats. Northwestern pond turtle is not likely to be present in BSA #1 as it is too high in the watershed to provide the permanent aquatic habitats

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## **BIRDS**

### ***Migratory and Non-migratory Bird Species***

The occupied nests and eggs of all birds are protected by state law (CFGC § 3503) and those of migratory birds are further protected by federal and state laws, including the Migratory Bird Treaty Act (MBTA) and CFGC Section 3503.5. USFWS is responsible for overseeing compliance with the MBTA, and CDFW is responsible for overseeing compliance with the CFGC and making recommendations about nesting birds.

The Redwood Forest and Woodland communities within the project ESL and BSA #1 provide suitable habitat for a variety of migratory and non-migratory nesting bird species. While an exhaustive survey of all birds within the project ESL was not performed, based on local observations, suitable habitat is present within the project ESL and BSA #1 for migratory and non-migratory bird species that may occur in the vicinity. These include, but are not limited to, winter wren (*Troglodytes hiemalis*), varied thrush (*Ixoreus naevius*), song sparrow (*Melospiza melodia*), Steller's jay (*Cyanocitta stelleri*), and white-crowned sparrow (*Zonotrichia leucophrys*).

## **FISH**

### ***Coastal Cutthroat Trout***

Coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), a state Species of Special Concern (SSC), can assume three general life-history strategies: non-migratory, freshwater migratory, and saltwater migratory. Non-migratory coastal cutthroat trout remain in the freshwater habitats in which they were born. Freshwater migratory coastal cutthroat trout migrate entirely within freshwater habitats (including populations that migrate from large tributaries to small tributaries to spawn), populations that inhabit lakes and migrate upstream to spawn in the lake's tributaries, and populations that live in lakes and migrate downstream to spawn in the lake outlet. Finally, saltwater migratory coastal cutthroat trout migrate from freshwater natal areas in the late winter and spring to feed in marine environments and then re-enter fresh water in the winter to feed, seek refuge, or spawn, sometimes returning to seawater in the spring.

The Eel River in Northern California represents the southern extent of the coastal cutthroat trout range. The principal large stream systems the species occupies in California include the Smith, Mad, and Lower Klamath rivers. Self-sustaining populations also occur in many



coastal basins, including Humboldt Bay tributaries and several lagoons and ponds including Big, Stone and Espa lagoons and the Lake Earl-Tolowa complex.

Focused surveys for special status fish were not conducted within the ESL or BSAs. However, it is presumed that within BSA #2 coastal cutthroat trout may occur year-round in Wilson Creek.

### ***Steelhead–Klamath Mountains Province DPS***

The steelhead (*Oncorhynchus mykiss irideus*)–Klamath Mountains Province Distinct Population Segment (DPS) (pop. 1), a Species of Special Concern, is a population of steelhead trout (another anadromous fish species) that occurs in the Klamath River basin and coastal streams north to the Elk River in Oregon, including the Smith (California) and Rogue (Oregon) rivers.

Steelhead are born in freshwater streams with newly emerged fry generally occupying shallow waters along stream margins, whereas larger juveniles maintain territories in faster and deeper water in pools or runs. Steelhead typically rear in streams or estuaries for 1 to 2 years before entering the ocean. Smoltification, the physiological process that enables juveniles to survive in the ocean, occurs in early spring. Peak downstream movements typically occur in April or May, although young of the year have been reported to migrate to estuaries as early as February and as late as June.

### ***Surveys***

Focused surveys for special status fish were not conducted within the ESL or BSAs. However, it is presumed that within BSA #2 steelhead may occur year-round in Wilson Creek.

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## MAMMALS

### *Pacific Fisher*

The Pacific fisher (*Pekania pennanti*)–West Coast Distinct Population Segment (DPS) is a state Species of Special Concern. The Pacific fisher is a small, carnivorous mammal that occurs in mature, second growth, and old-growth redwood and Douglas-fir forests (Zielinski 2013). The species requires coniferous forest habitats with high canopy closure, multiple canopy layers, and large trees, with snags, cavities, and hollow logs used for resting and natal and maternal dens. Fisher hunt exclusively in forested habitats, generally avoid openings, and likely use corridors with adequate overhead cover to travel between forest patches (Buskirk and Powell, 1999).

Focused surveys for Pacific fisher were not conducted within the project ESL or BSAs. While there are no CNDDDB occurrences of Pacific fisher within five miles of the project ESL (CDFW 2023a), there is suitable denning and resting habitat within BSA #1 and to a lesser extent the project ESL.

### *Ringtail*

Ringtail (*Bassariscus astutus*) is a CDFW fully protected species. Ringtail is a medium-size mammal in the raccoon family and can be found in a variety of habitat types such as deserts, shrublands, riparian woodlands, oak woodlands, and coniferous forests. This species typically dens in rock crevices, living and dead tree hollows, downed logs, brush piles, buildings, and other manmade structures. Ringtail are nocturnal carnivores that forage at night for a variety of prey, primarily small mammals, invertebrates, birds, and reptiles.

Focused surveys for ringtail were not conducted within the project ESL or BSAs. While ringtail occurrences are not reported in the CNDDDB, this species is fairly widespread throughout California and there is suitable denning and resting habitat present within the ESL and BSA #1.

### *Bat Species-Pallid Bat and Townsend's Big-eared Bat*

Two CDFW SSC bat species could potentially occur within BSA #1: pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*).

**Pallid bat** typically occurs at lower elevations throughout California in a variety of habitats, including grasslands, shrublands, and woodlands, and are most common in open, dry habitats with rocky areas for roosting. This species may roost alone, in small groups, or gregariously

in crevices in rocky outcrops and cliffs, caves, mines, tree hollows, exfoliating tree bark, and various human structures, such as bridges and buildings. Colonies form in early April, generally comprising 12 to 100 individuals. These colonies then disperse between August and October.

**Townsend's big-eared bat** is known to occur in mesic areas throughout California in coniferous forests, native prairies, riparian communities, active agricultural areas, and coastal areas. This species typically roosts in caves, tunnels, mines, buildings, and other cave-like spaces, including rock crevices and hollow trees. A relatively sedentary species, the bats hibernate near summer maternity roosts and are at their hibernacula from October to April. Townsend's big-eared bat are extremely sensitive to disturbance of roosting sites and a single visit may result in abandonment of the roost site.

Surveys for bats were not conducted within the project ESL or BSA #1. However, suitable roosting habitat for both species is present in the Redwood Forest and Woodland communities within the project ESL and BSA #1. While expected to roost primarily in well-developed wooded riparian areas, tree roosting bats may roost in tree foliage virtually anywhere in forest habitats. Large trees, crevices, space under sloughing bark on trees, and tree hollows within BSA #1 may provide suitable roosting habitat for pallid bat. Due to the lack of nearby caves, bridges, and other structures, the likelihood of Townsend's big-eared bat occurring in BSA #1 is low.

### **Sonoma Tree Vole**

The Sonoma tree vole (*Arborimus pomo*) (CDFW SSC), a species of rodent in the family Cricetidae, is found in Douglas-fir, redwood, and montane hardwood-conifer forest communities. These voles spend the majority of their time in the tree canopy where they nest and feed on fir needles. Male voles have been documented occasionally building nests at the base of trees beneath duff but are primarily arboreal in nature. Their home range is small, often only including one to several trees.

While focused surveys for Sonoma tree vole were not conducted within the project ESL or BSAs, the species could potentially occur within BSA #1. There are 3 CNDDDB occurrences of Sonoma tree vole within 5 miles of the project ESL. Suitable habitat for Sonoma tree vole is present in the Redwood Forest and Woodland communities within the project ESL.

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## **THREATENED AND ENDANGERED SPECIES**

### **Marbled Murrelet**

Marbled murrelet (MAMU) (*Brachyramphus marmoratus*) is a federally threatened and state endangered species. Marbled murrelet is a small, nearshore seabird species that nests on high platforms in mature conifers within 32 miles of the coasts of Washington, Oregon and Northern California. Suitable nest structures typically include large, mossy horizontal branches 4 to 25 inches in diameter and at least 33 feet high in the live crown of tree species including Douglas-fir, coast redwood, western hemlock, western red cedar, yellow cedar, mountain hemlock, and Sitka spruce. MAMU has been found nesting in small areas of suitable habitat even when surrounded by unsuitable habitat. In Northern California, the USFWS official nesting season is March 24 to September 15, with most MAMU fledged by August 5.

Critical habitat for MAMU has been designated. The project ESL and BSA #1 is entirely within USFWS-designated critical habitat for MAMU. The primary constituent elements of critical habitat for MAMU are individual trees with potential nesting platforms, forested areas within 0.5 mile of individual trees with potential nesting platforms, and a canopy height of at least one-half the site-potential tree height.

Protocol-level surveys for MAMU were not conducted within the project ESL or BSA #1 (auditory/visual). However, the presence of MAMU is well documented within BSA #1 and adjacent areas.

There is suitable MAMU nesting and foraging habitat present within BSA #1 in the Redwood Forest and Woodland communities

### **Northern Spotted Owl**

The northern spotted owl (NSO) (*Strix occidentalis caurina*) is federally and state threatened. It is a medium-sized owl that inhabits the forests of the Pacific Coast region from southwestern British Columbia to Marin County in California. In northern California, NSOs can be found in dense old-growth, multi-layered mixed conifer, redwood, and Douglas-fir forests, from sea level to 6,600 feet in elevation. Spotted owls are primarily nocturnal and normally spend their days perched in a protected roost. Foraging typically occurs in forested habitats near a permanent water source.

In northern California, NSO nest sites are often located on broken-top trees and cavities, although individuals will also use existing platforms such as abandoned raptor nests, squirrel nests, mistletoe brooms, and debris piles. Nest sites are frequently sited near streams and creeks and are typically located low to mid-slope rather than near ridge lines. NSOs have strong breeding site fidelity, producing one brood per season. In inland Douglas-fir habitats, the typical home range for NSO is 1.3 miles. Regionally, NSOs nest from approximately February 1 through July 31.

Protocol-level surveys for NSO were not conducted within the project ESL or BSA #1 (auditory/visual). However, the presence of NSO is documented approximately 1.5 miles east and 1.3 miles north of the project ESL.

There is marginal NSO nesting and foraging habitat present within BSA #1 in the Redwood Forest and Woodland communities. However, the documented presence of northern barred owl (*Strix varia*) in these areas likely precludes the presence of NSO within these areas (Personal comm. R. Litzky) as the northern barred owl is an aggressive species that displaces spotted owls, disrupts NSO nesting, and competes with NSO for food. There is no USFWS-designated critical habitat for NSO within the project ESL or BSAs.

### ***Chinook Salmon–California Coastal ESU***

The federally threatened Chinook salmon (*Oncorhynchus tshawytscha*)–California Coastal Evolutionarily Significant Unit (ESU) (pop. 17) is a population of Chinook salmon (also an anadromous species) that spawns in rivers and streams south of the Klamath River to the Russian River in Sonoma County. Chinook salmon can exhibit a variety of life history patterns in California’s variable environments, with migration to fresh water occurring at differing times for different spawning runs. The Chinook Salmon–California Coastal ESU (which occurs within BSA #2) consists entirely of fall-run, with adults entering fresh water between August and January and spawning within a few days or weeks (primarily between September and January) (Moyle et al., 2015). After hatching, the fry grow and slowly make their way downstream into deeper and faster waters. After rearing in fresh water anywhere from 3 months to a year, juvenile salmon (smolts) migrate to the ocean between April and July. Focused surveys for Chinook salmon–California Coastal ESU were not conducted within the ESL or BSAs. However, it is presumed that within BSA #2 Chinook salmon may occur year-round in Wilson Creek.

### ***Coho Salmon–Southern Oregon/Northern California Coast ESU***

The federal and state threatened coho salmon (*Oncorhynchus kisutch*)–Southern Oregon/Northern California Coast (SONCC) ESU (pop. 2) is a population of coho salmon (another anadromous fish species) that spawns in coastal streams between Cape Blanco, Oregon (Elk River), and Punta Gorda, California (Mattole River).

Coho salmon generally exhibit a 3-year life cycle. After hatching in freshwater streams, the juveniles spend up to 15 months rearing in the lower freshwater reaches before migrating to the ocean where they spend up to 18 months before returning to their nascent (i.e., where they were born) freshwater streams as adults to spawn. In California, the timing of upstream migration varies among tributaries, though it generally occurs from September through January with a peak in November and December, with spawning occurring mainly from November to January (primarily in tributary streams within a gradient of 3% or less) Fry emerge between March and July after 8–12 weeks of incubation, then develop into juveniles which generally rear in their natal streams for one year before returning to the ocean. Focused surveys for coho salmon–Southern Oregon/Northern California Coast ESU were not conducted within the ESL or BSAs. However, it is presumed that within BSA #2 coho salmon may occur year-round in Wilson Creek.

### ***Critical Habitat and Essential Fish Habitat***

NMFS-designated critical habitat for coho salmon–Southern Oregon/Northern California Coast ESU is also present within BSA #2 (Wilson Creek). However, critical habitat for Chinook salmon–California Coastal ESU is not present within the project ESL or BSAs. EFH for Chinook and coho salmon is present within BSA #2 (Wilson Creek); however, not within the project ESL.

### ***Pacific (Humboldt) Marten–Coastal DPS***

Pacific (Humboldt) marten (*Martes caurina humboldtensis*)–Coastal DPS, federal threatened and state endangered, is a small, carnivorous mammal also found in old-growth coast redwood and Douglas-fir forest with dense shrub understory. The species requires habitat with ample tree cavities, large snags and logs, and/or rock piles for denning, resting, foraging, and cover. The current range of Humboldt marten in California is a fraction of its former range and is now found in small areas of Del Norte County, northern Humboldt County, and adjacent western Siskiyou County.

Focused surveys for Pacific (Humboldt) marten were not conducted within the project ESL or BSAs. While the project ESL is outside the current known population distribution of Pacific (Humboldt) marten, suitable resting habitat may exist within the ESL and BSA #1.

### **Northwestern Pond Turtle**

Northwestern pond turtle (*Actinemys marmorata*), proposed federal threatened and state species of special concern, prefer creeks and ponds with quiet water, as well as streams with boulders or fallen trees that provide cover. The species is often associated with areas that provide basking habitat, such as aquatic vegetation and/or logs. They will also use adjacent terrestrial habitats for nesting, overwintering and dispersal. Focused surveys were not conducted for turtles.

While northwestern pond turtles are likely to be present in BSA #2 lower in the watershed in Wilson Creek, they are not likely to be present in BSA #1 closer to the project activities. The project area is far enough from high quality aquatic habitat that turtles are unlikely to be present in terrestrial habitats for breeding or overwintering.

### **Invertebrates: Monarch Butterfly, Oregon Silverspot Butterfly and Western Bumble Bee**

**The Monarch butterfly** – the California overwintering population of Monarch butterfly (*Danaus plexippus*) is an iconic species known for its striking orange and black wings and remarkable migratory patterns. It is a candidate for the federal endangered species list. In particular, the California overwintering population of Monarch butterflies is of significant ecological and cultural interest. This population, facing numerous challenges, has experienced alarming declines in recent decades, leading to its classification as endangered in some Californian regions. The main threats include habitat loss, climate change, pesticide exposure, and diseases.

Central to the life cycle of the Monarch butterfly is the milkweed plant (*Asclepias* spp.), upon which the butterfly lays its eggs and the caterpillars feed. Beginning in the spring, adult Monarchs mate and lay eggs on milkweed plants. Once hatched, the caterpillars undergo multiple molting stages, eventually forming a chrysalis from which they emerge as butterflies. By late fall, driven by environmental cues, the new generation of Monarchs embark on a southward migration to specific overwintering sites, primarily along the California coast. These sites provide them with the necessary microclimates to survive the winter, sheltered from extreme weather and predators.



No species-specific surveys were conducted for Monarch butterfly. No Monarch butterfly were observed within the BSA. No suitable overwintering habitat is present within the project ESL or BSAs. There was no milkweed present during the botanical surveys which is necessary for overwintering.

**The Oregon silverspot butterfly** (*Speyeria zerene hippolyta*) is a distinctive butterfly species native to the coastal regions of Oregon and some parts of the Pacific Northwest. The Oregon silverspot is federally threatened.

The Oregon silverspot butterfly has a unique association with the early blue violet (*Viola adunca*) plant, which serves as the primary host plant for its caterpillars. Adult butterflies emerge in the summer and immediately search for nectar sources, such as goldenrod and seaside daisies, to feed on. After mating, females lay their eggs in the proximity of violet plants. Upon hatching, the caterpillars feed voraciously on violet leaves, undergoing multiple stages before forming a chrysalis and eventually emerging as adults.

No species-specific surveys were conducted for Oregon silverspot butterfly. No Oregon silverspot butterfly were observed within the BSA. No host plant habitat is present within the project ESL or BSAs.

**The Western bumble bee** (*Bombus occidentalis*), a candidate for state endangered listing status, is a bumble bee native to the Western United States and Canada. It is considered critically imperiled in the state because of extreme rarity (often five or fewer populations) or because of factors such as very steep population declines that make the species especially vulnerable to elimination from the state.

This bumble bee is associated with several plant genera including *Melilotus*, *Cirsium*, *Lupinus*, *Trifolium*, *Centaurea*, and *Eriogonum*. Queens of this bumble bee species emerge from hibernation in late January and select a nest site in an existing hole in the ground, such as an abandoned rodent hole. The queen gathers pollen and nectar and stores them in wax containers. She lays 8 to 16 eggs that hatch into larvae and tends to them until they spin cocoons, pupate, and emerge as workers. Once they emerge, the queen stops foraging and devotes her time to egg laying. The first workers appear in early March and the drones and a new queen emerge by the end of April. The colony dissolves in late October when the old queen, workers, and drones die. A new queen mates and digs a hole where she hibernates through the winter.



No species-specific surveys were conducted for bumble bee species. No Western bumble bees or their nests were observed within the BSA. The project location is outside of the species current range and is not expected to be found within the ESL or BSA.

### ***INVASIVE SPECIES***

Roads, highways, and related construction projects are some of the principal dispersal pathways for invasive plant species. The introduction and spread of invasive plants adversely affect native plant communities by displacing native plant species that provide shelter and forage for wildlife species. Plants identified within the project ESL as federal noxious weeds by the United States Department of Agriculture, state noxious weed species designated by the California Department of Food and Agriculture, and invasive plants identified by California Invasive Plant Council are noted in Appendix C.

## **Discussion of CEQA Environmental Checklist Question 2.4a)—Biological Resources**

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

### **Plant Species**

The project ESL lacks suitable habitat for sand dune phacelia (federal proposed threatened) and western lily (federally endangered and state endangered). Neither species were observed within the project ESL during field studies. Therefore, the sand dune phacelia and western lily are not expected to occur within the ESL or be impacted by the project.

Per FESA, Caltrans has determined the proposed project would have *no effect* on sand dune phacelia or western lily.

Per CESA, Caltrans has determined the project would not result in “*take*” of western lily.

The project is anticipated to have “*no impact*” on special status plant species. No mitigation is required.

### **Animal Species**

#### **Amphibians**

Project-related activities could directly affect special status amphibians if present within the project ESL. The following amphibian Species of Special Concern are present within the ESL: Foothill yellow-legged frog–North Coast clade, northern red-legged frog, Pacific tailed frog, and southern torrent salamander. Potential direct effects include injury and mortality of individuals due to crushing from construction equipment and vehicle traffic. However, due to higher quality dispersal habitat existing outside of the project ESL, impacts to individuals within the project ESL would be less than significant.

With implementation of the Standard Measures and BMPs identified in Section 1.4, the proposed project would have minimal impact on Foothill yellow-legged frog, northern red-legged frog, Pacific tailed frog, and southern torrent salamander. No additional species-

specific avoidance and minimization measures would be implemented. The project is anticipated to have a “*less than significant impact*” on amphibians. No mitigation is required.

### *Migratory and Non-migratory Bird Species*

Minor vegetation removal is proposed, including annual grasses and forbs immediately adjacent to the highway and a single coast redwood tree snag. The project could potentially affect nesting migratory birds during ground-disturbing activities and vegetation removal, either through direct injury or mortality or by disrupting normal behaviors (such as nesting).

Though there is a low likelihood that project-related impacts to nesting birds would occur, the temporary nature of the project and implementation of the Standard Measures and BMPs outlined in Section 1.4 (including conducting a pre-construction nesting bird survey and avoiding vegetation removal during the nesting season) would minimize and avoid impacts to nesting birds.

If vegetation removal is necessary during the nesting season, a pre-construction nesting bird survey would be required to minimize and avoid impacts to nesting birds.

The project would have a “*less than significant impact*” to migratory and non-migratory bird species. No mitigation is required.

### *Coastal Cutthroat Trout*

Suitable habitat for the coastal cutthroat trout is not present within the project ESL; however, is present within BSA #2. The intermittent streams which intersect the ESL and connect with Wilson Creek over 1 mile downslope of the project have average gradients over 20%. These streams flow intermittently, ephemerally, sub-surface and would not be contiguous. Due to these topographic and hydrologic constraints to fish movement, the streams that intersect the ESL are likely inaccessible to fish and do not provide suitable habitat for coastal cutthroat trout.

Project activities would not occur within any suitable habitat for any of the special status fish species and, as such, would not impact any of those species. Additionally, due to the distance of Wilson Creek from the project area and steep gradient, seasonal nature of the streams within the project footprint, and with implementation of the Standard Measures and BMPs identified in Section 1.4, indirect impacts to any special status fish species or their habitat are also not anticipated.

The Standard Measures and BMPs outlined in Section 1.4 would be implemented to minimize potential indirect impacts to water quality. These include implementation of standard erosion and sediment control measures, pollution prevention measures, and stormwater treatment measures.

As a state Species of Special Concern, there would be “*no impact*” to coastal cutthroat trout. No mitigation is required.

### ***Steelhead–Klamath Mountains Province DPS***

While suitable habitat for special status fish is present within BSA #2, suitable habitat is not present within the project ESL. The intermittent streams which intersect the ESL and connect with Wilson Creek over 1 mile downslope of the project have average gradients over 20%. These streams flow intermittently, ephemerally, sub-surface and would not be contiguous. Therefore, the streams that intersect the ESL are likely inaccessible to fish and do not provide suitable habitat for these species.

As a state Species of Special Concern, there would be “*no impact*” to Steelhead – Klamath Mountains Province DPS. No mitigation is required.

### ***Pacific Fisher and Ringtail***

Due to the similar habitat requirements, behaviors, and life histories, these species are combined into one impact assessment. Marginal foraging and dispersal habitat for Pacific fisher and ringtail exists within the project ESL and BSA #1. The scope of work would not affect foraging and dispersal habitat because the changes to the road footprint are minor. Furthermore, the traffic and noise associated with U.S. 101 likely preclude these species from using these areas consistently.

For those individuals that may be present within the project ESL, potential project-related impacts would be restricted to temporary displacement due to construction noise. However, due to the mobility of these species and availability of higher quality habitat within the project vicinity, project impacts to these species are unlikely.

It is anticipated the project would have “*no impact*” on Pacific fisher or ringtail. Mitigation is not required.

### *Bat Species*

Project activities, including vegetation removal and noise from construction, have the potential to negatively impact individual bats, potentially resulting in roost abandonment. No known maternity roosts or other colonial night roosts would be removed or altered during project activities. A pre-construction nesting survey is required if vegetation removal takes place during the maternity season, to ensure that there are no impacts on any potentially unidentified maternity roosts. Impacts to bat species are not anticipated given the lack of observation during field reviews, specific vegetation to be removed, seasonal timing, and scope of work. As the project would not have a substantial impact to bat species populations or impact nursery sites, and with implementation of the Standard Measures and BMPs outlined in Section 1.4, impacts to special status bat species are not anticipated. The project is anticipated to have “no impact” on bats. No mitigation is required.

### *Sonoma Tree Vole*

Suitable Sonoma tree vole habitat is not present where project-related vegetation removal and ground disturbing activities would occur; therefore, project-related impacts to the species are not expected. The project is anticipated to have “no impact” on Sonoma tree vole. No mitigation is required.

## **Threatened and Endangered Species**

### *Marbled Murrelet and Northern Spotted Owl*

The project has the potential to impact MAMU and NSO due to noise-related harassment of nesting individuals. Visual disturbance to MAMU and NSO nests is not anticipated as no activities are expected to occur within a visual line-of-sight of 328 feet (100 meters) from any known nest locations. Daytime ambient noise levels within the ESL along U.S. 101 are estimated as *High* (81-90 decibels [dB]). Sound levels for equipment typically used for proposed project activities are estimated as *Moderate* (71-80 dB) to *Very High* (91-100 dB) (Table 3). Any construction noise that exceeds 90 dB (which may include work activities such as jackhammering and pile driving) could result in disturbance or harassment of MAMU and/or NSO individuals. The Standard Measures and BMPs described in Section 1.4 would limit sound disturbance and provide temporary work windows that avoid nesting which would minimize impacts to NSO and MAMU.

**Table 3. Relative Sound Level of Anticipated Equipment To Be Used**

| Measured Sound Source     | “Standardized” Value<br>dB at 50 ft | Relative Sound Level |
|---------------------------|-------------------------------------|----------------------|
| Pickup Truck (driving)    | 71                                  | Moderate             |
| Dump Truck                | 85                                  | High                 |
| Excavator                 | 81                                  | High                 |
| Backhoe (high end)        | 84                                  | High                 |
| Sweeper                   | 80                                  | Moderate             |
| Asphalt paver             | 77                                  | Moderate             |
| Roller (high end)         | 80                                  | Moderate             |
| Jackhammer                | 89                                  | High                 |
| Compactor (high end)      | 82                                  | High                 |
| Air compressor            | 80                                  | Moderate             |
| Concrete mixer (high end) | 85                                  | High                 |
| Pavement Scarifier        | 90                                  | High                 |
| Pile Driver               | 95                                  | Very High            |

Minor vegetation control would include the removal of one coast redwood snag which occurs immediately adjacent to the existing highway, but still within critical habitat for MAMU. The removal of one snag, which does not provide suitable nesting habitat for MAMU, would not significantly impact MAMU critical habitat.

Under FESA, the proposed project *may affect, but is not likely to adversely affect* MAMU. The Programmatic Letter of Concurrence (PLOC) issued by the USFWS (USFWS 2022) would be used to avoid potential effects of the project on MAMU. The project would have no adverse effect to MAMU critical habitat.

Under FESA, the proposed project *may affect, but is not likely to adversely affect* NSO. The PLOC issued by the USFWS would be used for potential effects of the project on NSO.

Under CESA, the project would not result in “*take*” of MAMU or NSO.

Standard protection measures for MAMU and NSO (Section 1.4) would be implemented to avoid and minimize impacts to these species.

As this project is anticipated to have a “*less than significant impact*” to MAMU and NSO, no mitigation is required.

### *Chinook Salmon and Coho Salmon*

The Chinook salmon–California Coastal ESU (pop. 17) is federally threatened and the coho salmon–Southern Oregon/Northern California Coast ESU (pop. 2) is federally and state threatened. These species’ populations are categorized into Evolutionarily Significant Units (ESU) or Distinct Population Segments (DPS). Both ESU and DPS classifications are used to identify specific subsets of species populations that are unique and significant for conservation purposes. In subsequent discussions in this document, the specific units (ESU/DPS) evaluated here will be referred to by their species name for brevity.

Suitable habitat for Chinook salmon and coho salmon is not present within the project ESL; however, is present within BSA #2. The intermittent streams which intersect the ESL and connect with Wilson Creek over 1 mile downslope of the project have average gradients over 20%. These streams flow intermittently, ephemeral, sub-surface and would not be contiguous. Due to these topographic and hydrologic constraints to fish movement, the streams that intersect the ESL are likely inaccessible to fish and do not provide suitable habitat for fish.

Project activities would not occur within any suitable habitat for any of the special status fish species described above and, as such, would not impact any of those species. Additionally, due to the distance of Wilson Creek from the project area and the steep gradient, seasonal nature of the streams within the project footprint, and with implementation of the Standard Measures and BMPs identified in Section 1.4, indirect impacts to any special status fish species or their habitat are also not anticipated.

The Standard Measures and BMPs outlined in Section 1.4 would be implemented to minimize potential indirect impacts to water quality. These include implementation of standard erosion and sediment control measures, pollution prevention measures, and stormwater treatment measures.

Under FESA, the project would have *no effect* on Chinook salmon–California Coastal ESU, coho salmon–SONCC ESU, or their critical habitat.

Under CESA, the proposed project would not result in “*take*” of coho salmon–SONCC ESU or their critical habitat.

The Standard Measures and BMPs outlined in Section 1.4 would be implemented to minimize potential impacts to water quality. These include implementation of standard erosion and sediment control measures, pollution prevention measures, and stormwater treatment measures.

As there would be “*no impacts*” to Chinook salmon and coho salmon, no mitigation is required.

### ***Pacific (Humboldt) Marten–Coastal DPS***

The Pacific (Humboldt) marten–Coastal DPS is federal threatened and state endangered. Marginal foraging and dispersal habitat for Pacific (Humboldt) marten exists within the ESL and BSA #1. Traffic and noise associated with the highway likely preclude martens from using the area consistently. The project is outside the current known population distribution of Pacific (Humboldt) marten–Coastal DPS. For these reasons the Pacific (Humboldt) marten is unlikely to be present within the project ESL; therefore, project-related impacts to the species is unlikely.

If individuals are present in the ESL during construction, potential project-related impacts would be restricted to temporary displacement due to construction noise. However, due to the mobility of these species and availability of higher quality habitat nearby, project impacts to these species are unlikely.

Under FESA, the project ***may affect, but is not likely to adversely affect*** Pacific (Humboldt) marten–Coastal DPS. The PLOC issued by the USFWS will be used for potential effects of the project on Pacific (Humboldt) marten–Coastal DPS.

Under CESA, the project would not result in “***take***” of Pacific (Humboldt) marten–Coastal DPS.

The project would have a “*less than significant*” impact to Pacific marten. No mitigation is required.



### ***Northwestern Pond Turtle***

The northwestern pond turtle is proposed for listing as federally threatened. It is unlikely to be present in BSA #1 as it is too far from potential high quality aquatic habitats further downstream closer to Wilson Creek. The project will not have any impacts downstream in BSA #2 that could affect turtles.

Under FESA the project would have “no effect” on northwestern pond turtle.

The project would have “no impact” to northwestern pond turtle and no mitigation is required.

### ***Invertebrates***

The Monarch butterfly–California overwintering population, Oregon silverspot butterfly, and the Western bumble bee do not have any suitable habitat within the project ESL or BSAs.

Caltrans anticipates this project would have “no impacts” on invertebrates. No mitigation is required.

Regarding Environmental Checklist Question 2.4a, Caltrans anticipates the project would have a *less than significant impact* to special status animal species and no mitigation is required.

### ***Discussion of CEQA Environmental Checklist Question 2.4b)—Biological Resources***

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

### ***Sensitive Natural Communities***

Approximately 4 acres of Redwood Forest and Woodland, an S3 ranked SNC, occurs within the project ESL. Minor vegetation removal is proposed, including the removal of annual grasses and forbs from areas immediately adjacent to the highway in preparation for earthwork and the installation of new guardrail, and the removal of one coast redwood snag during the installation of new guardrail. The disturbance of existing vegetation increases the potential to introduce and/or spread invasive non-native plants into the SNC.

No tree removal is proposed; however, construction activities could impact the health of adjacent trees due to potential damage to root systems. The most critical roots for tree health are the structural root zone (SRZ). The SRZ is a circular area with the tree trunk at the center and a radius equal to three times the tree Diameter at Breast Height (DBH) (Smiley et al., 2002). The SRZ represents the area where roots can be found that are responsible for keeping the tree upright. Damage to roots in this root zone could affect the structural integrity of the tree, increasing the likelihood of potential tree failure.

Mature redwood trees have been shown to overcome the loss of a large portion of its root system by rapidly regenerating a new root system without noticeable reduction in tree vigor. It has been documented that no significant loss of tree vigor has been observed in redwoods bordering highways, and paving does not have a significant effect on tree health as long as it covers less than half of the root zone (Sturgeon 1964).

The area of root zones affected by this project are anticipated to be below the threshold that would require loss of any trees (Caltrans 2023g). The amount of disturbance tolerated by the tree varies by tree species, size, age, tree health, tree crown position, and soil type, among other variables, and were evaluated by an arborist. The certified arborist that evaluated the trees proposed to be impacted by the project noted that one tree appears to be in decline and should be monitored post-construction.

The project scope includes invasive species control measures to minimize this potential to impact the adjacent SNC. Due to the limited (negligible) amount of vegetation to be removed coupled with measures to minimize impacts from invasive species encroachment into the SNC, Caltrans anticipates the project will have a *less than significant impact* on the SNC. No mitigation is required.

### ***Riparian Habitat***

Following site surveys, jurisdictional aquatic resources were identified and mapped within the project ESL. The aquatic resources mapped are summarized below.

Four intermittent streams were identified and mapped within the project ESL, all of which run perpendicular under the highway via existing drainage systems. Intermittent streams typically only flow for part of the year, generally during the wet season, and dry up over the summer months. Groundwater is the primary source of water for stream flow, with precipitation providing a supplemental source. All intermittent streams within the project ESL are potential Waters of the United States (WOTUS) and Waters of the State.

One ephemeral stream was identified and mapped within the project ESL. Ephemeral streams flow only for short durations in response to precipitation, which is the only source of stream flow. The one ephemeral stream within the project ESL is a potential WOTUS and Waters of the State.

Proposed drainage improvements only include modifications to roadside stormwater facilities and would not occur within jurisdictional waterways.

There is no riparian habitat within the ESL; therefore, “*no impacts*” to riparian habitat are anticipated. No mitigation is required.

### *Invasive Species*

Invasive species may be introduced to new areas or spread through the work sites by the tires and tracks of construction equipment. They may also recruit naturally and robustly, outcompeting native species, following soil disturbance. Bull thistle, ripgut grass, and poison hemlock were observed within the project limits.

To reduce the spread of invasive species, Caltrans endeavors to eradicate newly introduced invasive species ranked as having high ecological impact by the California Invasive Plant Council (Cal-IPC). Caltrans Standard Measures and Best Management Practices would be implemented to minimize the colonization of invasive species that could adversely impact natural communities (Section 1.4). Such measures include the inspection and cleaning of construction equipment to remove invasive species and/or pathogens during construction, seeding disturbed areas with native herbaceous species post-construction, and applying weed-free mulch.

Given the above, the project is anticipated to have a *less than significant impact* to invasive species proliferation. No mitigation is required.

### ***Discussion of CEQA Environmental Checklist Question 2.4c)—Biological Resources***

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

There are no wetlands within the project ESL; therefore, “*no impacts*” to wetlands are anticipated. No mitigation is required.

### **Discussion of CEQA Environmental Checklist Question 2.4d)—Biological Resources**

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

#### ***Migratory Wildlife Corridors/Fish Passage***

The BSAs are within an area that is not considered an area of known importance for connectivity. There are no waters within the project ESL suitable for fish passage; therefore, “no impacts” are anticipated. No mitigation is required.

### **Discussion of CEQA Environmental Checklist Question 2.4e)—Biological Resources**

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

Based on the scope, description, and location of the proposed project, the project would not conflict with local policies or ordinances protecting biological resources. Therefore, “no impacts” are anticipated. No mitigation is required.

### **Discussion of CEQA Environmental Checklist Question 2.4f)—Biological Resources**

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

Based on the scope, description, and location of the proposed project, the project would not conflict with an approved local, regional, or state habitat conservation plan. Therefore, “no impacts” are anticipated. No mitigation is required.

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this project.

## 2.5 Cultural Resources

| Would the project:  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?      |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>c) Disturb any human remains, including those interred outside of dedicated cemeteries?                        |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Archaeological Survey Report* (Caltrans 2023c), *Historic Property Survey Report* (Caltrans 2023d), and consultation with the Native American Heritage Commission and local tribes.

Efforts to locate cultural resources resulted in the conclusion that there are no cultural resources within the Area of Direct Impact. Based on the findings of the archaeological survey, it has been determined that *No Historic Properties Will Be Affected* as a result of this proposed undertaking. Consultation with Native American tribes will continue throughout the life of this project in order to manage concerns and address work within/adjacent to Reservation lands.

If previously unidentified cultural materials are unearthed during construction, it is Caltrans policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. *An additional archaeological survey would be required if the scope of the project changes to include areas not previously surveyed.*

Standard measures CR-1 and CR-2 in Section 1.4 would protect cultural resources should they be discovered during construction activities.

Caltrans anticipates the project would have “*no impact*” on cultural resources. No mitigation is required.

## 2.6 Energy

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?</p> |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</p>  |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality, GHG, and Energy Analyses Memorandum* (Caltrans 2023a) and *Air Quality Update Memorandum* (Caltrans 2023b). The project would not increase capacity or provide congestion relief when compared to the No-Build Alternative; therefore, potential impacts to direct energy (mobile sources) are not anticipated. The project does not include maintenance activities which would result in long-term indirect energy consumption by equipment required to operate and maintain the roadway; thus, is unlikely to increase indirect energy consumption through increased fuel usage. Potential impacts to indirect energy (construction) are therefore not anticipated.

Project construction would primarily consume diesel and gasoline through operation of construction equipment, material deliveries, and debris hauling. Energy use associated with project construction is estimated to result in the short-term consumption of diesel and gasoline powered equipment, which represents a small and temporary demand on local and regional fuel supplies. This temporary demand for fuel would have no noticeable effect on peak or baseline demands for energy. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. This project would have no effect on any plans for renewable energy or energy efficiency.

Caltrans anticipates the project would have “no impact” on energy. No mitigation is required.



## 2.7 Geology and Soils

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b></p> <p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p style="padding-left: 20px;">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.</p> |                                    |  |                              | ✓         |
| <p>ii) Strong seismic ground shaking?</p>  |                                    |  |                              | ✓         |
| <p>iii) Seismic-related ground failure, including liquefaction?</p>  |                                    |  |                              | ✓         |
| <p>iv) Landslides?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b></p> <p>b) Result in substantial soil erosion or the loss of topsoil?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b></p> <p>c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b></p> <p>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?</p>   |                                    |  |                              | ✓         |

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>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?</p> |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</p>  |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the California Geological Survey (CGS) Regulatory Maps. There is no landslide activity mapped throughout the project area. Project locations are not within or adjacent to Earthquake Fault Hazard Zones. Potential impacts to paleontological resources are not anticipated because the project work primarily would occur within previously disturbed materials (constructed roadway) and largely be constructed using fill material, thus minimizing the likelihood of impacting intact or undisturbed paleontological resources or geologic features.

The project anticipates using approximately 2,500 cubic yards of imported fill material to raise the road elevation. This material would be placed primarily within the existing footprint of the road. Erosion management practices outlined in Section 1.4 would be used to prevent any soil erosion or loss of topsoil.

The project would have minor fill excavation associated with guardrail installation and curve realignment. The excavation of fill would be managed using the Standard Measures and Best Management Practices discussed in Section 1.4 to ensure no soil erosion occurs.

Caltrans anticipates the project would have “no impact” on geology and soils. No mitigation is required.

## 2.8 Greenhouse Gas Emissions

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      |                                    |  | ✓                            |           |
| <b>Would the project:</b><br>b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? |                                    |  | ✓                            |           |

### *Climate Change*

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), and various hydrofluorocarbons (HFCs). CO<sub>2</sub> is the most abundant GHG. While it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO<sub>2</sub> that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO<sub>2</sub>.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

### ***Regulatory Setting***

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), please refer to Caltrans’ Standard Environmental Reference (SER), Chapter 16, Climate Change. This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

### **FEDERAL**

To date, no nationwide numeric mobile-source GHG reduction targets have been established, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In January 2023, the White House Council on Environmental Quality (CEQ) issued updated and expanded interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (88 Fed. Reg. 1196) (CEQ NEPA GHG Guidance), in accordance with EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 86 FR 70935 (December 13, 2021) and EO 14008, *Tackling the Climate Crisis at Home and Abroad*. The CEQ guidance does not establish numeric thresholds of significance, but emphasizes quantifying reasonably foreseeable lifetime direct and indirect emissions whenever possible. This guidance also emphasizes resilience and environmental justice in project-level climate change and GHG analyses.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level rise, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— “the triple bottom line of sustainability” (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation’s National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFE) standards for on-road motor vehicles sold in the United States. The U.S. Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation’s energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

## **STATE**

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs).

In 2005, EO S-3-05 initially set a goal to reduce California’s GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (CARB) was directed to create a climate change scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b).

In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

### ***Environmental Setting***

The proposed project is in a rural area, with a primarily natural-resources-based and tourism economy centered on the Redwood National and State Parks, a UNESCO World Heritage Site. U.S. 101, a designated scenic highway also known as the “Redwood Highway,” is the only transportation route to and through the area for both passenger and commercial vehicles. It is also part of the Pacific Coast Bike Route.

Other than U.S. 101 and associated features, the project limits are uninhabited and largely undeveloped, with no residences or other facilities present within the project limits. The route is rarely congested, but there can be seasonal fluctuations, mainly increasing during the summer months. The only alternate route would require a 449-mile, 8-hour detour between Klamath and Crescent City.

The Del Norte Local Transportation Commission (DNLTC) guides transportation development in the project region. Neither the Del Norte County General Plan nor the North Coast Unified Air Quality Management District (NCUAQMD) have established thresholds or guidance for transportation GHG emissions (Del Norte County 2003; NCUAQMD 2015).

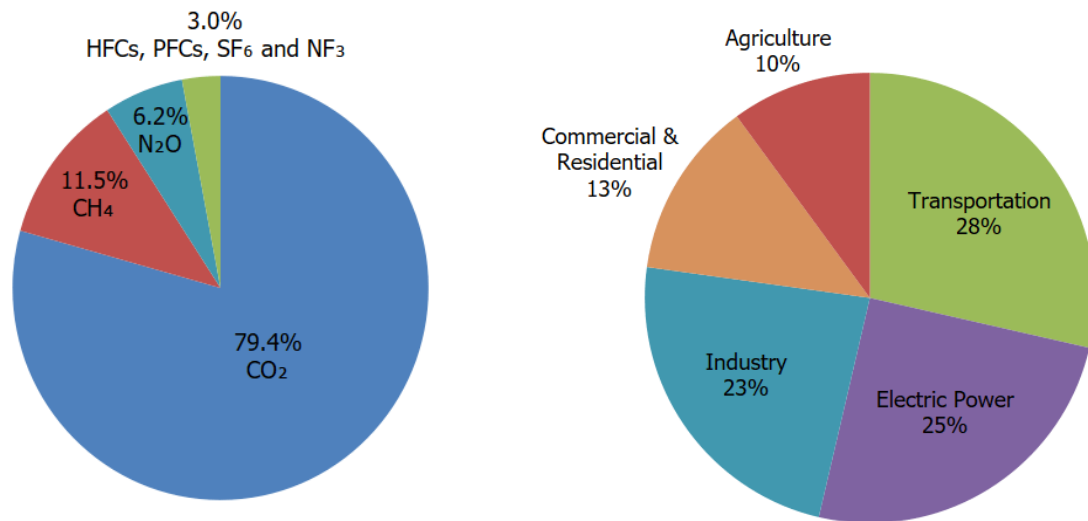
### ***GHG INVENTORIES***

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

**NATIONAL GHG INVENTORY**

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2021 were 5,586.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 12% of total U.S. emissions in 2021 [U.S. EPA 2023a].) While total GHG emissions in 2021 were 17% below 2005 levels, they increased by 6% over 2020 levels. Of these, 79.4% were CO<sub>2</sub>, 11.5% were CH<sub>4</sub>, and 6.2% were N<sub>2</sub>O; the balance consisted of fluorinated gases. From 1990 to 2021, CO<sub>2</sub> emissions decreased by only 2% (U.S. EPA 2023a).

The transportation sector’s share of total GHG emissions increased to 28% in 2021 and remains the largest contributing sector (Figure 5). Transportation fossil fuel combustion accounted for 92% of all CO<sub>2</sub> emissions in 2021. This is an increase of 7% over 2020, largely due to the rebound in economic activity following the COVID-19 pandemic (U.S. EPA 2023a, 2023b).

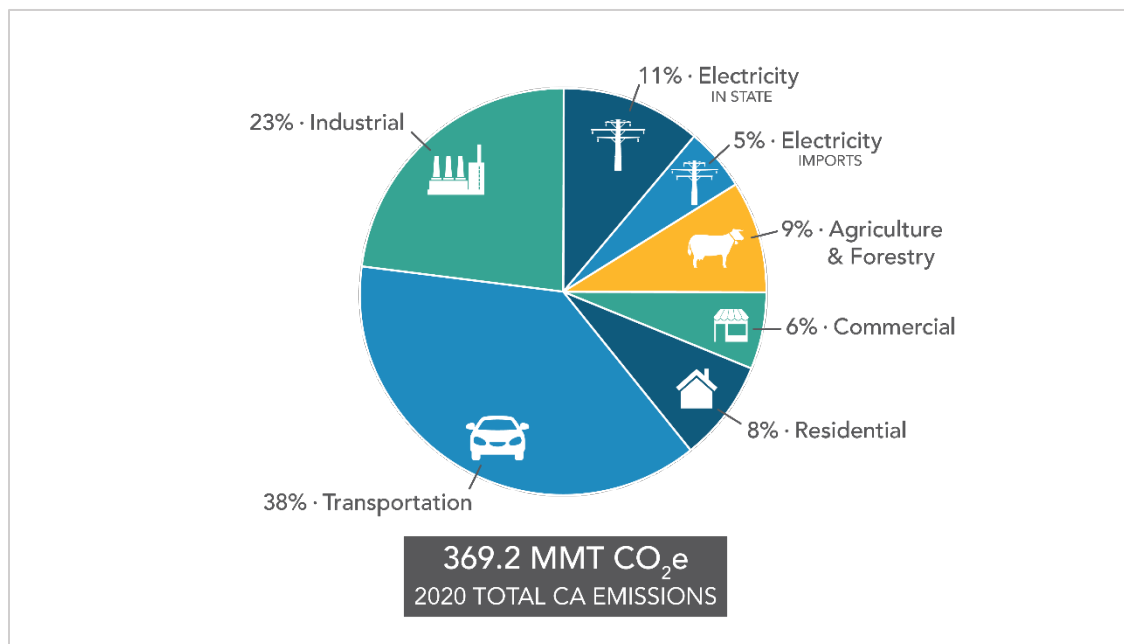


**Figure 5. U.S. 2021 Greenhouse Gas Emissions**

(Source: U.S. EPA 2023b)

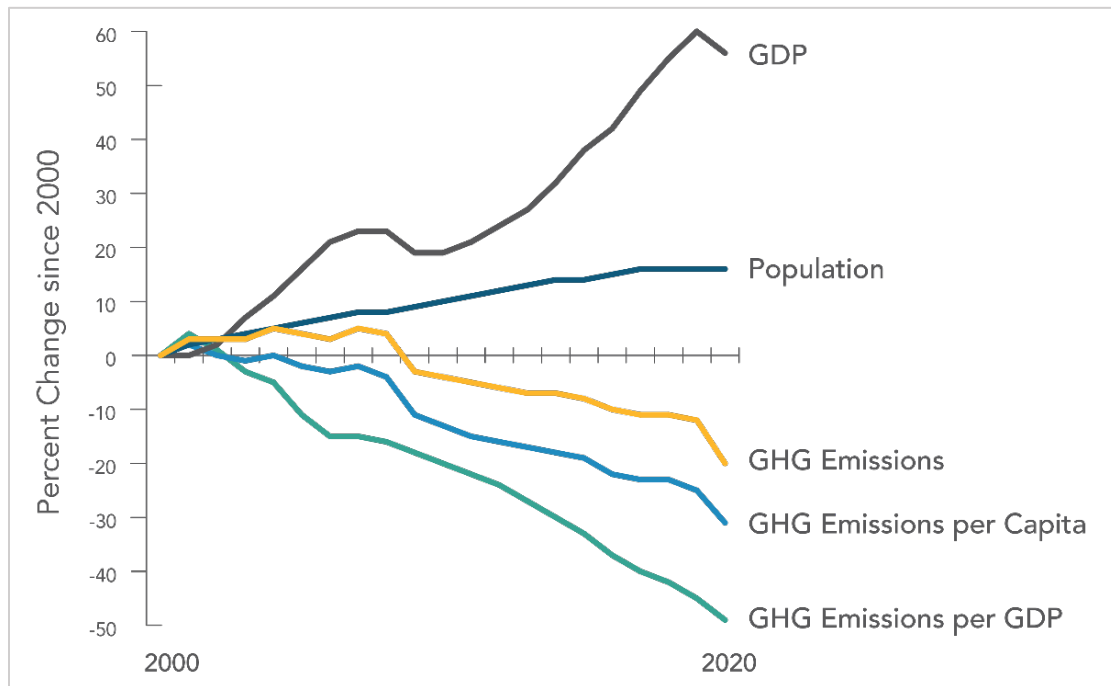
## STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial and residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2020 despite growth in population and state economic output (Figures 5 and 6) (CARB 2022a).



**Figure 6. California 2020 Greenhouse Gas Emissions by Economic Sector**  
(Source: CARB 2022a)





**Figure 7. Change in California Gross Domestic Product (GDP), Population, and GHG Emissions since 2000**

(Source: CARB 2022a)

AB 32 required the CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan, and the subsequent updates, contain the main strategies California will use to reduce GHG emissions. The CARB adopted the first scoping plan in 2008 (CARB 2008). The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality*, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (CARB 2022b).

## **REGIONAL PLANS**

As required by *The Sustainable Communities and Climate Protection Act of 2008*, the CARB sets regional GHG reduction targets for California's 18 Metropolitan Planning Organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project area is not within the jurisdiction of an MPO and therefore not subject to CARB GHG reduction targets. However, the DNLTC is the Regional Transportation Planning Agency (RTPA) for the project area. The 2020 Del Norte County Regional Transportation Plan (RTP) commits to county actions that will help Del Norte County proportionally contribute to statewide GHG reduction goals. RTP goals, objectives, and policies aimed at addressing climate change and reducing GHG emissions include the following objectives:

- Reduce or maintain GHG emissions from transportation-related sources in the Del Norte region”.
- Emphasize transportation investments in areas where desired land uses, as indicated in the City or County General Plan, may result in vehicle miles traveled (VMT) reduction or other lower impact use.
- Recognize the rural contribution towards GHG reduction for counties that have policies that support development within their cities and protect agricultural and resource lands.
- Consider transportation projects that increase connectivity or provide other means to reduce VMT (DNLTC).

Neither Del Norte County nor the NCUAQMD currently have climate change or GHG reduction plans.

### ***Project Analysis***

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs. CO<sub>2</sub> emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH<sub>4</sub> and N<sub>2</sub>O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector.

(GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO<sub>2</sub> is the most important GHG, so amounts of other gases are expressed relative to CO<sub>2</sub>, using a metric called “carbon dioxide equivalent”, or CO<sub>2</sub>e. The global warming potential of CO<sub>2</sub> is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO<sub>2</sub>.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

### ***Operational Emissions***

The purpose of the proposed project is to improve safety along an existing stretch of U.S. 101 and would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on U.S. 101, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

### ***Construction Emissions***

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the

atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved Transportation Management Plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction is expected to last approximately 110 working days. The proposed project would result in generation of short-term, construction related GHG emissions. Construction GHG emissions consist of emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays and detours due to construction. These emissions would be generated at different levels throughout the construction phase. The Caltrans Construction Emissions Tool (CAL-CET) 2021 v1.0.2 was used to estimate average carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), Black Carbon (BC), and hydrofluorocarbon-134a (HFC-134a) emissions from construction activities. The total CO<sub>2</sub>e produced during construction is estimated to be 181 US tons.

**Table 4. CAL-CET Estimates of GHG Emissions During Construction**

| Construction Year | CO <sub>2</sub> | CH <sub>4</sub> | N <sub>2</sub> O | BC          | HFC-134a    | CO <sub>2</sub> e |
|-------------------|-----------------|-----------------|------------------|-------------|-------------|-------------------|
| 2025              | 129             | .003            | .006             | .007        | .004        | 139               |
| 2026              | 38              | .001            | .003             | .001        | .002        | 42                |
| <b>Total</b>      | <b>167</b>      | <b>.004</b>     | <b>.009</b>      | <b>.008</b> | <b>.005</b> | <b>181</b>        |

\* A quantity of GHG is expressed as carbon dioxide equivalent (CO<sub>2</sub>e) that can be estimated by the sum after multiplying each amount of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs by its global warming potential (GWP). Each GWP of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs is 1, 25, 298, and 14,800, respectively.

Use of long-life pavement, improved Transportation Management Plans, and changes in materials can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7 1.02C, Emissions Reduction, require contractors comply with all laws applicable to the project and to certify they are aware of and will comply with all CARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors 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 GHG emissions.

### ***CEQA Conclusion***

While the proposed project would result in short-term construction-related GHG emissions, it is anticipated the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

### ***Greenhouse Gas Reduction Strategies***

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (CARB 2022c).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research (OPR) identified five sustainability pillars in a 2015 report:

- 1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030
- 2) Reducing petroleum use by up to 50 percent by 2030
- 3) Increasing the energy efficiency of existing buildings by 50 percent by 2030
- 4) Reducing emissions of short-lived climate pollutants; and
- 5) Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (California Governor's OPR 2015).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022).

### **CALTRANS ACTIVITIES**

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016) set an interim target to cut GHG emissions to 40% below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

#### ***Climate Action Plan For Transportation Infrastructure***

The *California Action Plan for Transportation Infrastructure* (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40% of all polluting emissions, to reach the state's climate goals.

Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

### ***California Transportation Plan***

The *California Transportation Plan* (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

### ***Caltrans Strategic Plan***

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

### ***Caltrans Policy Directives And Other Initiates***

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director's policies promote energy efficiency, conservation, and climate change, and commit Caltrans to sustainability practices in all planning, maintenance, and operations. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions and current Caltrans procedures and activities that track and reduce GHG emissions. It identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Caltrans and State goals.

### ***Project-Level Greenhouse Gas Reduction Strategies***

The following measures would also be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project.

- Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.
- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.
- Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resources Board (CARB).
- Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel time.
- All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO<sub>2</sub>. This replanting would help offset any potential CO<sub>2</sub> emissions increase.
- Pedestrian and bicycle access will be maintained on U.S. Highway 101.
- Where feasible, the removal of established trees and vegetation would be minimized.
- If necessary, environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) and/or flagging installed before start of construction to demarcate areas that will be protected. Such areas can include, but are not limited to, wetlands and vegetation, including trees and their root systems.
- If previously vegetated, temporary access roads, construction easements, and staging areas would be restored to a natural contour and revegetated with regionally appropriate native vegetation.



- For improved fuel efficiency from construction equipment:
  - Maintain equipment in proper tune and working condition.
  - Use right sized equipment for the job.
  - Use equipment with new technologies.
- Earthwork Balance: Reduce the need for transport of earthen materials by balancing cut and fill quantities.
- Maximize use of recycled materials (e.g., tire rubber), as feasible.
- Where feasible, salvage large, removed trees for lumber or similar on-site beneficial uses other than standard wood-chipping (e.g., use in roadside landscape projects or green infrastructure components).
- Use recycled water or reduce consumption of potable water for construction.

### ***Adaptation Strategies***

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

### **FEDERAL EFFORTS**

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance. Caltrans practices generally align with the 2023 CEQ Interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, which offers recommendations for additional ways of evaluating project effects related to GHG emissions and climate change. These recommendations are not regulatory requirements.

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and “analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years ... to support informed decision-making across the United States.” Building on previous assessments, it continues to advance “an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate” (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation (U.S. DOT) recognizes the transportation sector’s major contribution of GHGs that cause climate change and has made climate action one of the department’s top priorities (U.S. DOT 2023). FHWA’s policy is to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).

The National Oceanic and Atmospheric Administration (NOAA) provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

**STATE EFFORTS**

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

*California's Fourth Climate Change Assessment (Fourth Assessment)* (State of California 2018) provides information to help decision makers across sectors and at state, regional, and local levels protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the Coastal Zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 *California Climate Adaptation Strategy*, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio*, and the CAPTI (described above). Priorities in the *2023 California Climate Adaptation Strategy* include acting in partnership with California Native American tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to “anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the Coastal Zone.” As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

## **CALTRANS ADAPTATION EFFORTS**

### **Caltrans Vulnerability Assessments**

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

### **Caltrans Sustainability Programs**

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The *Sustainability Roadmap* is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023).

## **PROJECT ADAPTATION EFFORTS**

The impacts of climate change and extreme weather events may impact the State Highway System (SHS) and other transportation infrastructure in the state. As the climate continues to change at an increasingly rapid pace, Caltrans must ensure climate change adaptation measures are identified and implemented when appropriate and feasible. The project would not exacerbate the effects of climate change related to CEQA topics. However, the proposed project would include certain elements to prepare for increased precipitation, increased risk of wildfire, and hazards that may result from climate change, such as flooding, landslides, and road closures (Caltrans 2019). The intended design life of road surfaces are 30 years.

### Sea Level Rise

The *Caltrans Climate Change Vulnerability Assessment for District 1* (Caltrans 2019) includes an analysis using data from the Ocean Protection Council (OPC) and the National Oceanic and Atmospheric Administration (NOAA). The OPC developed a new set of sea level rise projections and scenarios for the state, which were chosen for consideration in this analysis to follow state guidance on sea level rise planning using the best available sea level rise projections. These projections were paired with a NOAA sea level rise model, which was used to identify potential impacts to the SHS in District 1.

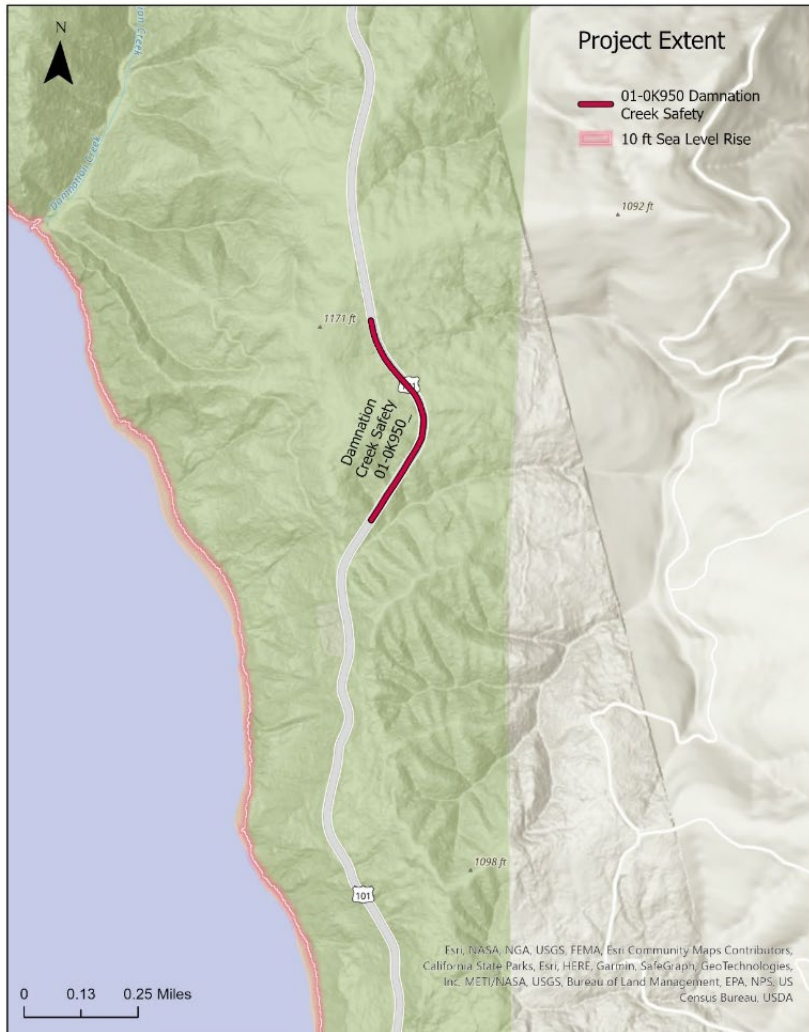
A sea level risk assessment has been conducted to determine the project's potential exposure to sea level rise utilizing the *State of California Sea Level Rise Guidance, 2018 Update* (California Ocean Protection Council 2018). Steps taken to determine the project's potential exposure to sea level rise included selecting the closest tide gauge location and referring to sea level rise projections for that location. Table 5 below provides projected sea level rise (in feet) for the project area. Data collected at the Crescent City tide gauge was used to document sea level rise in the proximity. Risk aversion is defined as "the strong inclination to avoid taking risks in the face of uncertainty." The *State of California Sea Level Rise Guidance, 2018 Update* describes low risk aversion is the most likely of all projections, with a 66% probability sea level rise to occur. Medium-High risk aversion is considered to be a 1-in-200 chance, a 0.5% probability to occur. The Extreme risk aversion is a single scenario which, according to the *State of California Sea Level Rise Guidance, 2018 Update*, includes unknown probability of occurring. However, it is important, particularly for high stakes, long-term decisions.

Considering the lifespan of the road surface being rehabilitated and or replaced, projected changes in the coastal Ordinary High-Water Mark (OHWM) were reviewed using the National Oceanic and Atmospheric Administration's (NOAA) sea level rise viewer. This tool is a mapping tool to visualize community-level impacts from coastal flooding or sea level rise (up to 10 feet above average high tides).

This project will not be affected by sea level rise. Evaluating for the most extreme risk averse scenario of an increase of 9.3 feet above current levels by 2100, the project will be more than 700 feet above sea level. The project is also more than one-quarter mile from the coastline; therefore, the projected 5.74 feet of coastal erosion by 2100 would not be relevant to this project (Caltrans 2021b). See Figure 8 below.

**Table 5. Projected Sea Level Rise (in feet) for Project Area**

|      | Low Risk Aversion (feet) | Medium-High Risk Aversion (feet) | Extreme Risk Aversion (H++) (feet) |
|------|--------------------------|----------------------------------|------------------------------------|
| 2030 | 0.3                      | 0.5                              | 0.8                                |
| 2040 | 0.4                      | 0.9                              | 1.4                                |
| 2050 | 0.7                      | 1.5                              | 2.3                                |
| 2060 | 0.9                      | 2.1                              | 3.3                                |
| 2070 | 1.2                      | 2.8                              | 4.5                                |
| 2080 | 1.6                      | 3.7                              | 5.9                                |
| 2090 | 2.0                      | 4.7                              | 7.4                                |
| 2100 | 2.5                      | 5.9                              | 9.3                                |



**Figure 8. Sea Level Rise Impact Map**

### **Precipitation and Flooding**

Historically, the project region has received on average more than 70 inches of rainfall per year; however, mean annual precipitation over the last 21 years has been observed to be only about 55% of the long-term average, indicating gradually drying conditions as the climate changes. In general, climate change in this region is expected to result in less total precipitation, however coming in heavier individual events. The 100-year storm rainfall event in the project region is expected to increase by 5–9% through 2085, according to mapping in the *Caltrans District 1 Climate Change Vulnerability Assessment* (Caltrans 2019). The anticipated increase in extreme precipitation events potentially heightens risk to slope stability driven by the interaction of severe weather events. Flooding and extreme weather events may disrupt construction activities and damage equipment and facilities used during the construction period. Changes in the frequency or intensity of these events are uncertain during the construction period. However, these events are typical for the region and are expected to be managed through existing construction management procedures, including appropriate construction scheduling, contingency budgeting, and emergency management protocols. Project limits are outside the 100-year floodplain and above risk of SLR and storm surge (see Sea Level Rise above)

### **Wildfire**

The *Caltrans Climate Change Vulnerability Assessment for District 1* (Caltrans 2019) indicates most of the project consists of coastal areas that experience mild, dry, and frequently foggy summers, and wet, cool winters. However, climate change on the California coast will exacerbate existing coastal hazards, such as wildfire severity. Currently, most of the project locations are classified as having a *Medium* level of concern for wildfire exposure with no highway miles considered having a *Very High* wildfire concern. By 2085, U.S. 101 within Del Norte is projected to be classified predominately as *High* wildfire concern (Caltrans 2019). Such projections are based on the Representative Concentration Pathways (RCP) 8.5 Emissions Scenario (Caltrans 2019).

The project limits are entirely within State Responsibility Areas (SRAs) served by CAL FIRE. Locations within the SRA are within the *High* Fire Hazard Severity Zone (FHSZ). According to the FHSZ maps for SRAs, adopted by CAL FIRE in November 2007, there is no work proposed in a *Very High* FHSZ (Figure 9).



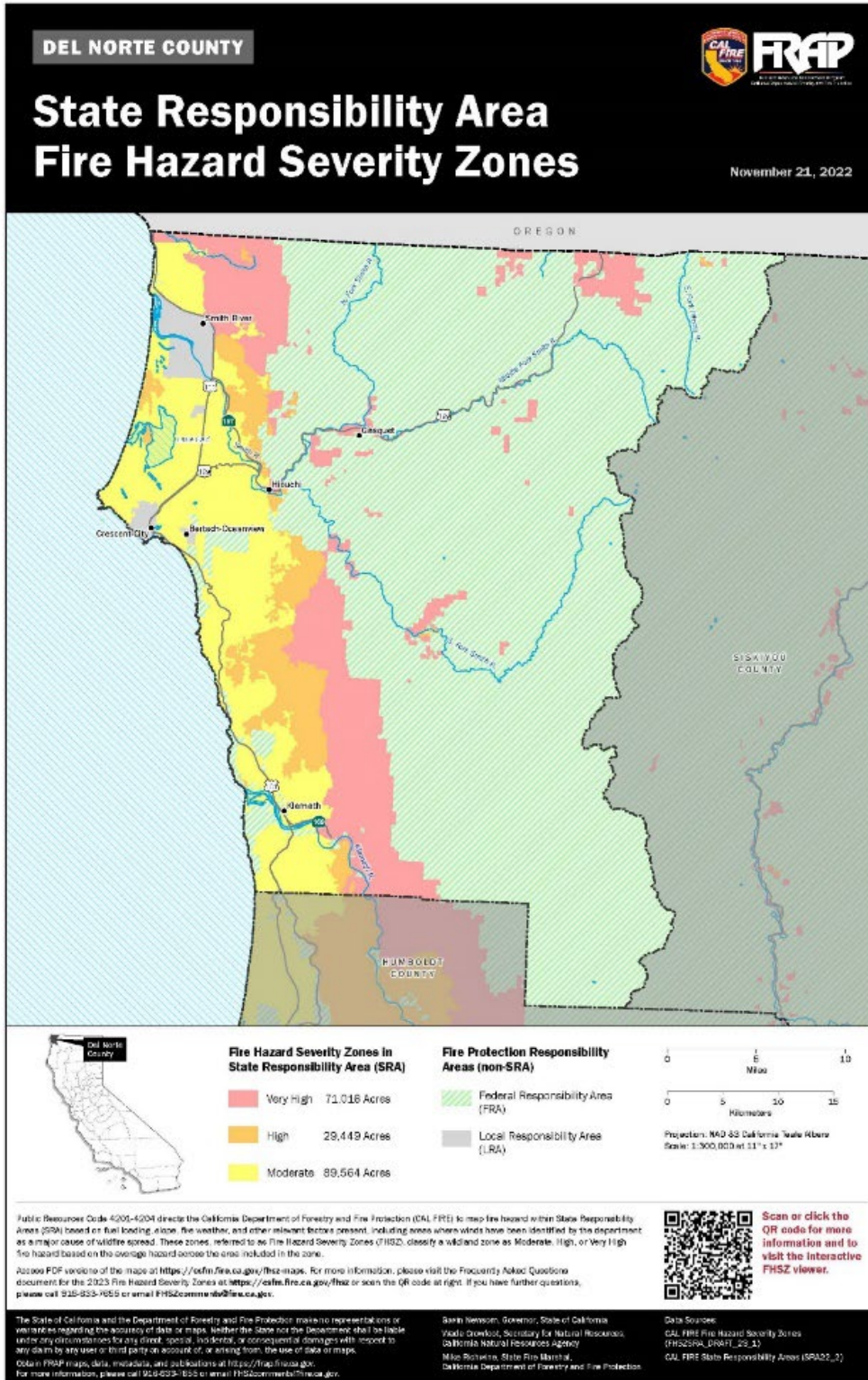


Figure 9. State Responsibility Area Fire Hazard Severity Zones

Standard fire prevention measures would be implemented during construction, including:

- The names and emergency telephone numbers of the nearest fire suppression agencies would be posted at a prominent place at the job site.
- A Fire Prevention Plan would be required from the contractor to identify measures taken to reduce the risk of fire.
- Fires occurring within and near the project limits would be immediately reported to the nearest fire suppression agency by using the emergency phone numbers retained at the job site and by dialing 911. Performance of the work would be in cooperation with fire prevention authorities.
- Fires caused directly or indirectly by job site activities would be extinguished and escape of fires would be prevented.
- Materials resulting from clearing and grubbing would be disposed of or managed to prevent accumulation of flammable material.
- All emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. Highway 101 throughout the construction period.
- Standard Special Provision 7-1.02M(2) includes a list of fire prevention procedures that would be required by the contractor during construction.

### **Temperature**

Average annual temperatures in the region, which includes Del Norte County, are anticipated to rise by 5°F to 9°F through the end of the 21st century, with interior regions experiencing the greatest warming. The District Climate Change Vulnerability Assessment mapping of change in average absolute maximum temperatures over 7 days in the project area shows a potential increase of 2°F to 3.9°F by 2025 (the midpoint of the 30-year period from 2010 to 2039); 4.0°F to 5.9°F by 2055 (midpoint of years 2040 to 2069) and 8°F to 9.9°F by 2085 (midpoint of years 2070 to 2099) (Caltrans 2019). No projections beyond 2099 are provided. Given the relatively low baseline temperatures in the region (41°F to 63°F), this range of temperature changes during the project's lifetime would not be likely to require adaptive changes in pavement design or maintenance practices.

## 2.9 Hazards and Hazardous Materials

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?</p> |                                    |  |                              | ✓         |

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?               |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Initial Site Assessment (Update)* dated October 28, 2022 (Caltrans 2022a). Potential hazards and impacts from hazardous materials are not anticipated because the project would not create a significant hazard to the public or environment, is not located near a school or airport, and is not on a list of hazardous sites compiled pursuant to Government Code Section 65962.5.

Emergency vehicles would be accommodated through any lane closures. If a wildland fire affected the area, work would stop and evacuation routes would be accessible.

Caltrans specifications require the management of hazardous materials to comply with applicable laws, rules, and regulations. If encountered, Aerially Deposited Lead, commonly found in unpaved areas around the highway, and treated wood waste from potential guardrail replacement, would be handled and disposed of in accordance with Caltrans standard specifications for these materials.

The Standard Measures and Best Management Practices described in Section 1.4 would be used on-site to contain hazardous materials should they be encountered and avoid exposure to workers, the public, and surrounding environment.

Caltrans anticipates the project would have “no impact” on hazards and hazardous materials. No mitigation is required.

## 2.10 Hydrology and Water Quality

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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:</p> <p>(i) result in substantial erosion or siltation on- or off-site;</p> |                                    |  |                              | ✓         |
| <p>(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</p>   |                                    |  |                              | ✓         |
| <p>(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</p>   |                                    |  |                              | ✓         |
| <p>(iv) impede or redirect flood flows?</p>  |                                    |  |                              | ✓         |

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?                     |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Water Quality Assessment Memorandum for Damnation Creek* (Caltrans 2023i).

***Disturbed Soil Area***

A project-specific Stormwater Plan will be prepared. The amount of disturbed soil area (DSA) will determine if a Water Pollution Control Program (WPCP) or Stormwater Pollution Prevention Plan (SWPPP) will be prepared. Projects disturbing less than one acre of soil require a WPCP under the NCRWQCB’s Stormwater Management Program. A disturbed soil area of 0.419 acre was calculated. Potential temporary impacts to water quality will be addressed by implementing standard BMPs recommended for a particular construction activity. The temporary control BMPs necessary to address stormwater impacts and protect water quality will include soil stabilization, sediment control, tracking control, non-stormwater management, job site management, and waste management and materials pollution control. Further evaluation of the DSA and necessary BMPs will be detailed in the Plans, Specifications, and Estimates (PS&E) phase of the project.

During construction, the contractor will be required to submit a Stormwater Plan which will describe the in-field implementation of proposed BMPs. The document would be amended as necessary to match field conditions and phasing of the project to minimize potentially negative effects of construction on stormwater.



### **Impact Evaluation**

The project includes replacement of an existing drainage inlet, construction of a new downdrain, and installation of approximately 1,130 feet of hot-mix asphalt dikes. These roadway drainage elements may reduce the occurrence of heavy, concentrated flow and decrease water velocity at the outlets of culverts. This may decrease erosion of the bed, bank, and channel both upstream and downstream of the culverts.

The potential for turbidity impacts from erosion is specifically of concern from construction-related activities. Potential temporary impacts due to construction activities would be minimized through implementation of the Standard Measures and BMPs described in Section 1.4.

### **Temporary Impacts to Water Quality**

Temporary impacts to water quality could occur during the construction phase of the project. Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment and other pollutants to adjacent waterways, wetlands, and/or riparian areas.

The following BMPs from the *Caltrans Construction Site BMP Manual* (Caltrans 2017) are anticipated to be incorporated into the approved project specific WPCP:

- Construction sequencing will be scheduled to minimize land disturbance during the wetter months (SS-1).
- Existing vegetation will be removed to the minimum extent necessary to facilitate the proposed work (SS-2).
- Disturbed slopes will be stabilized with a combination of seed, biodegradable rolled erosion control products (RECP) such as fiber rolls, coir blankets, and geotextile fabrics (SS-7).
- Perimeter control devices such as fiber rolls, compost socks, and silt fences will be utilized to prevent sediment transport from the project site (SC-1, SC-5, SC-6, SC-9).
- Temporary check dams constructed of rock, gravel bags, compost socks, fiber rolls, or other proprietary product will be used to reduce scour and channel erosion by reducing flow velocity and encouraging sediment settlement (SC-4).
- Slope sediment runoff control devices such as fiber rolls, gravel bags, and compost socks will be used to filter runoff, retain sediment, and reduce sheet flow (SC-5, SC-6, SC-11).

- Drainage inlet protection methods, such as gravel bags and fiber rolls, will be deployed to prevent sediment and other pollutants from entering drainage systems (SC-10).
- Temporary construction roadways will be stabilized and maintained to prevent sediment erosion and transport from the work area.
- Water conservation practices will be used to minimize the use of water onsite or use water in a manner that avoids causing runoff, erosion, and/or the discharge of pollutants into receiving waters.
- Dewatering operations will be implemented to manage the discharge of pollutants from the accumulation of groundwater associated with excavations, temporary stream crossings and clear water diversions.
- Paving and sealing operations will be conducted to avoid and minimize the discharge of pollutants to receiving waters.
- Illegal connection and illicit discharge detection and reporting is applicable anytime an illegal connection or illicit discharge is discovered, or illegally dumped material is found on the construction site.
- Vehicle and equipment cleaning, fueling, and maintenance procedures and practices will be used to minimize or eliminate the discharge of pollutants to storm drain systems or to watercourses.
- Proper concrete curing and finishing procedures will be used to minimize any potential for runoff.
- Material delivery, storage, and use procedures and practices will be used to minimize or eliminate the discharge of these materials to the storm drain system or receiving waters.
- Concrete washout facilities, re-fueling areas, as well as equipment and storage areas, should be covered and located away from drainage inlets and waterways to prevent both stormwater and non-stormwater discharges.
- Spill prevention and control practices and hazardous waste management.
- Concrete waste management procedures and practices should be used to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.



Additional BMPs will also likely be incorporated in the approved project-specific WPCP during the construction phase of the project to address BMPs for specific items of work.

***Permanent Impacts to Water Quality and Potential Treatment Areas***

It is anticipated that permanent impacts to water quality would be prevented by adhering to the required permits, and the incorporation of Design Pollution Prevention (DPP) BMP strategies. Any stabilized pervious area within the project limits that receives runoff from the impervious areas and promotes infiltration of the runoff may be designated a DPP infiltration area.

DPP infiltration areas can be vegetated or non-vegetated. DPP BMPs include:

1. Prevention of downstream erosion
2. Stabilization of disturbed soil areas
3. Maximization of vegetated surfaces
4. Consideration of downstream effects related to potentially increased flow

Inclusion of appropriate temporary and permanent BMPs would avoid potential impacts to water quality and meet the requirements of the Caltrans NPDES Permit, the CGP, and the Basin Plan. Based on standard practices during construction, Caltrans anticipates the project would have “*no impact*” to hydrology and water quality. No mitigation is required.

## 2.11 Land Use and Planning

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Physically divide an established community?   |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>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” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to land use and planning are not anticipated as the proposed project would not divide an established community or conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project is consistent with statewide, regional, and local planning goals. Caltrans anticipates the project would have “no impact” on land use and community planning. No mitigation is required.

## 2.12 Mineral Resources

| Question:  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>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” determinations in this section are based on the scope, description, and location of the proposed project, as well as the California Department of Conservation Division of Mine Reclamation–Mines Online web application (California Department of Conservation Division of Mine Reclamation 2022). There is no mining activity near U.S. 101 within the project limits.

There are no designated mineral resource areas of state or regional importance in the project area, and the project would not reduce the availability of a locally-important mineral resource recovery site. Caltrans anticipates the project would have “no impact” on mineral resources. No mitigation is required.

## 2.13 Noise

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project result in:</b><br/>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?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project result in:</b><br/>b) Generation of excessive groundborne vibration or groundborne noise levels?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project result in:</b><br/>c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</p> |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Noise Analysis for the Damnation Creek Safety Project* dated January 5, 2023 (Caltrans 2023f). The project would improve existing road superelevation and would not involve the construction of a new highway or expansion of an existing highway. Traffic volumes, composition, and speeds would remain the same. Based on the scope of work, the project is considered a Type III project, which does not require a noise analysis. Permanent traffic noise impacts are not anticipated, and noise abatement is not considered.

The project would have a temporary increase in noise generated by project construction. Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. Construction noise levels will vary on a day-to-day basis during each phase of construction depending on the specific task being completed. The closest receptors to the construction noise would be hikers on the Damnation Creek Trail. The Standard Measures and BMPs discussed in Section 1.4 would minimize or eliminate the impact of construction-related noise.

Construction noise and vibration impacts on wildlife are addressed in the Biological Resources section.

Caltrans anticipates the project would have “*no impact*” on noise. No mitigation is required.

## 2.14 Population and Housing

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>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)?</p> |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?</p>   |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to population and housing are not anticipated because the project does not involve the construction of homes, businesses, road extensions or infrastructure that could induce population growth. The project would not provide new access or open a new area to development. The project would not involve acquisition of land occupied by homes or residences and would not result in displacement of people or housing.

Caltrans anticipates the project would have “no impact” on population and housing. No mitigation is required.

## 2.15 Public Services

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p>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:</p> <p>Fire protection?</p> |                                    |  |                              | ✓         |
| Police protection?   |                                    |  |                              | ✓         |
| Schools?   |                                    |  |                              | ✓         |
| Parks?   |                                    |  |                              | ✓         |
| Other public facilities?   |                                    |  |                              | ✓         |

No Impact” determinations in this section are based on the scope, description, and location of the proposed project. This safety project would not result in an increased demand for fire or police protection or increased demand for space in schools, parks, or other public facilities in the area. Although there would be temporary, short-term lane closures during construction, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. 101 throughout the construction period.

Caltrans anticipates the project would have “no impact” on public services. No mitigation is required.

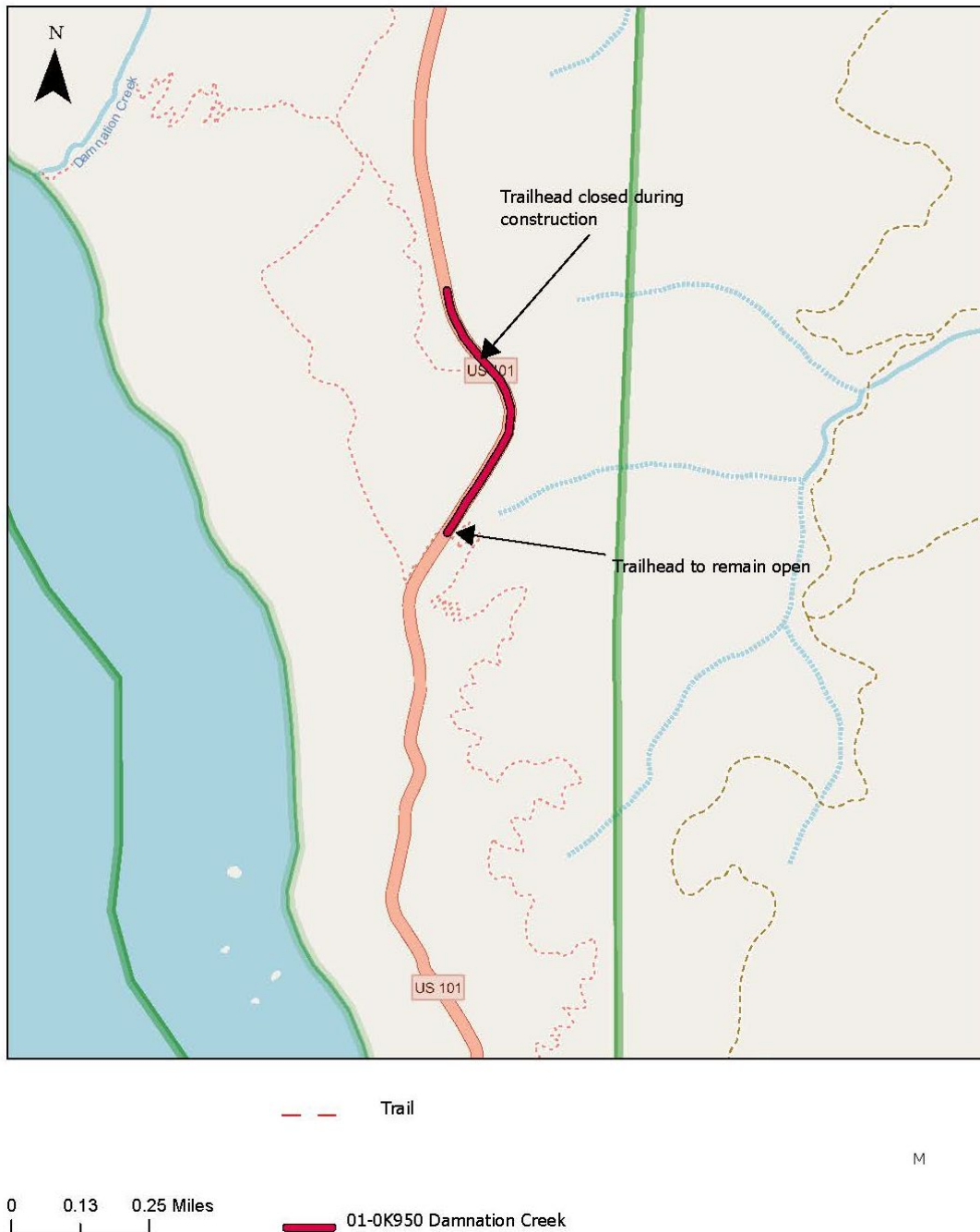


**2.16 Recreation**

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to recreational facilities due to deterioration, construction, or expansion of new facilities are not anticipated. Construction of the safety project would not result in an increased demand for park resources that would cause deterioration of existing parks or recreational facilities. The project does not include the construction of park resources or recreational facilities or the expansion of such facilities. The project would not increase the use of existing recreational facilities.

There would be temporary impacts to the Damnation Creek Trailhead parking as it would need to be closed during construction activities. However, there is an alternate trailhead 1,500 feet to the south along U.S. 101 that connects to the Damnation Creek Trail (Figure 10). This alternate trailhead would be open during construction. The Damnation Creek Trail is connected to the California Coastal Trail and is also accessible from the Last Chance Trailhead 5 miles to the north. There would be no long-term impacts to recreational facilities.



**Figure 10. Trailhead Map**

Caltrans anticipates the project would have “no impacts” on recreation. No mitigation is required.

## 2.17 Transportation

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <b>Would the project:</b><br>a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?         |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?  |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? |                                    |  |                              | ✓         |
| <b>Would the project:</b><br>d) Result in inadequate emergency access?  |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Transportation Management Plan* dated September 14, 2022 (Caltrans 2022b).

Emergency vehicles, public transit, bicyclists, and pedestrians would be accommodated through the project area. The project does not propose to add a vehicle lane and would not increase vehicle miles traveled (VMT). The project is anticipated to improve the safety of transportation through the project area with improvements to road geometry. Emergency service providers would receive prior notification of lane closures. Potential adverse impacts to transportation are not anticipated because temporary construction delays are expected to be 20 minutes or less in each direction during the construction period.

There would be only minor impacts to Transportation during the period of construction. No permanent impacts are anticipated. Due to the planned traffic control measures, Caltrans anticipates “no impact” to Transportation. No mitigation is required.

## 2.18 Tribal Cultural Resources

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, or 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:</b></p> <p>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 § 5020.1(k), or</p> |                                    |  |                              | ✓         |
| <p>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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>   |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Archaeological Survey Report* dated October 2023 (Caltrans 2023c). The Native American Heritage Commission (NAHC) was contacted in 2023 by the project archaeologist with a request for a consultation list of tribes, groups, and individuals who have expressed an interest in the project vicinity and for a review of the Sacred Lands File for any potential sacred sites within the project vicinity.

The NAHC responded with a negative result for sacred lands, which indicates sacred sites were not identified within the project vicinity. The NAHC also provided a list of Native American tribes, groups, and individuals pursuant to Section 106 consultation requirements. Outreach and consultation efforts included the Elk River Rancheria, Tolowa Dee-ni' Nation, Resighini Rancheria, and the Yurok Tribe. No concerns have been raised to date. Caltrans will continue to consult with interested tribes throughout the life of the project as required.

Given the above, the project is anticipated to have “*no impact*” on tribal cultural resources. No mitigation is required.

## 2.19 Utilities and Service Systems

| Question  | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <p><b>Would the project:</b><br/>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?</p> |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?</p>   |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>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?</p>  |                                    |  |                              | ✓         |
| <p><b>Would the project:</b><br/>e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</p>   |                                    |  |                              | ✓         |

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. There would be “*no impact*” to Utilities and Service Systems because the project would not construct new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. There are no existing utilities in the project area. No mitigation is required.

## 2.20 Wildfire

| Question   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|------------------------------------|--|------------------------------|-----------|
| <p><b>If located in or near State Responsibility Areas (SRAs) or lands classified as <i>very high</i> Fire Hazard Severity Zones, would the project:</b></p> <p>a) Substantially impair an adopted emergency response plan or emergency evacuation plan?</p>         |                                    |  |                              | ✓         |
| <p>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?</p>   |                                    |  |                              | ✓         |
| <p>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 may result in temporary or ongoing impacts to the environment?</p> |                                    |  |                              | ✓         |
| <p>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?</p>   |                                    |  |                              | ✓         |

### *Regulatory Setting*

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection (CAL FIRE) to develop amendments to the “CEQA Environmental Checklist” for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *Very High* Fire Hazard Severity Zones. The 2018 updates to the CEQA Guidelines expanded this to include projects “near” these *Very High* Fire Hazard Severity Zones.



**Affected Environment**

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. The entire project is within a “Moderate Severity” Fire Hazard Severity Zone (FHSZ) within the project’s State Responsibility Area.

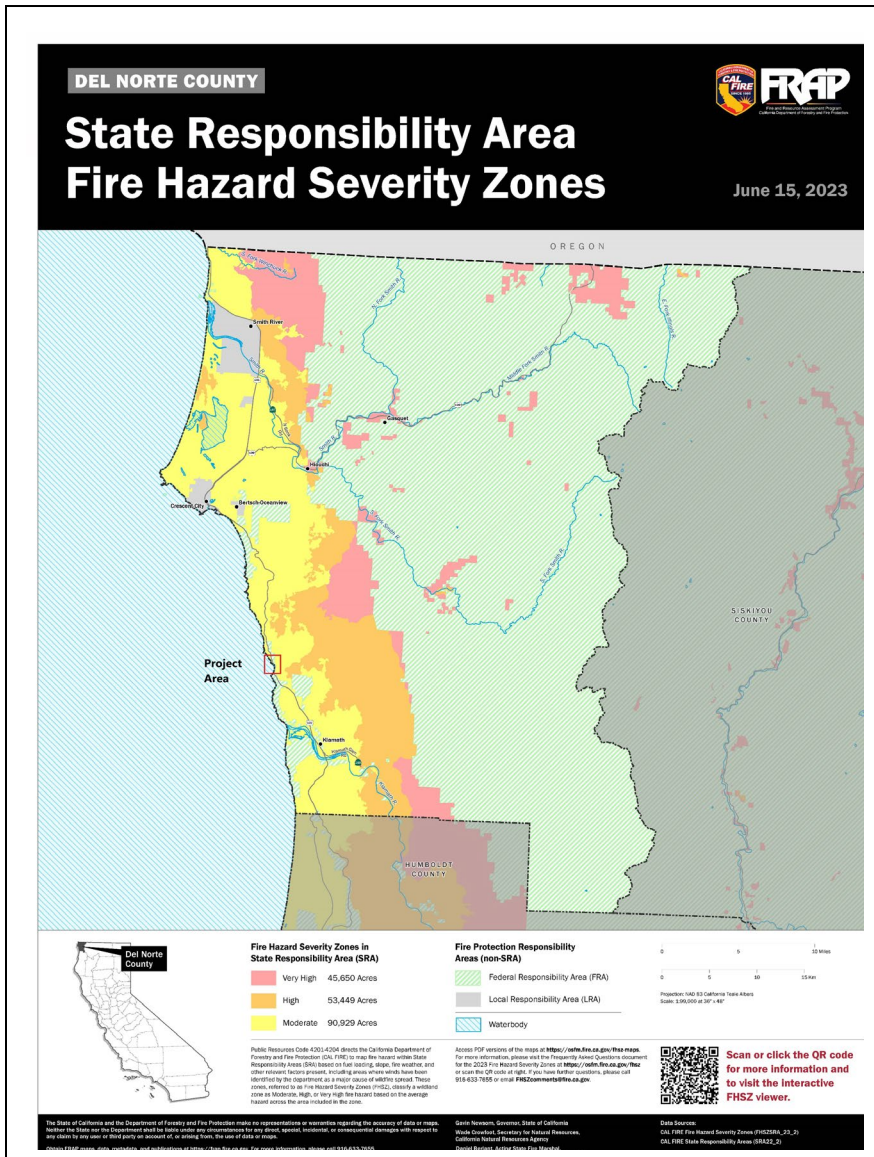


Figure 11. Map of Fire Hazard Severity Zones Near Project Area

According to the Fire Hazard Severity Zone maps for SRAs, adopted by CAL FIRE in November 2007, there is no work proposed in a *Very High* FHSZ. Within the LRA, the project is entirely within the *Moderate* Fire Hazard Severity Zone (CALFIRE 2022).

The proposed work will not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to significant risks. Emergency response agencies in the project area will be notified of the project construction schedule and will have access to U.S. 101 throughout the construction period. Emergency vehicles will be accommodated through any temporary ramp or lane closures. If a wildland fire were to affect the area, work will stop and evacuation routes will be accessible.

Based on the determinations made in the CEQA Environmental Checklist, the project is anticipated to have “*no impact*” to wildfire. Thus, no mitigation measures are proposed for this project.

## 2.21 Mandatory Findings of Significance

| Does the project:   | Significant and Unavoidable Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|------------------------------------|--|------------------------------|-----------|
| <p>a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?</p> |                                    |  |                              | ✓         |
| <p>b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.)</p>   |                                    |  |                              | ✓         |
| <p>c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>   |                                    |  |                              | ✓         |

***Discussion of CEQA Environmental Checklist Question 2.21—Mandatory Findings of Significance***

The California Environmental Quality Act of 1970 (CEQA) requires preparation of an Environmental Impact Report (EIR) when certain specific impacts may result from construction or implementation of a project. Project analyses indicated the potential impacts associated with this project would not require an EIR. Mandatory Findings of Significance are not required for projects where an EIR has not been prepared.

The analysis indicates that the construction of this project would not have the potential to significantly impact any resource. Given this, an EIR and CIA were not required for this project.

## 2.22 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time (CEQA § 15355).

Cumulative impacts to resources may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The Damnation Creek Safety Project, and other planned developments in the area, have undergone an assessment for their combined environmental impacts, including the Last Chance Grade Project. Although the Last Chance Grade Project is nearby, the Damnation Creek Project will be completed before the commencement of the Last Chance Grade Project. This comprehensive assessment has considered the potential impacts on various environmental resources, including visual aesthetics, water quality, and biodiversity. It has also factored in the cumulative effects of all related past, present, and future projects. Through the implementation of targeted measures aimed at avoiding and minimizing environmental impacts, the analysis has concluded that the combined effects of these projects will not be significant. These measures are designed to comply with regulatory standards and enhance the protection of natural and cultural resources, ensuring that collectively the projects adhere to environmental stewardship and sustainable development principles.

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "...situations where the cumulative effects are found to be significant." Based on the scope and scale of the potential effects and the inclusion of Standard Measures and Best Management Practices, the proposed project would not be expected to have any cumulative impacts. Given this, an EIR and CIA were not required for this project.



## Chapter 3. Agency and Public Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, and interagency coordination meetings. This chapter summarizes the results of Caltrans’ efforts to identify, address, and resolve project-related issues through early and continuing coordination.

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

### Coordination with Resource Agencies

Official species lists were received from USFWS, NMFS, CDFW and CNPS in July 2023, and updated in December 2023 (Appendix C). In addition, the following agencies, organizations and individuals were consulted in the preparation of this environmental document.

**Table 6. Agency Coordination and Professional Contacts**

| Coordination Effort                        | Date               | Personnel   |
|--|--------------------|---|
| State Parks Coordination                   | July 17, 2023      | Felicia Zimmerman, Caltrans<br>Tyler Brown, Caltrans<br>Eric Shada, Caltrans<br>Nguyen Pham, Caltrans<br>Ben Lardiere, Caltrans<br>Laurie Harvey, California State Parks<br>Rosalind Litzky, California State Parks<br>Saylor Moss, U.S. National Parks |
| U.S. Fish and Wildlife Coordination – PLOC | September 25, 2023 | Ben Lardiere, Caltrans<br>Greg Schmidt, USFWS   |
| California Coastal Commission (CCC)        | September 13, 2023 | Abigail Strickland – CCC<br>Tyler Brown, Caltrans   |

| Coordination Effort             | Date   | Personnel  |
|---------------------------------|--|--|
| Del Norte Local Coastal Program | September 27, 2023   | Heidi Kunstal, County of Del Norte<br>Tyler Brown, Caltrans      |
| 4(f) Coordination               | August 9, 2023<br>August 18, 2023<br>August 30, 2023<br>September 27, 2023<br>November 28, 2023<br>February 15, 2024<br>March 14, 2024 | Tyler Brown, Caltrans<br>Rosalind Litzky, California State Parks |

**Coordination with Native American Tribes**

A list of Native American contacts was compiled from the Caltrans District 1 Native American Coordination Database and from consultation on the Caltrans Last Chance Grade Project, a project that overlaps completely with the area of this project. The consultation record resulted in furthering consultation with the following tribes, in alphabetical order:

- Elk Valley Rancheria
- Tolowa Dee-ni' Nation
- Resighini Rancheria
- Yurok Tribe

An initial project notification email with project mapping, a description of work, and request for comments and concerns was sent on July 18, 2022. A follow up letter and email were sent in August 2023, providing information on the new preferred alignment.

Consultation is ongoing with the tribes for the duration of this project, and an electronic copy of this report will be emailed to the consulted tribes listed above.



## Chapter 4. List of Preparers

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The following individuals performed the environmental work and contributed to the preparation of the Initial Study/Negative Declaration for this project:

### *California Department of Transportation, North Region*

|                   |   |
|-------------------|---|
| Aaron Bali        | Transportation Engineer (Air Quality, Noise Specialist) |
| Alexander McKay   | Transportation Engineer (Design)                        |
| Angel Aguilar     | Engineering Geologist (Water Quality)                   |
| Ben Lardiere      | Environmental Scientist (Biologist)                     |
| Eric Shada        | Senior Transportation Engineer (Design)                 |
| Erin Ponte        | Landscape Associate (Aesthetics)                        |
| Felicia Zimmerman | Environmental Scientist (Coordinator)                   |
| Jason Meyer       | Senior Environmental Scientist (Branch Chief)           |
| Julie Price       | Environmental Scientist (Coordinator)                   |
| Karen Radford     | Associate Environmental Planner (Technical Editor)      |
| Liza Walker       | Environmental Program Manager (Office Chief)            |
| Nguyen Pham       | Transportation Engineer (Design)                        |
| Stephen Umbertis  | Environmental Scientist (Coordinator)                   |
| Tim Keefe         | Senior Environmental Scientist (Archaeology)            |
| Tina Fulton       | Associate Environmental Planner (Archaeology)           |
| Tyler Brown       | Environmental Scientist (Coordinator)                   |

***Stantec Consulting Services, Inc.***

Julie McNamara                      Certified Consulting Arborist

Adam Fuentes                        Arborist Assistant

## **Chapter 5. Distribution List**

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### ***Federal and State Agencies***

United States Fish and Wildlife Service (USFWS)  
1655 Heindon Road  
Arcata, CA 95521

Del Norte Coast Redwoods State Parks  
P.O. Box 2006  
Eureka, CA 95502-2006

Redwood National Parks  
1111 Second Street  
Crescent City, CA 95531

### ***Regional/County/Local Agencies***

County of Del Norte Planning Department  
981 H Street, Suite 110  
Crescent City, CA 95531



## Chapter 6. References

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## **PERSONAL COMMUNICATIONS**

R. Litzky, California State Parks, July 17, 2023



# Appendix A. Project Layouts

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|      |        |       |                          |                    |
|------|--------|-------|--------------------------|--------------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| 01   | DN     | 101   | 15.6/16                  |                    |

REGISTERED CIVIL ENGINEER DATE: \_\_\_\_\_  
 PLANS APPROVAL DATE: \_\_\_\_\_  
 No. \_\_\_\_\_  
 Exp. \_\_\_\_\_  
 CIVIL  
 STATE OF CALIFORNIA

PRELIMINARY DESIGN FOR REVIEW ONLY

THE ENGINEER OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES**

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAM.

**ABBREVIATIONS**

- SR = SUPERELEVATION RATE (12% MAX)  
 LL = LANE LINE  
 TE = TAPERED EDGE  
 SB = SHOULDER BACKING  
 Emb = EMBANKMENT

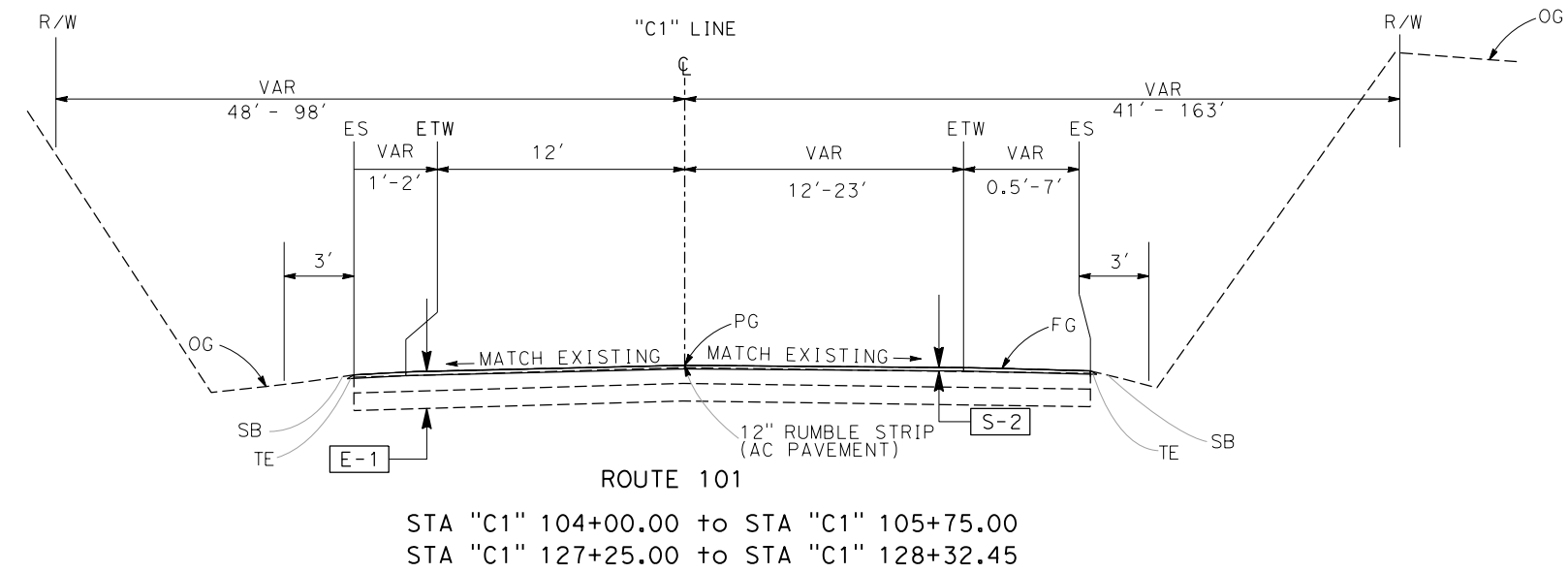
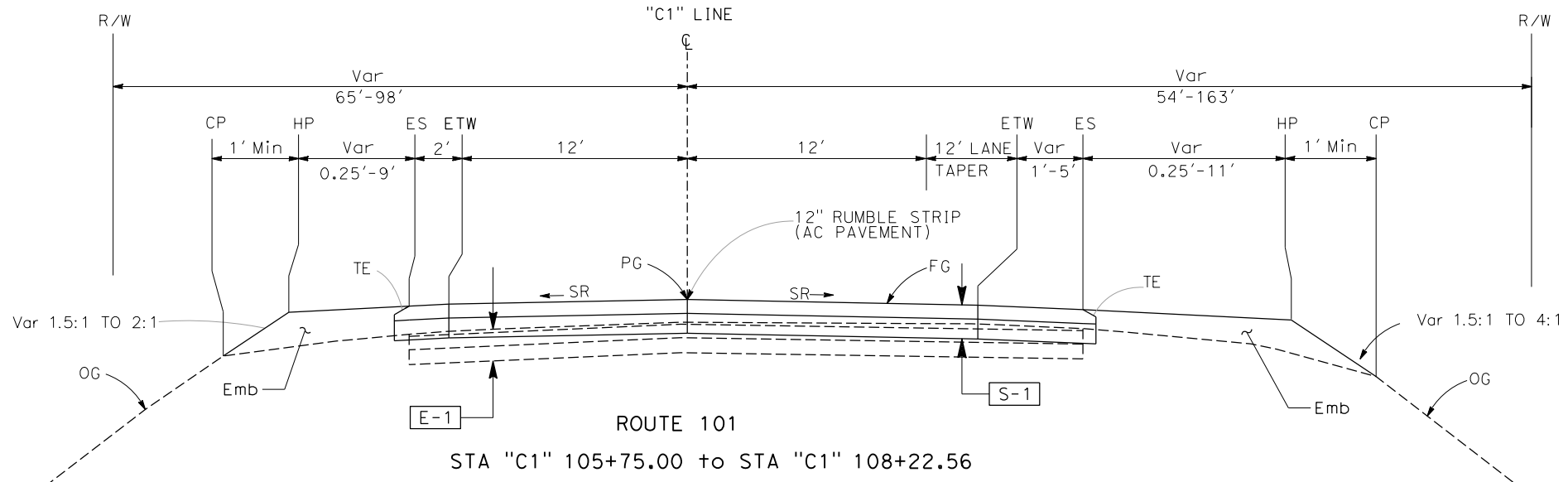
**DESIGN DESIGNATION**

|            |           |                  |        |
|------------|-----------|------------------|--------|
| ADT (2028) | 4,830     | D                | 60%    |
| ADT (2048) | 5,110     | T                | 11%    |
| DHV        | 650       | V                | 55 mph |
| ESAL       | 2,312,166 | TI <sub>20</sub> | 10     |

PAVEMENT CLIMATE REGION: NORTH COAST

**TYPICAL PAVEMENT STRUCTURAL SECTION**

- E-1 Exist  
0.10' HMA-O (BWC)  
VAR 0.42'-1.17' HMA  
VAR 0.50'-1.17' AB
- S-1 0.70' HMA-A  
1.00' AB (CL-2)
- S-2 0.10' HMA-A  
LEVELING COURSE
- S-3 0.85' HMA-A



**TYPICAL CROSS SECTION**

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: ERIC SHADA  
 DESIGN

|      |        |       |                          |                    |
|------|--------|-------|--------------------------|--------------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| 01   | DN     | 101   | 15.6/16                  |                    |

REGISTERED CIVIL ENGINEER DATA

PLANS - PRELIMINARY DESIGN

NO. \_\_\_\_\_

Exp. \_\_\_\_\_

CIVIL

STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

THE ENGINEER OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**PRELIMINARY DESIGN FOR REVIEW ONLY**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ERIC SHADA

DESIGN

NGUYEN PHAM

REVISOR

DATE

CHECKED BY

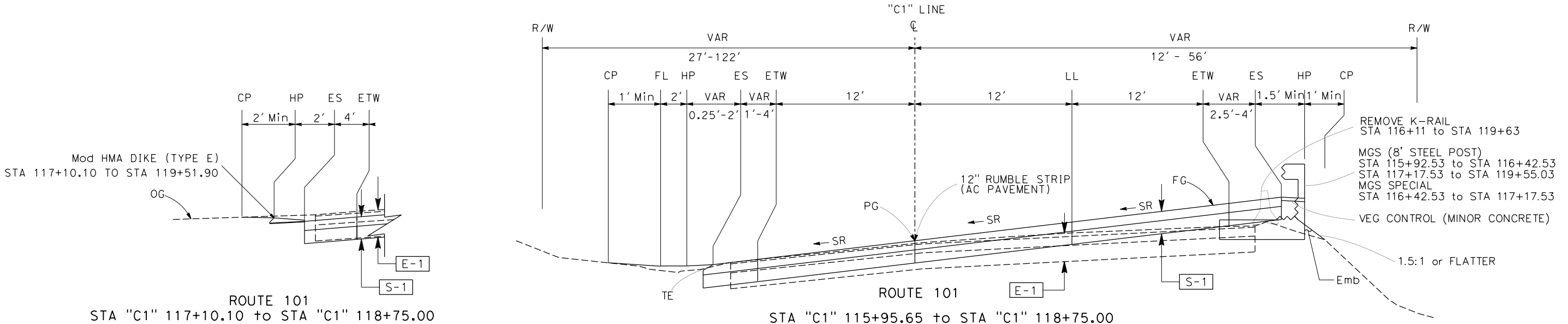
DESIGNED BY

FUNCTIONAL SUPERVISOR

ERIC SHADA

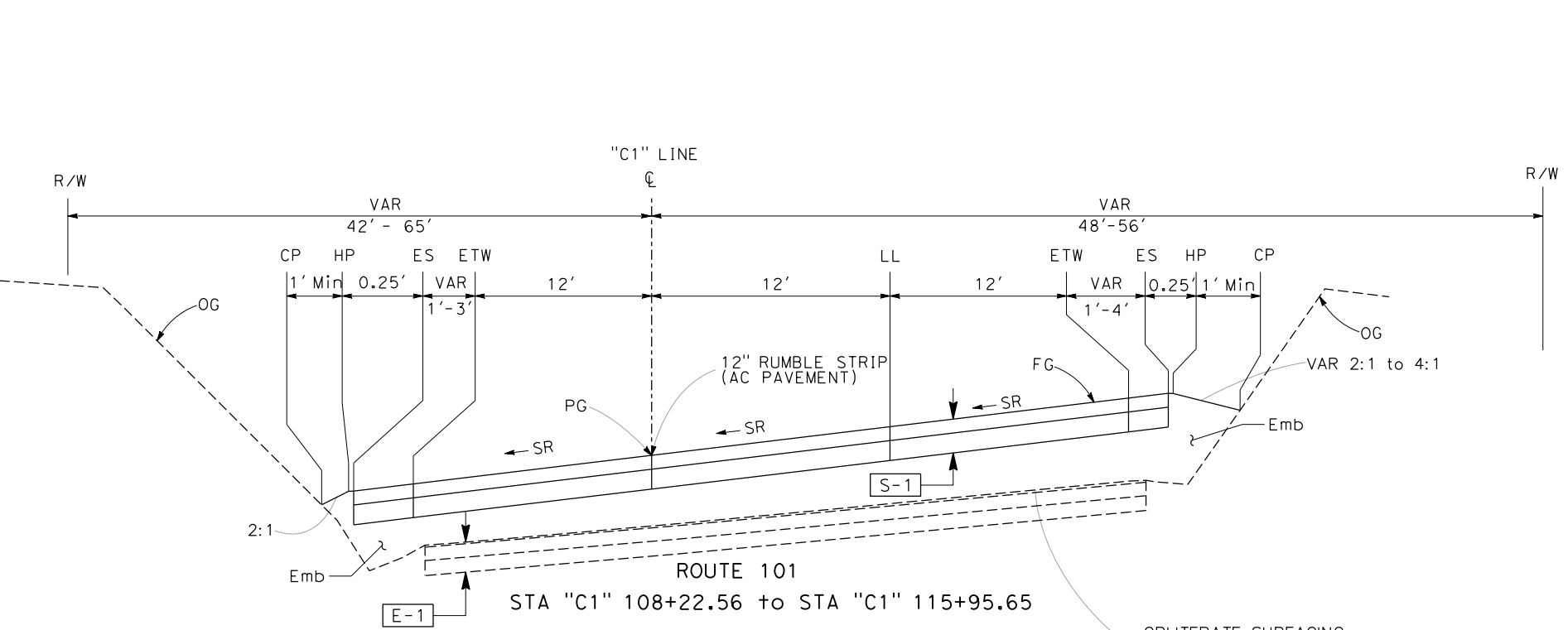
DESIGN

Caltrans

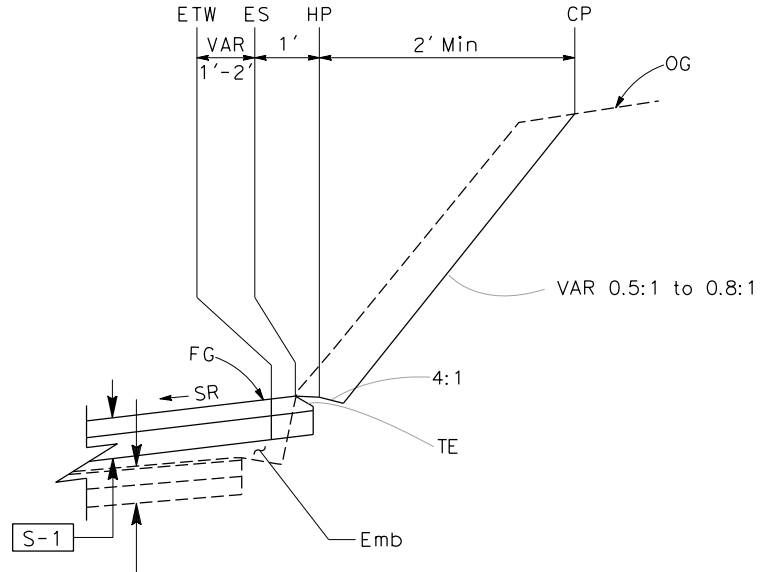


ROUTE 101  
STA "C1" 117+10.10 to STA "C1" 118+75.00

ROUTE 101  
STA "C1" 115+95.65 to STA "C1" 118+75.00



ROUTE 101  
STA "C1" 108+22.56 to STA "C1" 115+95.65



ROUTE 101  
STA "C1" 115+18.50 to STA "C1" 115+95.65

OBLITERATE SURFACING  
STA 108+50 to STA 114+75 SOUTHBOUND  
STA 108+50 to STA 115+18.50 NORTHBOUND

**TYPICAL CROSS SECTION**

NO SCALE

**X-2**

|      |        |       |                          |                    |
|------|--------|-------|--------------------------|--------------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| 01   | DN     | 101   | 15.6/16                  |                    |

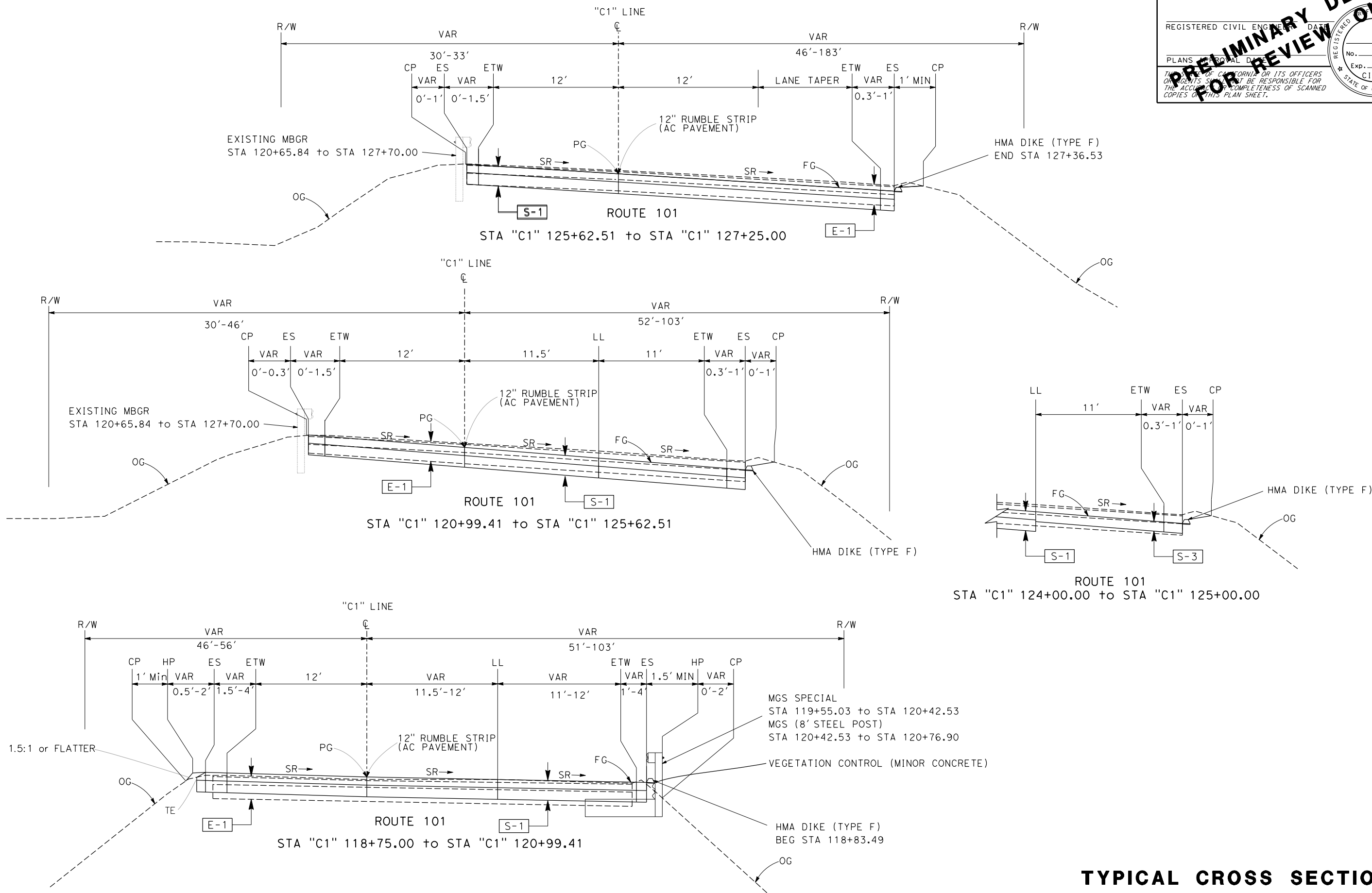
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
No. \_\_\_\_\_  
Exp. \_\_\_\_\_  
CIVIL  
STATE OF CALIFORNIA

**PRELIMINARY DESIGN FOR REVIEW ONLY**



**TYPICAL CROSS SECTION**

NO SCALE

**X-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ERIC SHADA

DESIGN

USERNAME => DGN FILE => ...NOK950 A1+ C1 XS4.dgn

RELATIVE BORDER SCALE IS IN INCHES

0 1 2 3

UNIT 0312

PROJECT NUMBER & PHASE

01210000340

LAST REVISION | DATE PLOTTED => 3/6/2024  
00-00-00 | TIME PLOTTED => 1:34:03 PM



|      |        |       |                          |                    |
|------|--------|-------|--------------------------|--------------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| 01   | DN     | 101   | 15.6/16.2                |                    |

REGISTERED CIVIL ENGINEER  
 PLANS APPROVAL DATE  
 No. \_\_\_\_\_  
 Exp. \_\_\_\_\_  
 CIVIL  
 STATE OF CALIFORNIA

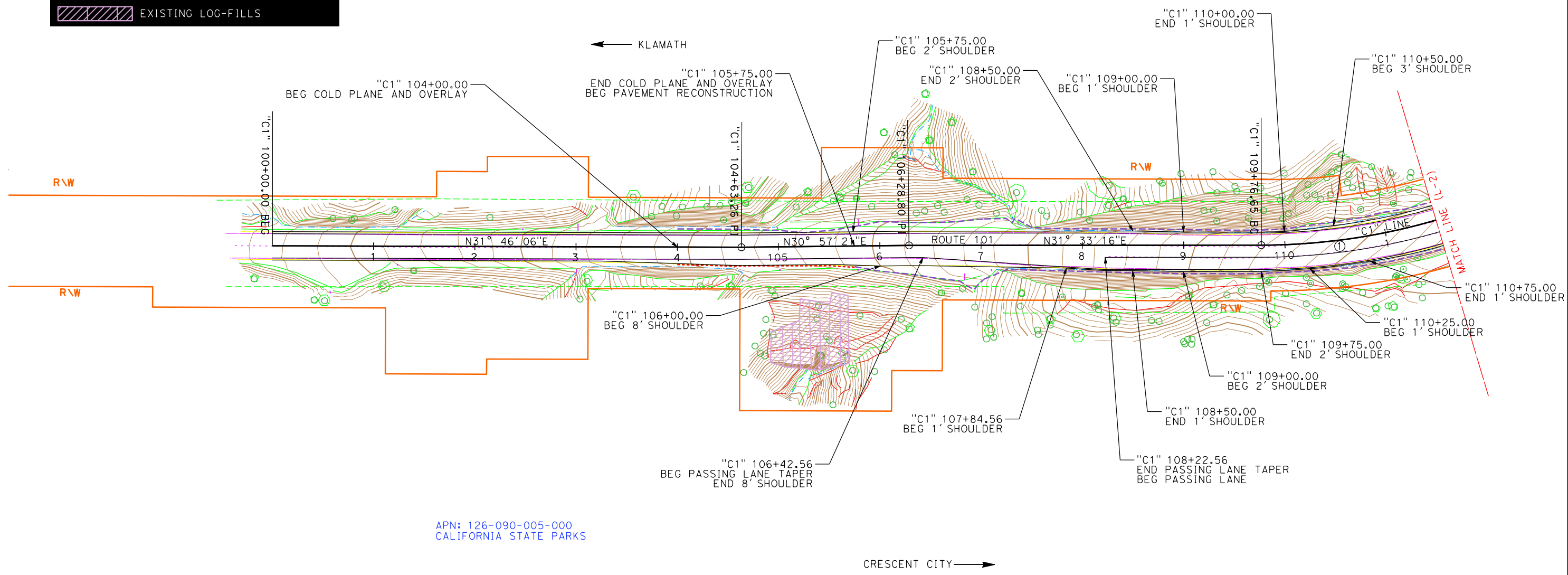
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NOTES:  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

|  |                            |
|--|----------------------------|
|  | ENVIRONMENTAL STUDY LIMITS |
|  | FILL                       |
|  | CUT                        |
|  | RIGHT OF WAY               |
|  | TREES                      |
|  | FLOWLINE                   |
|  | MGS                        |
|  | EXISTING MBGR              |
|  | DIKE                       |
|  | EXISTING DIKE              |
|  | K-RAIL                     |
|  | EXISTING K-RAIL            |
|  | EXISTING EDGE OF PAVEMENT  |
|  | EXISTING ETW               |
|  | EXISTING LANE LINE         |
|  | EXISTING LOG-FILLS         |

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: ERIC SHADA  
 REVISOR: NGUYEN PHAM  
 CALCULATED/DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVISOR: \_\_\_\_\_  
 DATE REVISOR: \_\_\_\_\_



| CURVE DATA |         |            |         |         |
|------------|---------|------------|---------|---------|
| Curve #    | R       | Δ          | T       | L       |
| 1          | 618.00' | 074°53'34" | 473.29' | 807.80' |

**LAYOUT L-1**  
 SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

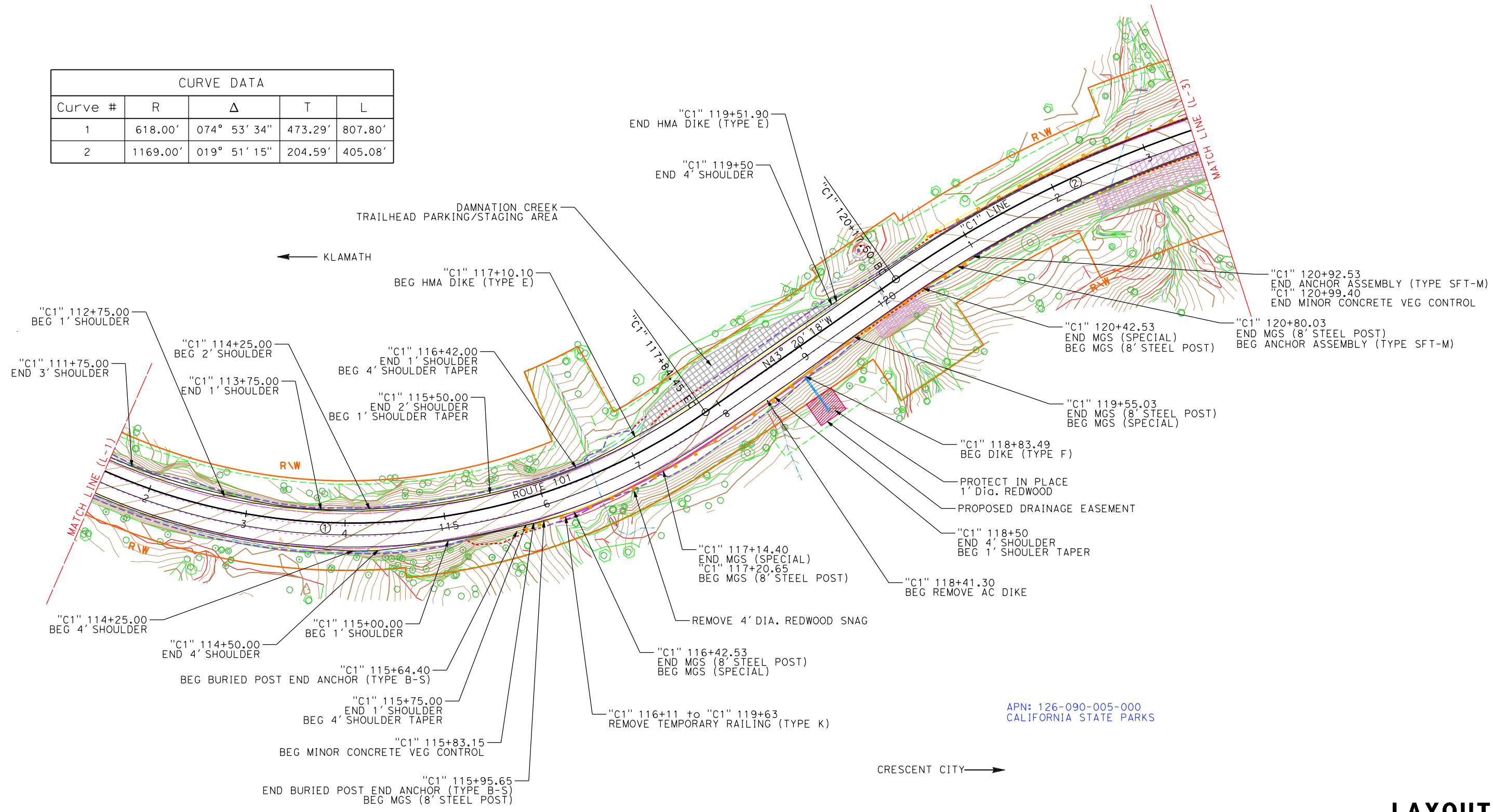
FUNCTIONAL SUPERVISOR: ERIC SHADA  
 CALCULATED/DESIGNED BY: NGUYEN PHAM  
 CHECKED BY: NGUYEN PHAM  
 REVISED BY: NGUYEN PHAM  
 DATE REVISED: NGUYEN PHAM

**NOTES:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

- DRAINAGE EASEMENT
- STAGING AREA

| CURVE DATA |          |              |         |         |
|------------|----------|--------------|---------|---------|
| Curve #    | R        | Δ            | T       | L       |
| 1          | 618.00'  | 074° 53' 34" | 473.29' | 807.80' |
| 2          | 1169.00' | 019° 51' 15" | 204.59' | 405.08' |



| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
|------|--------|-------|--------------------------|--------------------|
| 01   | DN     | 101   | 15.6/16.2                |                    |

REGISTERED CIVIL ENGINEER DATE: \_\_\_\_\_  
 PLANS APPROVAL DATE: \_\_\_\_\_  
 No. \_\_\_\_\_ Exp. \_\_\_\_\_  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA

**PRELIMINARY DESIGN FOR REVIEW ONLY**

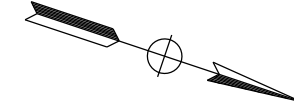
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**LAYOUT L-2**

SCALE: 1" = 50'

LAST REVISION DATE PLOTTED => #DATE 00-00-00 TIME PLOTTED => #TIME

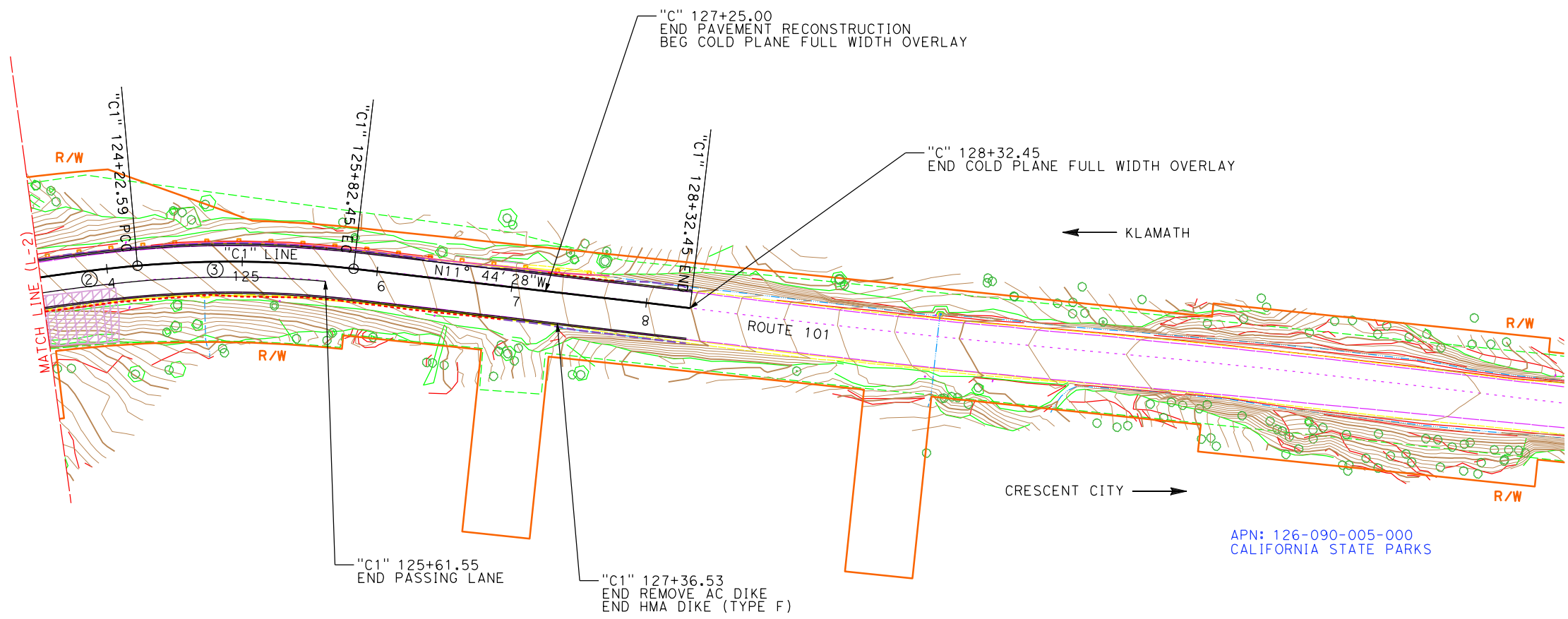
PRELIMINARY DESIGN FOR REVIEW ONLY



**NOTES:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

|  |                          |
|--|--------------------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN                   |
| ERIC SHADA<br>FUNCTIONAL SUPERVISOR                | ERIC SHADA<br>CHECKED BY |
| NGUYEN PHAM  | NGUYEN PHAM<br>REVISOR   |
| DATE   | DATE                     |

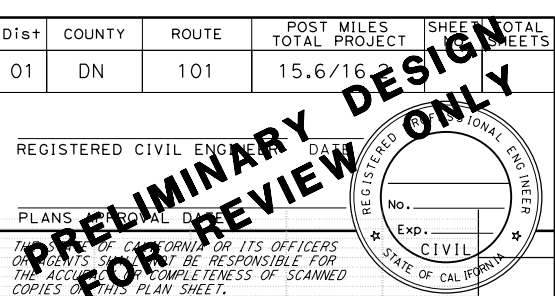


| CURVE DATA |          |              |         |         |
|------------|----------|--------------|---------|---------|
| Curve #    | R        | Δ            | T       | L       |
| 2          | 1169.00' | 019° 51' 15" | 204.59' | 405.08' |
| 3          | 780.00'  | 011° 44' 35" | 80.21'  | 159.86' |

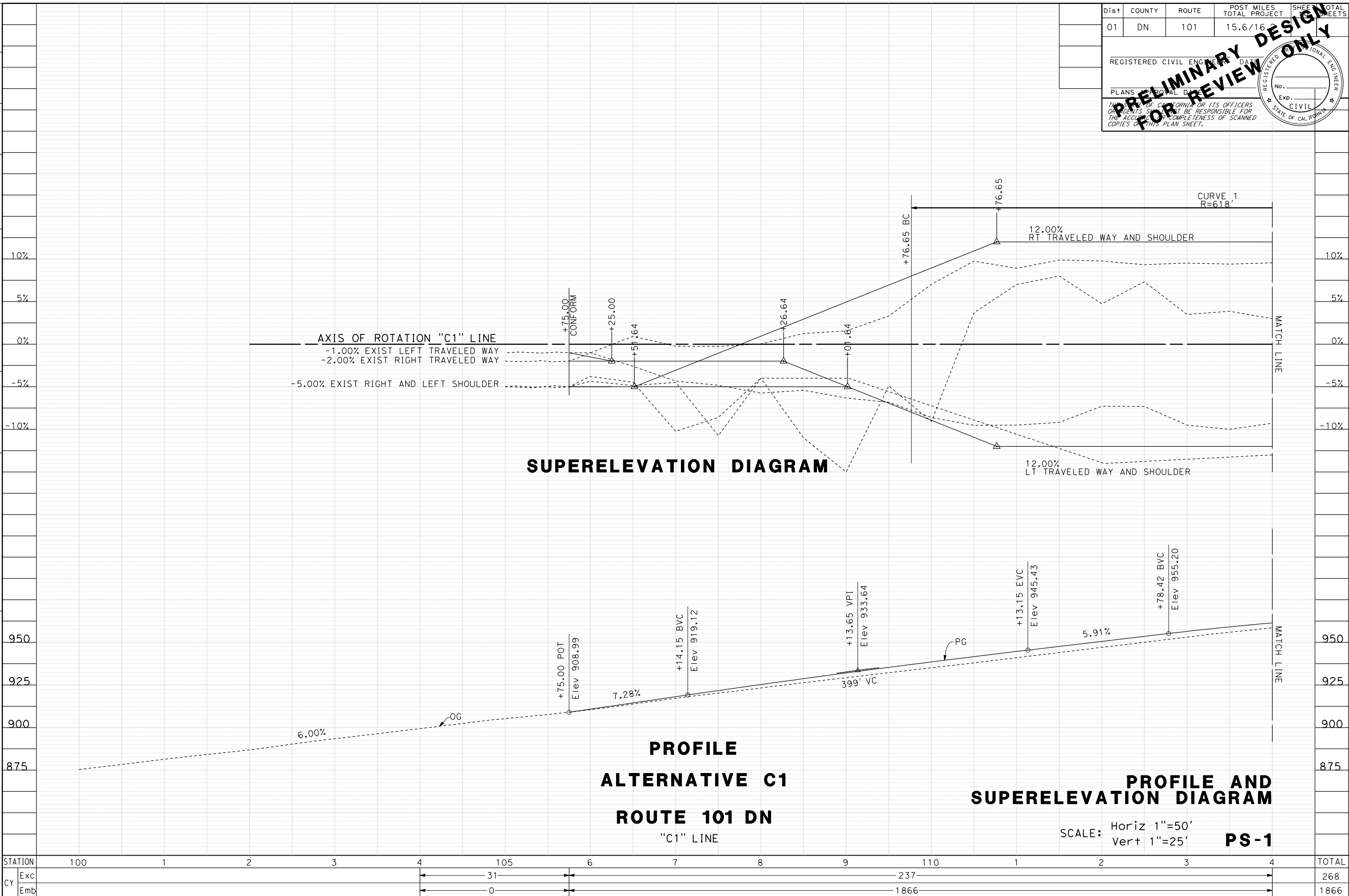
**LAYOUT**  
SCALE: 1" = 50' **L-3**

LAST REVISION | DATE PLOTTED => #DATE  
00-00-00 | TIME PLOTTED => #TIME

|   |        |       |                          |                    |
|---|--------|-------|--------------------------|--------------------|
| Dist  | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| 01  | DN     | 101   | 15.6/16                  |                    |
| REGISTERED CIVIL ENGINEER DATE  |        |       |                          |                    |
| PLANS - PARIAL DATA   |        |       |                          |                    |
| THE ENGINEER OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. |        |       |                          |                    |



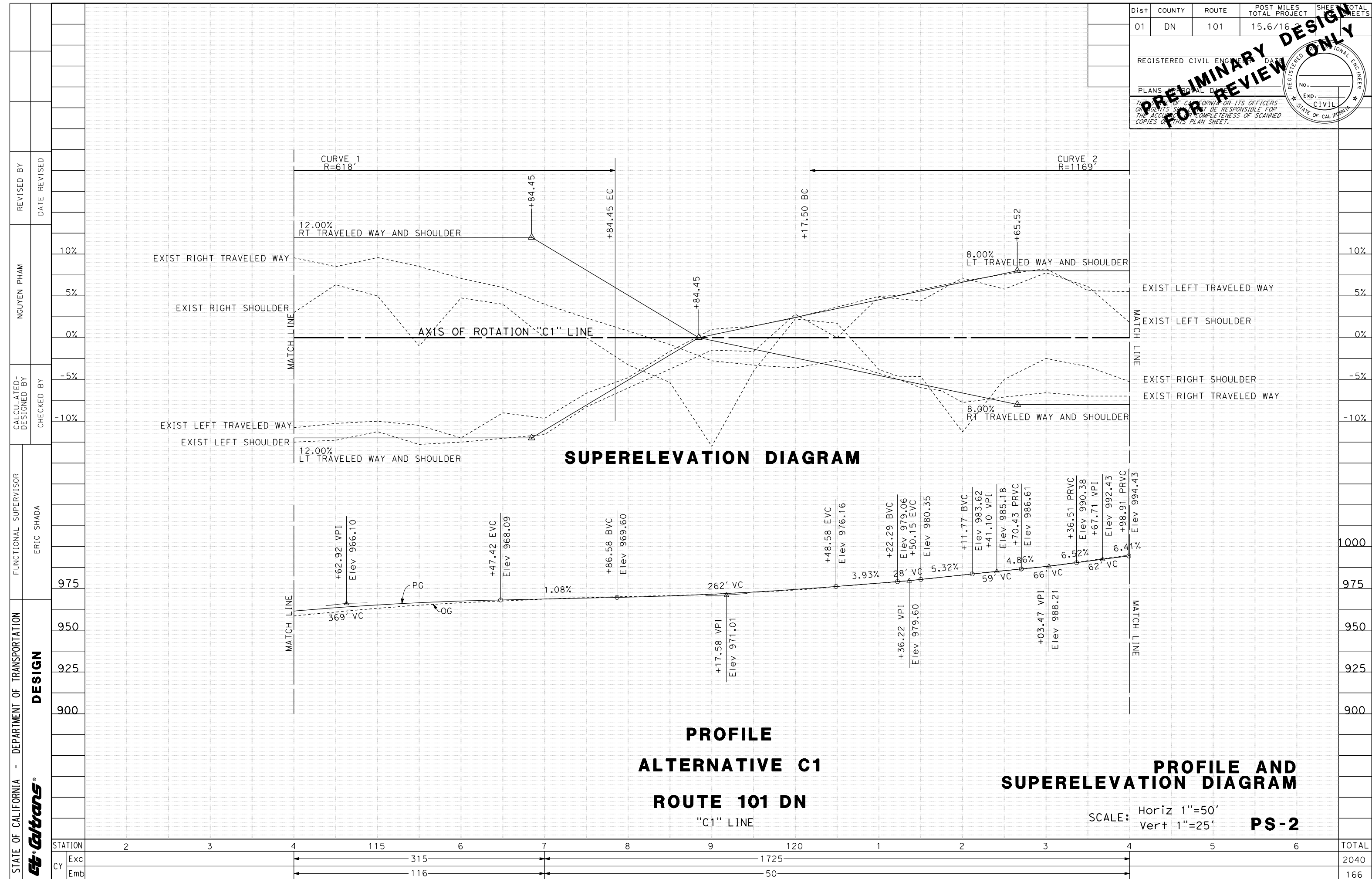
|  |              |
|--|--------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN       |
| FUNCTIONAL SUPERVISOR                              | ERIC SHADA   |
| CALCULATED-DESIGNED BY                             | CHECKED BY   |
| NGUYEN PHAM  |              |
| REVISOR BY   | DATE REVISED |



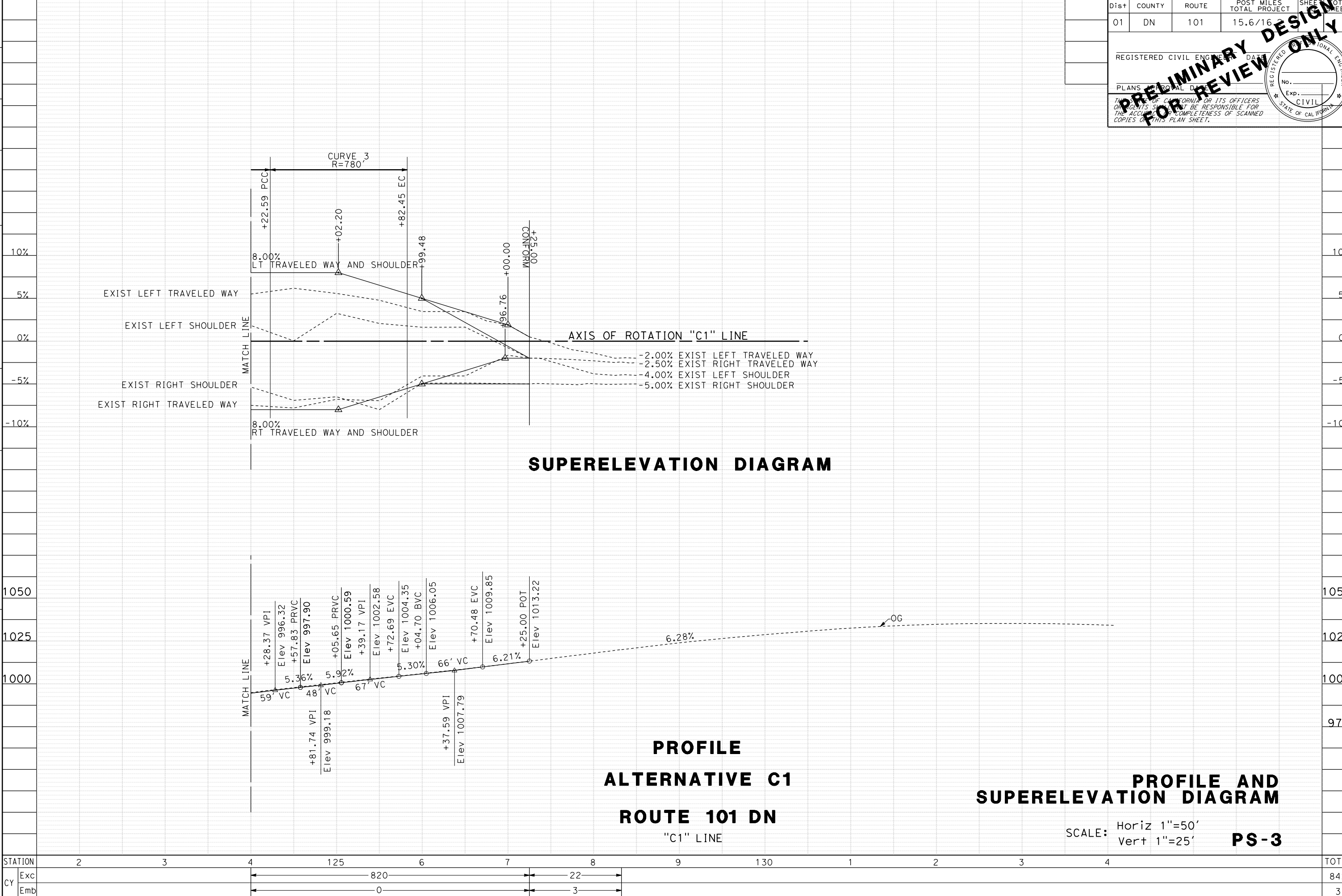
|         |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |       |
|---------|-----|---|---|---|---|-----|---|---|---|---|-----|---|---|---|---|-------|
| STATION | 100 | 1 | 2 | 3 | 4 | 105 | 6 | 7 | 8 | 9 | 110 | 1 | 2 | 3 | 4 | TOTAL |
| Exc     |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   | 268   |
| Emb     |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   | 1866  |

LAST REVISION DATE PLOTTED => 3/6/2024 00-00-00 TIME PLOTTED => 2:00:07 PM





STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
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 FUNCTIONAL SUPERVISOR: ERIC SHADA  
 CALCULATED/DESIGNED BY: NGUYEN PHAM  
 CHECKED BY: NGUYEN PHAM  
 REVISOR BY: NGUYEN PHAM  
 DATE REVISOR: NGUYEN PHAM



|      |        |       |                          |                    |
|------|--------|-------|--------------------------|--------------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| 01   | DN     | 101   | 15.6/16                  |                    |

REGISTERED CIVIL ENGINEER  
 No. \_\_\_\_\_  
 Exp. \_\_\_\_\_  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA

**PRELIMINARY DESIGN FOR REVIEW ONLY**

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 00-00-00 TIME PLOTTED => 2:00:49 PM



## **Appendix B. Title VI Policy Statement**

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**California Department of Transportation**

OFFICE OF THE DIRECTOR  
P.O. BOX 942873, MS-49 | SACRAMENTO, CA 94273-0001  
(916) 654-6130 | FAX (916) 653-5776 TTY 711  
[www.dot.ca.gov](http://www.dot.ca.gov)



September 2022

**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."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

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) 639-6392 or visit the following web page: <https://dot.ca.gov/programs/civil-rights/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 Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at [Title.VI@dot.ca.gov](mailto:Title.VI@dot.ca.gov).

A handwritten signature in black ink, appearing to read 'Tony Tavares'.

TONY TAVARES  
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"



## **Appendix C. USFWS, NMFS, CNDDDB, CNPS Species Lists**

---





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Arcata Fish And Wildlife Office  
1655 Heindon Road  
Arcata, CA 95521-4573  
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To:  
Project Code: 2022-0032273  
Project Name: 0K950

December 12, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

## To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Arcata Fish And Wildlife Office**

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

---



## PROJECT SUMMARY

Project Code: 2022-0032273

Project Name: 0K950

Project Type: Road/Hwy - Maintenance/Modification

Project Description: Transportation Safety Project

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.646307199999995,-124.11250244286893,14z>



Counties: Del Norte County, California

---

## ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME  | STATUS     |
|---|------------|
| Pacific Marten, Coastal Distinct Population Segment <i>Martes caurina</i><br>There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9081">https://ecos.fws.gov/ecp/species/9081</a> | Threatened |

---

**BIRDS**

| NAME   | STATUS     |
|--|------------|
| Marbled Murrelet <i>Brachyramphus marmoratus</i><br>Population: U.S.A. (CA, OR, WA)<br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>   | Threatened |
| Northern Spotted Owl <i>Strix occidentalis caurina</i><br>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>  | Threatened |
| Western Snowy Plover <i>Charadrius nivosus nivosus</i><br>Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)<br>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a> | Threatened |
| Yellow-billed Cuckoo <i>Coccyzus americanus</i><br>Population: Western U.S. DPS<br>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>   | Threatened |

**REPTILES**

| NAME   | STATUS                 |
|--|------------------------|
| Northwestern Pond Turtle <i>Actinemys marmorata</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1111">https://ecos.fws.gov/ecp/species/1111</a> | Proposed<br>Threatened |

**FISHES**

| NAME   | STATUS     |
|--|------------|
| Tidewater Goby <i>Eucyclogobius newberryi</i><br>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/57">https://ecos.fws.gov/ecp/species/57</a> | Endangered |

**INSECTS**

| NAME   | STATUS    |
|--|-----------|
| Monarch Butterfly <i>Danaus plexippus</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a> | Candidate |

**CRITICAL HABITATS**

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

| NAME  | STATUS |
|---|--------|
| Marbled Murrelet <i>Brachyramphus marmoratus</i><br><a href="https://ecos.fws.gov/ecp/species/4467#crithab">https://ecos.fws.gov/ecp/species/4467#crithab</a> | Final  |

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## **IPAC USER CONTACT INFORMATION**

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State: CA  
Zip: 95501  
Email: benjamin.lardiere@dot.ca.gov  
Phone: 7078156361

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Quad Name **Crescent City**

Quad Number **41124-G2**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) - **X**  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) - **X**  
sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - **X**  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - X  
Olive Ridley Sea Turtle (T/E) - X  
Leatherback Sea Turtle (E) - X  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) - X  
Fin Whale (E) - X  
Humpback Whale (E) - X  
Southern Resident Killer Whale (E) - X  
North Pacific Right Whale (E) - X  
Sei Whale (E) - X  
Sperm Whale (E) - X

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - X  
Chinook Salmon EFH - X  
Groundfish EFH - X  
Coastal Pelagics EFH - X  
Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - X  
MMPA Pinnipeds - X

Quad Name **Hiouchi**

Quad Number **41124-G1**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) - **X**  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) -

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - **X**  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat -

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -



## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) -  
Olive Ridley Sea Turtle (T/E) -  
Leatherback Sea Turtle (E) -  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) -  
Fin Whale (E) -  
Humpback Whale (E) -  
Southern Resident Killer Whale (E) -  
North Pacific Right Whale (E) -  
Sei Whale (E) -  
Sperm Whale (E) -

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - **X**  
Chinook Salmon EFH - **X**  
Groundfish EFH -  
Coastal Pelagics EFH -  
Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans -  
MMPA Pinnipeds -

Quad Name **Sister Rocks**

Quad Number **41124-F2**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) - **X**  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) - **X**  
sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - **X**  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - X  
Olive Ridley Sea Turtle (T/E) - X  
Leatherback Sea Turtle (E) - X  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) - X  
Fin Whale (E) - X  
Humpback Whale (E) - X  
Southern Resident Killer Whale (E) - X  
North Pacific Right Whale (E) - X  
Sei Whale (E) - X  
Sperm Whale (E) - X

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - X  
Chinook Salmon EFH - X  
Groundfish EFH - X  
Coastal Pelagics EFH - X  
Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - X  
MMPA Pinnipeds - X

Quad Name **Childs Hill**

Quad Number **41124-F1**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) - **X**  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) - **X**  
sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - **X**  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - X  
Olive Ridley Sea Turtle (T/E) - X  
Leatherback Sea Turtle (E) - X  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) - X  
Fin Whale (E) - X  
Humpback Whale (E) - X  
Southern Resident Killer Whale (E) - X  
North Pacific Right Whale (E) - X  
Sei Whale (E) - X  
Sperm Whale (E) - X

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - X  
Chinook Salmon EFH - X  
Groundfish EFH - X  
Coastal Pelagics EFH - X  
Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - X  
MMPA Pinnipeds - X

Quad Name **Requa**

Quad Number **41124-E1**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) - **X**  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) - **X**  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) - **X**  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) - **X**  
sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - **X**  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat - **X**  
sDPS Green Sturgeon Critical Habitat - **X**

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

**Black Abalone Critical Habitat -**

**ESA Sea Turtles**

- East Pacific Green Sea Turtle (T) - **X**
- Olive Ridley Sea Turtle (T/E) - **X**
- Leatherback Sea Turtle (E) - **X**
- North Pacific Loggerhead Sea Turtle (E) -

**ESA Whales**

- Blue Whale (E) - **X**
- Fin Whale (E) - **X**
- Humpback Whale (E) - **X**
- Southern Resident Killer Whale (E) - **X**
- North Pacific Right Whale (E) - **X**
- Sei Whale (E) - **X**
- Sperm Whale (E) - **X**

**ESA Pinnipeds**

- Guadalupe Fur Seal (T) -
- Steller Sea Lion Critical Habitat -

**Essential Fish Habitat**

- Coho EFH - **X**
- Chinook Salmon EFH - **X**
- Groundfish EFH - **X**
- Coastal Pelagics EFH - **X**
- Highly Migratory Species EFH -

**MMPA Species (See list at left)**

**ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

- MMPA Cetaceans - **X**
- MMPA Pinnipeds - **X**

Quad Name **Cant Hook Mountain**

Quad Number **41123-F8**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) - **X**  
CCC Coho ESU (E) -  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) -  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) -

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat - **X**  
CCC Coho Critical Habitat -  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat -

### **ESA Marine Invertebrates**

Range Black Abalone (E) -  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -



## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) -  
Olive Ridley Sea Turtle (T/E) -  
Leatherback Sea Turtle (E) -  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) -  
Fin Whale (E) -  
Humpback Whale (E) -  
Southern Resident Killer Whale (E) -  
North Pacific Right Whale (E) -  
Sei Whale (E) -  
Sperm Whale (E) -

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - **X**  
Chinook Salmon EFH - **X**  
Groundfish EFH -  
Coastal Pelagics EFH -  
Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans -  
MMPA Pinnipeds -



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad<span style='color: Red;'> IS </span>(Crescent City (4112472)<span style='color: Red;'> OR </span>Hiouchi (4112471)<span style='color: Red;'> OR </span>Sister Rocks (4112462)<span style='color: Red;'> OR </span>Childs Hill (4112461)<span style='color: Red;'> OR </span>Requa (4112451)<span style='color: Red;'> OR </span>Cant Hook Mtn. (4112368))

| Name (Scientific/Common)  | CNDDB Ranks  | Listing Status (Fed/State)      | Other Lists  | Elev. Range (ft.) | Total EO's  | Element Occ. Ranks |   |   |   |   |    | Population Status |                 | Presence |               |         |
|---|--------------|---------------------------------|--|-------------------|-------------|--------------------|---|---|---|---|----|-------------------|-----------------|----------|---------------|---------|
|   |              |                                 |  |                   |             | A                  | B | C | D | X | U  | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Abronia umbellata</i> var. <i>breviflora</i><br>pink sand-verbena          | G4G5T2<br>S2 | None<br>None                    | Rare Plant Rank - 1B.1<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-<br>California/Rancho<br>Santa Ana Botanic<br>Garden | 5<br>10           | 61<br>S:6   | 0                  | 1 | 2 | 3 | 0 | 0  | 4                 | 2               | 6        | 0             | 0       |
| <i>Anthoxanthum nitens</i> ssp. <i>nitens</i><br>vanilla-grass                | G5T5<br>S2   | None<br>None                    | Rare Plant Rank - 2B.3   | 10<br>10          | 6<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Aplodontia rufa humboldtiana</i><br>Humboldt mountain beaver               | G5TNR<br>SNR | None<br>None                    |  | 5<br>30           | 28<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2  | 1                 | 1               | 2        | 0             | 0       |
| <i>Arborimus pomo</i><br>Sonoma tree vole                                     | G3<br>S3     | None<br>None                    | CDFW_SSC-Species<br>of Special Concern<br>IUCN_NT-Near<br>Threatened   | 300<br>800        | 222<br>S:4  | 0                  | 0 | 0 | 0 | 0 | 4  | 4                 | 0               | 4        | 0             | 0       |
| <i>Ardea herodias</i><br>great blue heron                                     | G5<br>S4     | None<br>None                    | CDF_S-Sensitive<br>IUCN_LC-Least<br>Concern  | 20<br>20          | 156<br>S:1  | 0                  | 1 | 0 | 0 | 0 | 0  | 0                 | 1               | 1        | 0             | 0       |
| <i>Ascaphus truei</i><br>Pacific tailed frog                                  | G4<br>S3S4   | None<br>None                    | CDFW_SSC-Species<br>of Special Concern<br>IUCN_LC-Least<br>Concern   | 60<br>2,100       | 491<br>S:33 | 1                  | 0 | 0 | 0 | 0 | 32 | 19                | 14              | 33       | 0             | 0       |
| <i>Asplenium trichomanes</i> ssp. <i>trichomanes</i><br>maidenhair spleenwort | G5T5<br>S1   | None<br>None                    | Rare Plant Rank - 2B.1   | 600<br>600        | 1<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 0                 | 1               | 1        | 0             | 0       |
| <i>Atractelmis wawona</i><br>Wawona riffle beetle                             | G3<br>S1S2   | None<br>None                    |  | 45<br>257         | 80<br>S:3   | 0                  | 0 | 0 | 0 | 0 | 3  | 3                 | 0               | 3        | 0             | 0       |
| <i>Boechera koehleri</i><br>Koehler's stipitate rockcress                     | G3G4<br>S3   | None<br>None                    | Rare Plant Rank - 1B.3<br>USFS_S-Sensitive   | 400<br>400        | 29<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Bombus caliginosus</i><br>obscure bumble bee                               | G2G3<br>S1S2 | None<br>None                    | IUCN_VU-Vulnerable   | 1<br>500          | 181<br>S:7  | 0                  | 0 | 0 | 0 | 0 | 7  | 6                 | 1               | 7        | 0             | 0       |
| <i>Bombus occidentalis</i><br>western bumble bee                              | G3<br>S1     | None<br>Candidate<br>Endangered | IUCN_VU-Vulnerable<br>USFS_S-Sensitive   | 25<br>50          | 306<br>S:3  | 0                  | 0 | 0 | 0 | 0 | 3  | 3                 | 0               | 3        | 0             | 0       |



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



| Name (Scientific/Common)  | CNDDB Ranks | Listing Status (Fed/State) | Other Lists                                     | Elev. Range (ft.) | Total EO's  | Element Occ. Ranks |   |   |   |   |    | Population Status |                 | Presence |               |         |
|---|-------------|----------------------------|---|-------------------|-------------|--------------------|---|---|---|---|----|-------------------|-----------------|----------|---------------|---------|
|   |             |                            |   |                   |             | A                  | B | C | D | X | U  | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Brachyramphus marmoratus</i><br>marbled murrelet                           | G3<br>S2    | Threatened<br>Endangered   | CDF_S-Sensitive<br>IUCN_EN-Endangered           | 200<br>1,000      | 110<br>S:17 | 0                  | 0 | 0 | 0 | 0 | 17 | 17                | 0               | 17       | 0             | 0       |
| <i>Branta hutchinsii leucopareia</i><br>cackling (=Aleutian Canada) goose     | G5T3<br>S3  | Delisted<br>None           | CDFW_WL-Watch List                              | 20<br>200         | 19<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Calamagrostis crassiglumis</i><br>Thurber's reed grass                     | G3Q<br>S2   | None<br>None               | Rare Plant Rank - 2B.1                          |                   | 15<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Calicium adpersum</i><br>spiral-spored gilded-head pin lichen              | G3G4<br>S1  | None<br>None               | Rare Plant Rank - 2B.2<br>USFS_S-Sensitive      | 650<br>650        | 1<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Calystegia atriplicifolia ssp. buttensis</i><br>Butte County morning-glory | G5T3<br>S3  | None<br>None               | Rare Plant Rank - 4.2                           | 350<br>1,960      | 121<br>S:3  | 1                  | 1 | 0 | 0 | 0 | 1  | 2                 | 1               | 3        | 0             | 0       |
| <i>Cardamine angulata</i><br>seaside bittercress                              | G4G5<br>S3  | None<br>None               | Rare Plant Rank - 2B.1                          | 40<br>755         | 38<br>S:8   | 1                  | 4 | 0 | 0 | 0 | 3  | 1                 | 7               | 8        | 0             | 0       |
| <i>Cardamine nuttallii var. gemmata</i><br>yellow-tubered toothwort           | G5T3Q<br>S2 | None<br>None               | Rare Plant Rank - 3.3                           | 70<br>1,840       | 17<br>S:2   | 0                  | 1 | 0 | 0 | 0 | 1  | 2                 | 0               | 2        | 0             | 0       |
| <i>Carex arcta</i><br>northern clustered sedge                                | G5<br>S1    | None<br>None               | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern |                   | 13<br>S:1   | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Carex lenticularis var. limnophila</i><br>lagoon sedge                     | G5T5<br>S1  | None<br>None               | Rare Plant Rank - 2B.2                          |                   | 4<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Carex leptalea</i><br>bristle-stalked sedge                                | G5<br>S1    | None<br>None               | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern | 1,450<br>1,450    | 8<br>S:1    | 0                  | 0 | 1 | 0 | 0 | 0  | 0                 | 1               | 1        | 0             | 0       |
| <i>Carex lyngbyei</i><br>Lyngbye's sedge                                      | G5<br>S3    | None<br>None               | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern | 4<br>15           | 37<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Carex praticola</i><br>northern meadow sedge                               | G5<br>S2    | None<br>None               | Rare Plant Rank - 2B.2                          | 50<br>50          | 14<br>S:1   | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Carex serpenticola</i><br>serpentine sedge                                 | G4<br>S3    | None<br>None               | Rare Plant Rank - 2B.3                          | 2,280<br>2,280    | 17<br>S:1   | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Carex viridula ssp. viridula</i><br>green yellow sedge                     | G5T5<br>S2  | None<br>None               | Rare Plant Rank - 2B.3                          | 10<br>10          | 8<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Cascadia nuttallii</i><br>Nuttall's saxifrage                              | G4?<br>S1   | None<br>None               | Rare Plant Rank - 2B.1                          | 125<br>250        | 2<br>S:2    | 0                  | 0 | 0 | 0 | 0 | 2  | 1                 | 1               | 2        | 0             | 0       |



## Summary Table Report

### California Department of Fish and Wildlife California Natural Diversity Database



| Name (Scientific/Common)  | CNDDB Ranks    | Listing Status (Fed/State) | Other Lists   | Elev. Range (ft.) | Total EO's | Element Occ. Ranks |   |   |   |   |   | Population Status |                 | Presence |               |         |
|---|----------------|----------------------------|---|-------------------|------------|--------------------|---|---|---|---|---|-------------------|-----------------|----------|---------------|---------|
|   |                |                            |   |                   |            | A                  | B | C | D | X | U | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Castilleja elata</i><br>Siskiyou paintbrush                                    | G3<br>S2S3     | None<br>None               | Rare Plant Rank - 2B.2  | 200<br>540        | 36<br>S:4  | 0                  | 1 | 0 | 0 | 0 | 3 | 4                 | 0               | 4        | 0             | 0       |
| <i>Castilleja litoralis</i><br>Oregon coast paintbrush                            | G3<br>S3       | None<br>None               | Rare Plant Rank - 2B.2  | 14<br>280         | 44<br>S:5  | 0                  | 0 | 2 | 0 | 0 | 3 | 2                 | 3               | 5        | 0             | 0       |
| <i>Cerorhinca monocerata</i><br>rhinoceros auklet                                 | G5<br>S3       | None<br>None               | CDFW_WL-Watch List<br>IUCN_LC-Least Concern   | 235<br>235        | 10<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Charadrius nivosus nivosus</i><br>western snowy plover                         | G3T3<br>S3     | Threatened<br>None         | CDFW_SSC-Species of Special Concern   | 10<br>10          | 138<br>S:1 | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Circus hudsonius</i><br>northern harrier                                       | G5<br>S3       | None<br>None               | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFWS_BCC-Birds of Conservation Concern | 15<br>55          | 54<br>S:3  | 0                  | 1 | 2 | 0 | 0 | 0 | 0                 | 3               | 3        | 0             | 0       |
| <i>Coastal and Valley Freshwater Marsh</i><br>Coastal and Valley Freshwater Marsh | G3<br>S2.1     | None<br>None               |   | 10<br>10          | 60<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Coastal Brackish Marsh</i><br>Coastal Brackish Marsh                           | G2<br>S2.1     | None<br>None               |   |                   | 30<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Cochlearia groenlandica</i><br>Greenland cochlearia                            | G4<br>S1       | None<br>None               | Rare Plant Rank - 2B.3  | 5<br>5            | 1<br>S:1   | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Coenonympha tullia yontockett</i><br>Yontockett satyr                          | G5T1T2<br>S1S2 | None<br>None               |   | 10<br>10          | 1<br>S:1   | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Coptis laciniata</i><br>Oregon goldthread                                      | G4?<br>S3?     | None<br>None               | Rare Plant Rank - 4.2   | 340<br>1,780      | 122<br>S:5 | 0                  | 0 | 0 | 0 | 0 | 5 | 3                 | 2               | 5        | 0             | 0       |
| <i>Corynorhinus townsendii</i><br>Townsend's big-eared bat                        | G4<br>S2       | None<br>None               | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive     | 170<br>170        | 635<br>S:1 | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Cypseloides niger</i><br>black swift   | G4<br>S3       | None<br>None               | CDFW_SSC-Species of Special Concern<br>IUCN_VU-Vulnerable<br>USFWS_BCC-Birds of Conservation Concern    | 160<br>160        | 46<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |



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| Name (Scientific/Common)                                     | CNDDB Ranks | Listing Status (Fed/State)  | Other Lists  | Elev. Range (ft.) | Total EO's  | Element Occ. Ranks |   |   |   |   |    | Population Status |                 | Presence |               |         |
|--|-------------|-----------------------------|--|-------------------|-------------|--------------------|---|---|---|---|----|-------------------|-----------------|----------|---------------|---------|
|  |             |                             |  |                   |             | A                  | B | C | D | X | U  | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Discelium nudum</i><br>naked flag moss                    | G4G5<br>S1  | None<br>None                | Rare Plant Rank - 2B.2   |                   | 2<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Downingia willamettensis</i><br>Cascade downingia         | G4<br>S2    | None<br>None                | Rare Plant Rank - 2B.2   | 191<br>191        | 8<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Elanus leucurus</i><br>white-tailed kite                  | G5<br>S3S4  | None<br>None                | BLM_S-Sensitive<br>CDFW_FP-Fully Protected<br>IUCN_LC-Least Concern                              | 10<br>10          | 184<br>S:1  | 0                  | 0 | 0 | 0 | 1 | 0  | 1                 | 0               | 0        | 1             | 0       |
| <i>Empetrum nigrum</i><br>black crowberry                    | G5<br>S1?   | None<br>None                | Rare Plant Rank - 2B.2   | 10<br>45          | 4<br>S:3    | 0                  | 0 | 0 | 0 | 1 | 2  | 3                 | 0               | 2        | 0             | 1       |
| <i>Emys marmorata</i><br>western pond turtle                 | G3G4<br>S3  | Proposed Threatened<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_VU-Vulnerable<br>USFS_S-Sensitive | 38<br>65          | 1522<br>S:2 | 1                  | 1 | 0 | 0 | 0 | 0  | 0                 | 2               | 2        | 0             | 0       |
| <i>Erethizon dorsatum</i><br>North American porcupine        | G5<br>S3    | None<br>None                | IUCN_LC-Least Concern  | 14<br>1,347       | 523<br>S:28 | 0                  | 0 | 0 | 0 | 0 | 28 | 4                 | 24              | 28       | 0             | 0       |
| <i>Eriogonum nudum var. paralinum</i><br>Del Norte buckwheat | G5T2<br>S1  | None<br>None                | Rare Plant Rank - 2B.2   | 5<br>178          | 4<br>S:4    | 0                  | 0 | 0 | 0 | 0 | 4  | 1                 | 3               | 4        | 0             | 0       |
| <i>Erysimum concinnum</i><br>bluff wallflower                | G3<br>S2    | None<br>None                | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive  | 10<br>50          | 30<br>S:5   | 0                  | 1 | 0 | 1 | 0 | 3  | 3                 | 2               | 5        | 0             | 0       |
| <i>Erythronium hendersonii</i><br>Henderson's fawn lily      | G4<br>S2    | None<br>None                | Rare Plant Rank - 2B.3<br>USFS_S-Sensitive   | 200<br>200        | 7<br>S:1    | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Erythronium howellii</i><br>Howell's fawn lily            | G3G4<br>S2  | None<br>None                | Rare Plant Rank - 1B.3   | 400<br>2,300      | 11<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Erythronium oregonum</i><br>giant fawn lily               | G5<br>S2    | None<br>None                | Rare Plant Rank - 2B.2<br>SB_UCSC-UC Santa Cruz  | 1,700<br>1,780    | 37<br>S:2   | 0                  | 1 | 0 | 0 | 0 | 1  | 0                 | 2               | 2        | 0             | 0       |
| <i>Erythronium revolutum</i><br>coast fawn lily              | G4G5<br>S3  | None<br>None                | Rare Plant Rank - 2B.2<br>SB_UCSC-UC Santa Cruz  | 400<br>1,445      | 172<br>S:4  | 0                  | 4 | 0 | 0 | 0 | 0  | 0                 | 4               | 4        | 0             | 0       |
| <i>Eucyclogobius newberryi</i><br>tidewater goby             | G3<br>S3    | Endangered<br>None          | AFS_EN-Endangered<br>IUCN_NT-Near Threatened   | 4<br>4            | 127<br>S:1  | 1                  | 0 | 0 | 0 | 0 | 0  | 0                 | 1               | 1        | 0             | 0       |



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|--|-------------|----------------------------|--|-------------------|------------|--------------------|---|---|---|---|---|-------------------|-----------------|----------|---------------|---------|
|  |             |                            |  |                   |            | A                  | B | C | D | X | U | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Eumetopias jubatus</i><br>Steller sea lion                      | G3<br>S2    | Delisted<br>None           | IUCN_NT-Near Threatened<br>MMC_SSC-Species of Special Concern  | 10<br>10          | 38<br>S:2  | 0                  | 1 | 0 | 0 | 0 | 1 | 0                 | 2               | 2        | 0             | 0       |
| <i>Fissidens pauperculus</i><br>minute pocket moss                 | G3?<br>S2   | None<br>None               | Rare Plant Rank - 1B.2<br>USFS_S-Sensitive   |                   | 22<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Fratercula cirrhata</i><br>tufted puffin                        | G5<br>S1S2  | None<br>None               | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFWS_BCC-Birds of Conservation Concern    | 235<br>235        | 17<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Gilia capitata ssp. pacifica</i><br>Pacific gilia               | G5T3<br>S2  | None<br>None               | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden                        | 16<br>1,900       | 91<br>S:11 | 0                  | 1 | 1 | 0 | 0 | 9 | 6                 | 5               | 11       | 0             | 0       |
| <i>Gilia millefoliata</i><br>dark-eyed gilia                       | G2<br>S2    | None<br>None               | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden     | 10<br>75          | 54<br>S:8  | 0                  | 0 | 7 | 0 | 0 | 1 | 5                 | 3               | 8        | 0             | 0       |
| <i>Gonidea angulata</i><br>western ridged mussel                   | G3<br>S2    | None<br>None               | IUCN_VU-Vulnerable   | 5<br>5            | 158<br>S:1 | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Haliaeetus leucocephalus</i><br>bald eagle                      | G5<br>S3    | Delisted<br>Endangered     | BLM_S-Sensitive<br>CDF_S-Sensitive<br>CDFW_FP-Fully Protected<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive | 292<br>292        | 333<br>S:1 | 0                  | 0 | 0 | 0 | 0 | 1 | 0                 | 1               | 1        | 0             | 0       |
| <i>Hesperovax sparsiflora var. brevifolia</i><br>short-leaved evax | G4T3<br>S3  | None<br>None               | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden     | 13<br>54          | 72<br>S:5  | 1                  | 2 | 1 | 0 | 0 | 1 | 0                 | 5               | 5        | 0             | 0       |
| <i>Hydrobates furcatus</i><br>fork-tailed storm-petrel             | G5<br>S1    | None<br>None               | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern                            | 12<br>235         | 8<br>S:3   | 0                  | 0 | 0 | 0 | 1 | 2 | 3                 | 0               | 2        | 0             | 1       |



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|---|--------------|----------------------------|--|-------------------|------------|--------------------|---|---|---|---|---|-------------------|-----------------|----------|---------------|---------|
|   |              |                            |  |                   |            | A                  | B | C | D | X | U | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Juga chacei</i><br>Chace juga                                    | G1<br>S1     | None<br>None               | USFS_S-Sensitive   | 13<br>988         | 11<br>S:8  | 0                  | 0 | 0 | 0 | 0 | 8 | 7                 | 1               | 8        | 0             | 0       |
| <i>Kopsiopsis hookeri</i><br>small groundcone                       | G4?<br>S1S2  | None<br>None               | Rare Plant Rank - 2B.3   | 1,750<br>1,980    | 21<br>S:3  | 0                  | 1 | 1 | 0 | 0 | 1 | 1                 | 2               | 3        | 0             | 0       |
| <i>Lanx alta</i><br>highcap lanx                                    | G2G3<br>S3   | None<br>None               |  | 116<br>157        | 13<br>S:2  | 0                  | 0 | 0 | 0 | 0 | 2 | 1                 | 1               | 2        | 0             | 0       |
| <i>Lasionycteris noctivagans</i><br>silver-haired bat               | G3G4<br>S3S4 | None<br>None               | IUCN_LC-Least Concern  | 170<br>370        | 139<br>S:2 | 1                  | 0 | 0 | 0 | 0 | 1 | 0                 | 2               | 2        | 0             | 0       |
| <i>Lasthenia californica ssp. macrantha</i><br>perennial goldfields | G3T2<br>S2   | None<br>None               | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 100<br>100        | 59<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Lathyrus japonicus</i><br>seaside pea                            | G5<br>S2     | None<br>None               | Rare Plant Rank - 2B.1<br>IUCN_LC-Least Concern  | 0<br>20           | 24<br>S:6  | 0                  | 3 | 0 | 0 | 0 | 3 | 2                 | 4               | 6        | 0             | 0       |
| <i>Lathyrus palustris</i><br>marsh pea                              | G5<br>S2     | None<br>None               | Rare Plant Rank - 2B.2   | 8<br>40           | 13<br>S:5  | 1                  | 2 | 0 | 0 | 0 | 2 | 2                 | 3               | 5        | 0             | 0       |
| <i>Lewisia oppositifolia</i><br>opposite-leaved lewisia             | G3<br>S2     | None<br>None               | Rare Plant Rank - 2B.2<br>USFS_S-Sensitive   | 1,800<br>1,800    | 14<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 0                 | 1               | 1        | 0             | 0       |
| <i>Lilium occidentale</i><br>western lily                           | G1G2<br>S1   | Endangered<br>Endangered   | Rare Plant Rank - 1B.1<br>SB_BerrySB-Berry Seed Bank   | 10<br>40          | 16<br>S:7  | 0                  | 1 | 4 | 2 | 0 | 0 | 4                 | 3               | 7        | 0             | 0       |
| <i>Limnephilus atercus</i><br>Fort Dick limnephilus caddisfly       | G3G4<br>S1S2 | None<br>None               |  | 50<br>70          | 2<br>S:2   | 0                  | 0 | 0 | 0 | 0 | 2 | 2                 | 0               | 2        | 0             | 0       |
| <i>Lysimachia europaea</i><br>arctic starflower                     | G5<br>S1     | None<br>None               | Rare Plant Rank - 2B.2   | 10<br>50          | 4<br>S:4   | 1                  | 0 | 0 | 1 | 0 | 2 | 4                 | 0               | 4        | 0             | 0       |
| <i>Margaritifera falcata</i><br>western pearlshell                  | G5<br>S1S2   | None<br>None               | IUCN_NT-Near Threatened  | 130<br>130        | 78<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Martes caurina humboldtensis</i><br>Humboldt marten              | G4G5T1<br>S1 | Threatened<br>Endangered   | CDFW_SSC-Species of Special Concern<br>USFS_S-Sensitive  | 50<br>3,600       | 44<br>S:3  | 0                  | 0 | 0 | 0 | 0 | 3 | 3                 | 0               | 3        | 0             | 0       |
| <i>Mitellastra caulescens</i><br>leafy-stemmed mitrewort            | G5<br>S4     | None<br>None               | Rare Plant Rank - 4.2  | 1,000<br>1,000    | 21<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |



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|---|--------------|----------------------------|---|-------------------|-------------|--------------------|----|----|---|---|----|-------------------|-----------------|----------|---------------|---------|
|   |              |                            |   |                   |             | A                  | B  | C  | D | X | U  | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Monadenia fidelis pronotis</i><br>rocky coast Pacific sideband | G4G5T1<br>S1 | None<br>None               | IUCN_DD-Data Deficient  | 40<br>40          | 1<br>S:1    | 0                  | 0  | 0  | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Moneses uniflora</i><br>woodnymph                              | G5<br>S2     | None<br>None               | Rare Plant Rank - 2B.2  |                   | 7<br>S:1    | 0                  | 0  | 0  | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Monotropa uniflora</i><br>ghost-pipe                           | G5<br>S2     | None<br>None               | Rare Plant Rank - 2B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 50<br>1,665       | 115<br>S:56 | 1                  | 13 | 30 | 5 | 0 | 7  | 2                 | 54              | 56       | 0             | 0       |
| <i>Myotis evotis</i><br>long-eared myotis                         | G5<br>S3     | None<br>None               | BLM_S-Sensitive<br>IUCN_LC-Least Concern  | 122<br>979        | 139<br>S:2  | 0                  | 0  | 0  | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Myotis thysanodes</i><br>fringed myotis                        | G4<br>S3     | None<br>None               | BLM_S-Sensitive<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive                        | 940<br>940        | 86<br>S:1   | 0                  | 0  | 1  | 0 | 0 | 0  | 1                 | 0               | 1        | 0             | 0       |
| <i>Myotis yumanensis</i><br>Yuma myotis                           | G5<br>S4     | None<br>None               | BLM_S-Sensitive<br>IUCN_LC-Least Concern  | 60<br>380         | 265<br>S:4  | 1                  | 2  | 0  | 0 | 0 | 1  | 0                 | 4               | 4        | 0             | 0       |
| <i>Nannopterum auritum</i><br>double-crested cormorant            | G5<br>S4     | None<br>None               | CDFW_WL-Watch List<br>IUCN_LC-Least Concern   | 5<br>9            | 39<br>S:5   | 0                  | 0  | 0  | 0 | 0 | 5  | 5                 | 0               | 5        | 0             | 0       |
| <i>Northern Coastal Salt Marsh</i><br>Northern Coastal Salt Marsh | G3<br>S3.2   | None<br>None               |   | 4<br>4            | 53<br>S:1   | 0                  | 0  | 0  | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Nycticorax nycticorax</i><br>black-crowned night heron         | G5<br>S4     | None<br>None               | IUCN_LC-Least Concern   | 22<br>22          | 37<br>S:1   | 0                  | 0  | 0  | 0 | 0 | 1  | 0                 | 1               | 1        | 0             | 0       |
| <i>Oenothera wolfii</i><br>Wolf's evening-primrose                | G2<br>S1     | None<br>None               | Rare Plant Rank - 1B.1<br>SB_BerrySB-Berry Seed Bank                                | 0<br>100          | 29<br>S:13  | 0                  | 5  | 3  | 2 | 0 | 3  | 7                 | 6               | 13       | 0             | 0       |
| <i>Oncorhynchus clarkii clarkii</i><br>coast cutthroat trout      | G5T4<br>S3   | None<br>None               | AFS_VU-Vulnerable<br>CDFW_SSC-Species of Special Concern<br>USFS_S-Sensitive        | 4<br>200          | 45<br>S:7   | 0                  | 1  | 0  | 0 | 0 | 6  | 6                 | 1               | 7        | 0             | 0       |
| <i>Packera bolanderi var. bolanderi</i><br>seacoast ragwort       | G4T4<br>S2S3 | None<br>None               | Rare Plant Rank - 2B.2  | 105<br>1,940      | 72<br>S:15  | 1                  | 2  | 0  | 0 | 0 | 12 | 5                 | 10              | 15       | 0             | 0       |
| <i>Pandion haliaetus</i><br>osprey                                | G5<br>S4     | None<br>None               | CDF_S-Sensitive<br>CDFW_WL-Watch List<br>IUCN_LC-Least Concern                      | 17<br>650         | 504<br>S:14 | 6                  | 5  | 1  | 0 | 0 | 2  | 12                | 2               | 14       | 0             | 0       |





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|--|----------------|----------------------------|---|-------------------|-------------|--------------------|----|---|---|---|----|-------------------|-----------------|----------|---------------|---------|
|  |                |                            |   |                   |             | A                  | B  | C | D | X | U  | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Pekania pennanti</i><br>Fisher                                | G5<br>S2S3     | None<br>None               | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive                                   | 1,080<br>1,080    | 555<br>S:1  | 0                  | 0  | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Phacelia argentea</i><br>sand dune phacelia                   | G2<br>S1       | Threatened<br>None         | Rare Plant Rank - 1B.1<br>SB_BerrySB-Berry Seed Bank  | 10<br>80          | 16<br>S:11  | 0                  | 10 | 0 | 0 | 0 | 1  | 2                 | 9               | 11       | 0             | 0       |
| <i>Pinguicula macroceras</i><br>horned butterwort                | G4<br>S2       | None<br>None               | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCSC-UC Santa Cruz | 80<br>450         | 26<br>S:8   | 0                  | 0  | 0 | 0 | 0 | 8  | 7                 | 1               | 8        | 0             | 0       |
| <i>Piperia candida</i><br>white-flowered rein orchid             | G3?<br>S3      | None<br>None               | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden   | 470<br>2,200      | 222<br>S:5  | 0                  | 2  | 2 | 0 | 0 | 1  | 1                 | 4               | 5        | 0             | 0       |
| <i>Platismatia lacunosa</i><br>crinkled rag lichen               | G4<br>S2?      | None<br>None               | Rare Plant Rank - 2B.3  | 213<br>213        | 4<br>S:1    | 0                  | 0  | 0 | 0 | 0 | 1  | 0                 | 1               | 1        | 0             | 0       |
| <i>Plethodon elongatus</i><br>Del Norte salamander               | G4<br>S3       | None<br>None               | CDFW_WL-Watch List<br>IUCN_NT-Near Threatened   | 80<br>2,100       | 151<br>S:23 | 1                  | 0  | 0 | 0 | 0 | 22 | 23                | 0               | 23       | 0             | 0       |
| <i>Polemonium carneum</i><br>Oregon polemonium                   | G3G4<br>S2     | None<br>None               | Rare Plant Rank - 2B.2  | 1,000<br>1,000    | 16<br>S:1   | 0                  | 0  | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Polites mardon</i><br>mardon skipper                          | G2<br>S1       | None<br>None               | USFS_S-Sensitive  | 1,720<br>1,720    | 2<br>S:1    | 0                  | 0  | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Pomatiopsis chacei</i><br>marsh walker                        | G1<br>S2       | None<br>None               |   | 38<br>168         | 6<br>S:4    | 0                  | 0  | 0 | 0 | 1 | 3  | 4                 | 0               | 3        | 1             | 0       |
| <i>Potamogeton foliosus ssp. fibrillosus</i><br>fibrous pondweed | G5T2T4<br>S1S2 | None<br>None               | Rare Plant Rank - 2B.3  | 50<br>50          | 1<br>S:1    | 0                  | 0  | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Prosartes parvifolia</i><br>Siskiyou bells                    | G2<br>S2       | None<br>None               | Rare Plant Rank - 1B.2<br>SB_UCSC-UC Santa Cruz<br>USFS_S-Sensitive   | 2,740<br>2,740    | 14<br>S:1   | 0                  | 0  | 0 | 0 | 0 | 1  | 0                 | 1               | 1        | 0             | 0       |



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



| Name (Scientific/Common)   | CNDDB Ranks  | Listing Status (Fed/State) | Other Lists  | Elev. Range (ft.) | Total EO's   | Element Occ. Ranks |   |   |   |   |    | Population Status |                 | Presence |               |         |
|--|--------------|----------------------------|--|-------------------|--------------|--------------------|---|---|---|---|----|-------------------|-----------------|----------|---------------|---------|
|  |              |                            |  |                   |              | A                  | B | C | D | X | U  | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Pyrrocoma racemosa var. congesta</i><br>Del Norte pyrrocoma             | G5T4<br>S2   | None<br>None               | Rare Plant Rank - 2B.3   | 1,949<br>1,949    | 13<br>S:2    | 0                  | 0 | 0 | 0 | 0 | 2  | 2                 | 0               | 2        | 0             | 0       |
| <i>Ramalina thrausta</i><br>angel's hair lichen                            | G5?<br>S2S3  | None<br>None               | Rare Plant Rank - 2B.1   | 160<br>1,250      | 21<br>S:7    | 0                  | 0 | 1 | 0 | 0 | 6  | 1                 | 6               | 7        | 0             | 0       |
| <i>Rana aurora</i><br>northern red-legged frog                             | G4<br>S3     | None<br>None               | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive | 10<br>800         | 292<br>S:48  | 0                  | 2 | 2 | 1 | 0 | 43 | 23                | 25              | 48       | 0             | 0       |
| <i>Rana boylei pop. 1</i><br>foothill yellow-legged frog - north coast DPS | G3T4<br>S4   | None<br>None               | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>USFS_S-Sensitive       | 25<br>1,300       | 1608<br>S:22 | 0                  | 0 | 0 | 0 | 0 | 22 | 9                 | 13              | 22       | 0             | 0       |
| <i>Rhyacotriton variegatus</i><br>southern torrent salamander              | G3?<br>S2S3  | None<br>None               | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive | 100<br>1,800      | 416<br>S:38  | 0                  | 0 | 2 | 0 | 0 | 36 | 21                | 17              | 38       | 0             | 0       |
| <i>Romanzoffia tracyi</i><br>Tracy's romanzoffia                           | G4<br>S2     | None<br>None               | Rare Plant Rank - 2B.3   | 235<br>235        | 9<br>S:3     | 0                  | 0 | 0 | 0 | 0 | 3  | 3                 | 0               | 3        | 0             | 0       |
| <i>Sabulina howellii</i><br>Howell's sandwort                              | G4<br>S3     | None<br>None               | Rare Plant Rank - 1B.3   | 125<br>1,960      | 24<br>S:4    | 1                  | 0 | 0 | 0 | 0 | 3  | 3                 | 1               | 4        | 0             | 0       |
| <i>Sagittaria sanfordii</i><br>Sanford's arrowhead                         | G3<br>S3     | None<br>None               | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive  | 10<br>10          | 143<br>S:1   | 0                  | 0 | 0 | 0 | 0 | 1  | 1                 | 0               | 1        | 0             | 0       |
| <i>Sanguisorba officinalis</i><br>great burnet                             | G5?<br>S2    | None<br>None               | Rare Plant Rank - 2B.2   | 15<br>15          | 22<br>S:3    | 1                  | 0 | 0 | 0 | 0 | 2  | 2                 | 1               | 3        | 0             | 0       |
| <i>Scaphinotus behrensi</i><br>Behrens' snail-eating beetle                | G2G4<br>S2S4 | None<br>None               |  | 114<br>114        | 4<br>S:1     | 0                  | 0 | 0 | 0 | 0 | 1  | 0                 | 1               | 1        | 0             | 0       |
| <i>Sedum patens</i><br>Smith River stonecrop                               | G2<br>S2     | None<br>None               | Rare Plant Rank - 1B.2   | 350<br>611        | 6<br>S:6     | 0                  | 0 | 0 | 0 | 0 | 6  | 0                 | 6               | 6        | 0             | 0       |
| <i>Sidalcea malachroides</i><br>maple-leaved checkerbloom                  | G3<br>S3     | None<br>None               | Rare Plant Rank - 4.2  | 100<br>300        | 136<br>S:2   | 0                  | 0 | 1 | 0 | 0 | 1  | 2                 | 0               | 2        | 0             | 0       |
| <i>Sidalcea malviflora ssp. patula</i><br>Siskiyou checkerbloom            | G4G5T2<br>S2 | None<br>None               | Rare Plant Rank - 1B.2<br>SB_UCSC-UC Santa Cruz                                  | 18<br>87          | 60<br>S:2    | 0                  | 0 | 0 | 0 | 0 | 2  | 0                 | 2               | 2        | 0             | 0       |



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|---|----------------|----------------------------|---|-------------------|------------|--------------------|---|---|---|---|---|-------------------|-----------------|----------|---------------|---------|
|   |                |                            |   |                   |            | A                  | B | C | D | X | U | Historic > 20 yr  | Recent <= 20 yr | Extant   | Poss. Extirp. | Extirp. |
| <i>Sidalcea oregana ssp. eximia</i><br>coast checkerbloom               | G5T1<br>S1     | None<br>None               | Rare Plant Rank - 1B.2  | 20<br>35          | 19<br>S:3  | 0                  | 0 | 0 | 0 | 0 | 3 | 3                 | 0               | 3        | 0             | 0       |
| <i>Silene hookeri</i><br>Hooker's catchfly                              | G4<br>S2       | None<br>None               | Rare Plant Rank - 2B.2  | 2,296<br>2,296    | 31<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Silene scouleri ssp. scouleri</i><br>Scouler's catchfly              | G5T4T5<br>S2S3 | None<br>None               | Rare Plant Rank - 2B.2  | 1,000<br>1,000    | 23<br>S:2  | 0                  | 0 | 0 | 0 | 0 | 2 | 2                 | 0               | 2        | 0             | 0       |
| <i>Silene serpentinicola</i><br>serpentine catchfly                     | G3<br>S3       | None<br>None               | Rare Plant Rank - 1B.2<br>SB_UCSC-UC Santa Cruz<br>USFS_S-Sensitive | 158<br>2,241      | 55<br>S:12 | 0                  | 4 | 0 | 0 | 0 | 8 | 2                 | 10              | 12       | 0             | 0       |
| <i>Speyeria zerene hippolyta</i><br>Oregon silverspot butterfly         | G5T1<br>S1     | Threatened<br>None         |   | 20<br>50          | 3<br>S:2   | 0                  | 2 | 0 | 0 | 0 | 0 | 2                 | 0               | 2        | 0             | 0       |
| <i>Spirinchus thaleichthys</i><br>longfin smelt                         | G5<br>S1       | Candidate<br>Threatened    | IUCN_LC-Least Concern   | 0<br>0            | 46<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Sulcaria spiralifera</i><br>twisted horsehair lichen                 | G3G4<br>S2     | None<br>None               | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive                           | 45<br>45          | 18<br>S:3  | 0                  | 0 | 0 | 0 | 0 | 3 | 3                 | 0               | 3        | 0             | 0       |
| <i>Thaleichthys pacificus</i><br>eulachon                               | G5<br>S1       | Threatened<br>None         | IUCN_LC-Least Concern   |                   | 10<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 0                 | 1               | 1        | 0             | 0       |
| <i>Triquetrella californica</i><br>coastal triquetrella                 | G2<br>S2       | None<br>None               | Rare Plant Rank - 1B.2<br>USFS_S-Sensitive                          | 80<br>80          | 13<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |
| <i>Usnea longissima</i><br>Methuselah's beard lichen                    | G4<br>S4       | None<br>None               | Rare Plant Rank - 4.2<br>BLM_S-Sensitive                            | 160<br>1,000      | 206<br>S:5 | 0                  | 1 | 2 | 0 | 0 | 2 | 5                 | 0               | 5        | 0             | 0       |
| <i>Vaccinium scoparium</i><br>little-leaved huckleberry                 | G5<br>S3       | None<br>None               | Rare Plant Rank - 2B.2  |                   | 27<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 0                 | 1               | 1        | 0             | 0       |
| <i>Viola langsdorffii</i><br>Langsdorf's violet                         | G4<br>S1       | None<br>None               | Rare Plant Rank - 2B.1  | 0<br>35           | 2<br>S:2   | 1                  | 0 | 0 | 0 | 0 | 1 | 2                 | 0               | 2        | 0             | 0       |
| <i>Viola palustris</i><br>alpine marsh violet                           | G5<br>S1S2     | None<br>None               | Rare Plant Rank - 2B.2  | 10<br>15          | 10<br>S:3  | 1                  | 0 | 0 | 0 | 0 | 2 | 3                 | 0               | 3        | 0             | 0       |
| <i>Viola primulifolia ssp. occidentalis</i><br>western white bog violet | G5T2<br>S2     | None<br>None               | Rare Plant Rank - 1B.2<br>USFS_S-Sensitive                          | 1,300<br>1,300    | 19<br>S:1  | 0                  | 0 | 0 | 0 | 0 | 1 | 1                 | 0               | 1        | 0             | 0       |



## CNPS Rare Plant Inventory

### Search Results

122 matches found. Click on scientific name for details

Search Criteria: Quad is one of [4112462:4112461:4112368:4112471:4112451:4112472]

| ▲ SCIENTIFIC NAME  | COMMON NAME                          | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK |
|--|--------------------------------------|----------|------------|-------------|------------|--------------------|
| <a href="#"><i>Abronia umbellata</i> var. <i>breviflora</i></a>        | pink sand-verbena                    | None     | None       | G4G5T2      | S2         | 1B.1               |
| <a href="#"><i>Angelica lucida</i></a>                                 | sea-watch                            | None     | None       | G5          | S3         | 4.2                |
| <a href="#"><i>Antennaria suffrutescens</i></a>                        | evergreen everlasting                | None     | None       | G4          | S3         | 4.3                |
| <a href="#"><i>Anthoxanthum nitens</i> ssp. <i>nitens</i></a>          | vanilla-grass                        | None     | None       | G5T5        | S2         | 2B.3               |
| <a href="#"><i>Arctostaphylos hispidula</i></a>                        | Howell's manzanita                   | None     | None       | G4          | S3         | 4.2                |
| <a href="#"><i>Arctostaphylos nortensis</i></a>                        | Del Norte manzanita                  | None     | None       | G2          | S2         | 4.3                |
| <a href="#"><i>Arnica cernua</i></a>                                   | serpentine arnica                    | None     | None       | G5          | S4         | 4.3                |
| <a href="#"><i>Arnica spathulata</i></a>                               | Klamath arnica                       | None     | None       | G3?         | S3         | 4.3                |
| <a href="#"><i>Asplenium trichomanes</i> ssp. <i>trichomanes</i></a>   | maidenhair spleenwort                | None     | None       | G5T5        | S1         | 2B.1               |
| <a href="#"><i>Boechera koehleri</i></a>                               | Koehler's stipitate rockcress        | None     | None       | G3G4        | S3         | 1B.3               |
| <a href="#"><i>Calamagrostis crassiglumis</i></a>                      | Thurber's reed grass                 | None     | None       | G3Q         | S2         | 2B.1               |
| <a href="#"><i>Calicium adpersum</i></a>                               | spiral-spored gilded-head pin lichen | None     | None       | G3G4        | S1         | 2B.2               |
| <a href="#"><i>Calystegia atriplicifolia</i> ssp. <i>buttensis</i></a> | Butte County morning-glory           | None     | None       | G5T3        | S3         | 4.2                |
| <a href="#"><i>Cardamine angulata</i></a>                              | seaside bittercress                  | None     | None       | G4G5        | S3         | 2B.2               |
| <a href="#"><i>Cardamine nuttallii</i> var. <i>gemmata</i></a>         | yellow-tubered toothwort             | None     | None       | G5T3Q       | S2         | 3.3                |
| <a href="#"><i>Carex arcta</i></a>                                     | northern clustered sedge             | None     | None       | G5          | S1         | 2B.2               |
| <a href="#"><i>Carex lenticularis</i> var. <i>limnophila</i></a>       | lagoon sedge                         | None     | None       | G5T5        | S1         | 2B.2               |
| <a href="#"><i>Carex leptalea</i></a>                                  | bristle-stalked sedge                | None     | None       | G5          | S1         | 2B.2               |
| <a href="#"><i>Carex lyngbyei</i></a>                                  | Lyngbye's sedge                      | None     | None       | G5          | S3         | 2B.2               |
| <a href="#"><i>Carex praticola</i></a>                                 | northern meadow sedge                | None     | None       | G5          | S2         | 2B.2               |
| <a href="#"><i>Carex scabriuscula</i></a>                              | Siskiyou sedge                       | None     | None       | G3G4        | S4         | 4.3                |
| <a href="#"><i>Carex serpenticola</i></a>                              | serpentine sedge                     | None     | None       | G4          | S3         | 2B.3               |
| <a href="#"><i>Carex sheldonii</i></a>                                 | Sheldon's sedge                      | None     | None       | G4          | S2         | 2B.2               |
| <a href="#"><i>Carex viridula</i> ssp. <i>viridula</i></a>             | green yellow sedge                   | None     | None       | G5T5        | S2         | 2B.3               |
| <a href="#"><i>Cascadia nuttallii</i></a>                              | Nuttall's saxifrage                  | None     | None       | G4?         | S1         | 2B.1               |
| <a href="#"><i>Castilleja ambigua</i> var. <i>ambigua</i></a>          | johnny-nip                           | None     | None       | G4T4        | S3S4       | 4.2                |
| <a href="#"><i>Castilleja brevilobata</i></a>                          | short-lobed paintbrush               | None     | None       | G4          | S3         | 4.2                |
| <a href="#"><i>Castilleja elata</i></a>                                | Siskiyou paintbrush                  | None     | None       | G3          | S2S3       | 2B.2               |
| <a href="#"><i>Castilleja litoralis</i></a>                            | Oregon coast paintbrush              | None     | None       | G3          | S3         | 2B.2               |

|  |                               |      |      |        |      |      |
|--|-------------------------------|------|------|--------|------|------|
| <u><i>Chrysosplenium glechomifolium</i></u>          | Pacific golden saxifrage      | None | None | G5?    | S3   | 4.3  |
| <u><i>Cochlearia groenlandica</i></u>                | Greenland cochlearia          | None | None | G4     | S1   | 2B.3 |
| <u><i>Coptis laciniata</i></u>                       | Oregon goldthread             | None | None | G4?    | S3?  | 4.2  |
| <u><i>Cypripedium californicum</i></u>               | California lady's-slipper     | None | None | G3     | S4   | 4.2  |
| <u><i>Cypripedium montanum</i></u>                   | mountain lady's-slipper       | None | None | G4G5   | S4   | 4.2  |
| <u><i>Darlingtonia californica</i></u>               | California pitcherplant       | None | None | G4     | S4   | 4.2  |
| <u><i>Dicentra formosa ssp. oregana</i></u>          | Oregon bleeding heart         | None | None | G5T4   | S3   | 4.2  |
| <u><i>Discelium nudum</i></u>                        | naked flag moss               | None | None | G4G5   | S1   | 2B.2 |
| <u><i>Doellingeria glabrata</i></u>                  | Siskiyou aster                | None | None | G4     | S3   | 4.3  |
| <u><i>Downingia willamettensis</i></u>               | Cascade downingia             | None | None | G4     | S2   | 2B.2 |
| <u><i>Empetrum nigrum</i></u>                        | black crowberry               | None | None | G5     | S1?  | 2B.2 |
| <u><i>Epilobium rigidum</i></u>                      | Siskiyou Mountains willowherb | None | None | G3G4   | S3   | 4.3  |
| <u><i>Erigeron cervinus</i></u>                      | Siskiyou daisy                | None | None | G4     | S4   | 4.3  |
| <u><i>Eriogonum nudum var. paralinum</i></u>         | Del Norte buckwheat           | None | None | G5T2   | S1   | 2B.2 |
| <u><i>Eriogonum ternatum</i></u>                     | ternate buckwheat             | None | None | G4     | S4   | 4.3  |
| <u><i>Erysimum concinnum</i></u>                     | bluff wallflower              | None | None | G3     | S2   | 1B.2 |
| <u><i>Erythronium hendersonii</i></u>                | Henderson's fawn lily         | None | None | G4     | S2   | 2B.3 |
| <u><i>Erythronium howellii</i></u>                   | Howell's fawn lily            | None | None | G3G4   | S2   | 1B.3 |
| <u><i>Erythronium oregonum</i></u>                   | giant fawn lily               | None | None | G5     | S2   | 2B.2 |
| <u><i>Erythronium revolutum</i></u>                  | coast fawn lily               | None | None | G4G5   | S3   | 2B.2 |
| <u><i>Fissidens pauperculus</i></u>                  | minute pocket moss            | None | None | G3?    | S2   | 1B.2 |
| <u><i>Gilia capitata ssp. pacifica</i></u>           | Pacific gilia                 | None | None | G5T3   | S2   | 1B.2 |
| <u><i>Gilia millefoliata</i></u>                     | dark-eyed gilia               | None | None | G2     | S2   | 1B.2 |
| <u><i>Glehnia littoralis ssp. leiocarpa</i></u>      | American glehnia              | None | None | G5T5   | S2S3 | 4.2  |
| <u><i>Hesperevax sparsiflora var. brevifolia</i></u> | short-leaved evax             | None | None | G4T3   | S3   | 1B.2 |
| <u><i>Horkelia howellii</i></u>                      | Howell's horkelia             | None | None | G4     | S3   | 4.3  |
| <u><i>Horkelia sericata</i></u>                      | silky horkelia                | None | None | G3G4   | S3   | 4.3  |
| <u><i>Hosackia gracilis</i></u>                      | harlequin lotus               | None | None | G3G4   | S3   | 4.2  |
| <u><i>Iris innominata</i></u>                        | Del Norte County iris         | None | None | G4G5   | S3   | 4.3  |
| <u><i>Iris tenax ssp. klamathensis</i></u>           | Orleans iris                  | None | None | G4G5T4 | S4   | 4.3  |
| <u><i>Iris thompsonii</i></u>                        | Thompson's iris               | None | None | G3     | S3   | 4.3  |
| <u><i>Kopsiopsis hookeri</i></u>                     | small groundcone              | None | None | G4?    | S1S2 | 2B.3 |
| <u><i>Lasthenia californica ssp. macrantha</i></u>   | perennial goldfields          | None | None | G3T2   | S2   | 1B.2 |
| <u><i>Lathyrus delnorticus</i></u>                   | Del Norte pea                 | None | None | G4     | S3   | 4.3  |
| <u><i>Lathyrus japonicus</i></u>                     | seaside pea                   | None | None | G5     | S2   | 2B.1 |
| <u><i>Lathyrus palustris</i></u>                     | marsh pea                     | None | None | G5     | S2   | 2B.2 |
| <u><i>Leptosiphon latisectus</i></u>                 | broad-lobed leptosiphon       | None | None | G4     | S4   | 4.3  |
| <u><i>Lewisia oppositifolia</i></u>                  | opposite-leaved lewisia       | None | None | G3     | S2   | 2B.2 |
| <u><i>Lilium bolanderi</i></u>                       | Bolander's lily               | None | None | G4     | S3S4 | 4.2  |
| <u><i>Lilium occidentale</i></u>                     | western lily                  | FE   | CE   | G1G2   | S1   | 1B.1 |
| <u><i>Lilium pardalinum ssp. vollmeri</i></u>        | Vollmer's lily                | None | None | G5T4   | S3   | 4.3  |

|  |                            |      |      |        |      |      |
|--|----------------------------|------|------|--------|------|------|
| <u><i>Listera cordata</i></u>                              | heart-leaved twayblade     | None | None | G5     | S4   | 4.2  |
| <u><i>Lomatium howellii</i></u>                            | Howell's lomatium          | None | None | G4G5   | S4   | 4.3  |
| <u><i>Lomatium martindalei</i></u>                         | Coast Range lomatium       | None | None | G5     | S2   | 2B.3 |
| <u><i>Lycopodium clavatum</i></u>                          | running-pine               | None | None | G5     | S3   | 4.1  |
| <u><i>Lysimachia europaea</i></u>                          | arctic starflower          | None | None | G5     | S1   | 2B.2 |
| <u><i>Micranthes marshallii</i></u>                        | Marshall's saxifrage       | None | None | G5     | S3   | 4.3  |
| <u><i>Mitellastra caulescens</i></u>                       | leafy-stemmed mitrewort    | None | None | G5     | S4   | 4.2  |
| <u><i>Moneses uniflora</i></u>                             | woodnymph                  | None | None | G5     | S2   | 2B.2 |
| <u><i>Monotropa uniflora</i></u>                           | ghost-pipe                 | None | None | G5     | S2   | 2B.2 |
| <u><i>Oenothera wolfii</i></u>                             | Wolf's evening-primrose    | None | None | G2     | S1   | 1B.1 |
| <u><i>Oxalis suksdorfii</i></u>                            | Suksdorf's wood-sorrel     | None | None | G4     | S3   | 4.3  |
| <u><i>Packera bolanderi</i> var. <i>bolanderi</i></u>      | seacoast ragwort           | None | None | G4T4   | S2S3 | 2B.2 |
| <u><i>Packera macounii</i></u>                             | Siskiyou Mountains ragwort | None | None | G5?    | S3   | 4.3  |
| <u><i>Perideridia gairdneri</i> ssp. <i>gairdneri</i></u>  | Gairdner's yampah          | None | None | G5T3T4 | S3S4 | 4.2  |
| <u><i>Phacelia argentea</i></u>                            | sand dune phacelia         | FT   | None | G2     | S1   | 1B.1 |
| <u><i>Pinguicula macroceras</i></u>                        | horned butterwort          | None | None | G4     | S2   | 2B.2 |
| <u><i>Piperia candida</i></u>                              | white-flowered rein orchid | None | None | G3?    | S3   | 1B.2 |
| <u><i>Pityopus californicus</i></u>                        | California pinefoot        | None | None | G4G5   | S4   | 4.2  |
| <u><i>Platismatia lacunosa</i></u>                         | crinkled rag lichen        | None | None | G4     | S1   | 2B.3 |
| <u><i>Pleuropogon refractus</i></u>                        | nodding semaphore grass    | None | None | G4     | S4   | 4.2  |
| <u><i>Poa piperi</i></u>                                   | Piper's blue grass         | None | None | G4     | S3   | 4.3  |
| <u><i>Polemonium carneum</i></u>                           | Oregon polemonium          | None | None | G3G4   | S2   | 2B.2 |
| <u><i>Potamogeton foliosus</i> ssp. <i>fibrillosus</i></u> | fibrous pondweed           | None | None | G5T2T4 | S1S2 | 2B.3 |
| <u><i>Prosartes parvifolia</i></u>                         | Siskiyou bells             | None | None | G2     | S2   | 1B.2 |
| <u><i>Pyrocoma racemosa</i> var. <i>congesta</i></u>       | Del Norte pyrocoma         | None | None | G5T4   | S2   | 2B.3 |
| <u><i>Ramalina thrausta</i></u>                            | angel's hair lichen        | None | None | G5?    | S2S3 | 2B.1 |
| <u><i>Ribes laxiflorum</i></u>                             | trailing black currant     | None | None | G5?    | S3   | 4.3  |
| <u><i>Romanzoffia tracyi</i></u>                           | Tracy's romanzoffia        | None | None | G4     | S2   | 2B.3 |
| <u><i>Sabulina howellii</i></u>                            | Howell's sandwort          | None | None | G4     | S3   | 1B.3 |
| <u><i>Sagittaria sanfordii</i></u>                         | Sanford's arrowhead        | None | None | G3     | S3   | 1B.2 |
| <u><i>Salix delnortensis</i></u>                           | Del Norte willow           | None | None | G4     | S4   | 4.3  |
| <u><i>Sanguisorba officinalis</i></u>                      | great burnet               | None | None | G5?    | S2   | 2B.2 |
| <u><i>Sanicula peckiana</i></u>                            | Peck's sanicle             | None | None | G4     | S3   | 4.3  |
| <u><i>Sedum patens</i></u>                                 | Smith River stonecrop      | None | None | G2     | S2   | 1B.2 |
| <u><i>Sidalcea elegans</i></u>                             | Del Norte checkerbloom     | None | None | G4?    | S2?  | 3.3  |
| <u><i>Sidalcea malachroides</i></u>                        | maple-leaved checkerbloom  | None | None | G3     | S3   | 4.2  |
| <u><i>Sidalcea malviflora</i> ssp. <i>patula</i></u>       | Siskiyou checkerbloom      | None | None | G4G5T2 | S2   | 1B.2 |
| <u><i>Sidalcea oregana</i> ssp. <i>eximia</i></u>          | coast checkerbloom         | None | None | G5T1   | S1   | 1B.2 |
| <u><i>Silene hookeri</i></u>                               | Hooker's catchfly          | None | None | G4     | S2   | 2B.2 |
| <u><i>Silene scouleri</i> ssp. <i>scouleri</i></u>         | Scouler's catchfly         | None | None | G5T4T5 | S2S3 | 2B.2 |
| <u><i>Silene serpentinicola</i></u>                        | serpentine catchfly        | None | None | G3     | S3   | 1B.2 |



|   |                            |      |      |      |      |      |
|---|----------------------------|------|------|------|------|------|
| <u><i>Sulcaria spiralifera</i></u>                        | twisted horsehair lichen   | None | None | G3G4 | S2   | 1B.2 |
| <u><i>Tauschia glauca</i></u>                             | glaucous tauschia          | None | None | G4   | S4   | 4.3  |
| <u><i>Tiarella trifoliata</i> var. <i>trifoliata</i></u>  | trifoliate laceflower      | None | None | G5T5 | S2S3 | 3.2  |
| <u><i>Triquetrella californica</i></u>                    | coastal triquetrella       | None | None | G2   | S2   | 1B.2 |
| <u><i>Usnea longissima</i></u>                            | Methuselah's beard lichen  | None | None | G4   | S4   | 4.2  |
| <u><i>Vaccinium scoparium</i></u>                         | little-leaved huckleberry  | None | None | G5   | S3   | 2B.2 |
| <u><i>Vancouveria chrysantha</i></u>                      | Siskiyou inside-out-flower | None | None | G4   | S3   | 4.3  |
| <u><i>Veratrum insolitum</i></u>                          | Siskiyou false-hellebore   | None | None | G3   | S4   | 4.3  |
| <u><i>Viola langsdorffii</i></u>                          | Langsdorf's violet         | None | None | G4   | S1   | 2B.1 |
| <u><i>Viola palustris</i></u>                             | alpine marsh violet        | None | None | G5   | S1S2 | 2B.2 |
| <u><i>Viola primulifolia</i> ssp. <i>occidentalis</i></u> | western white bog violet   | None | None | G5T2 | S2   | 1B.2 |

Showing 1 to 122 of 122 entries

#### Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 12 December 2023].

**OK950 Botanical Inventory**

| Scientific Name                                     | Common Name              | Family           | Origin     |
|---|--------------------------|------------------|------------|
| <b>FORBS</b>  |                          |                  |            |
| <i>Achillea millefolium</i>                         | Common yarrow            | Asteraceae       | native     |
| <i>Actaea rubra</i>                                 | Red baneberry            | Ranunculaceae    | native     |
| <i>Asarum caudatum</i>                              | Longtail wild ginger     | Aristolochiaceae | native     |
| <i>Athyrium filix-femina</i> var. <i>cyclosorum</i> | Lady fern                | Woodsiaceae      | native     |
| <i>Barbarea vulgaris</i>                            | Yellow rocket            | Brassicaceae     | introduced |
| <i>Brassica nigra</i>                               | Black mustard            | Brassicaceae     | invasive   |
| <i>Cardamine californica</i>                        | Milk maids               | Brassicaceae     | native     |
| <i>Cirsium</i> sp.                                  | Thistle                  | Asteraceae       |            |
| <i>Cirsium vulgare</i>                              | Bull thistle             | Asteraceae       | invasive   |
| <i>Claytonia perfoliata</i>                         | Miner's lettuce          | Montiaceae       | native     |
| <i>Claytonia sibirica</i>                           | Candy flower             | Montiaceae       | native     |
| <i>Conium maculatum</i>                             | Poison hemlock           | Apiaceae         | invasive   |
| <i>Daucus carota</i>                                | Queen Anne's lace        | Apiaceae         | introduced |
| <i>Dicentra formosa</i>                             | Pacific bleeding heart   | Papaveraceae     | native     |
| <i>Epilobium ciliatum</i>                           | Northern willow herb     | Onagraceae       | native     |
| <i>Erodium</i> sp.                                  | Storksbill or filaree    | Geraniaceae      |            |
| <i>Galium aparine</i>                               | Goose grass              | Rubiaceae        | native     |
| <i>Geranium lucidum</i>                             | Shining geranium         | Geraniaceae      | introduced |
| <i>Helminthotheca echioides</i>                     | Bristly ox-tongue        | Asteraceae       | invasive   |
| <i>Heracleum maximum</i>                            | Cow parsnip              | Apiaceae         | native     |
| <i>Lysichiton americanus</i>                        | Yellow skunk-cabbage     | Araceae          | native     |
| <i>Maianthemum dilatatum</i>                        | False lily-of-the-valley | Ruscaceae        | native     |
| <i>Marah oregana</i>                                | Coast man-root           | Cucurbitaceae    | native     |
| <i>Oenanthe sarmentosa</i>                          | Pacific water-parsley    | Apiaceae         | native     |
| <i>Osmorhiza berteroi</i>                           | Sweet-cicely             | Apiaceae         | native     |
| <i>Oxalis oregana</i>                               | Redwood sorrel           | Oxalidaceae      | native     |
| <i>Petasites frigidus</i> var. <i>palmatus</i>      | Western sweet coltsfoot  | Asteraceae       | native     |
| <i>Plantago lanceolata</i>                          | English plantain         | Plantaginaceae   | invasive   |
| <i>Plantago major</i>                               | Common plantain          | Plantaginaceae   | introduced |
| <i>Polypodium glycyrrhiza</i>                       | Licorice fern            | Polypodiaceae    | native     |
| <i>Polypodium scolieri</i>                          | Leather-leaf fern        | Polypodiaceae    | native     |
| <i>Polystichum munitum</i>                          | Western sword fern       | Dryopteridaceae  | native     |
| <i>Pteridium aquilinum</i> var. <i>pubescens</i>    | Western bracken fern     | Dennstaedtiaceae | native     |
| <i>Ranunculus repens</i>                            | Creeping buttercup       | Ranunculaceae    | invasive   |
| <i>Rubus ursinus</i>                                | California blackberry    | Rosaceae         | native     |
| <i>Sanicula crassicaulis</i>                        | Pacific snakeroot        | Apiaceae         | native     |
| <i>Sonchus</i> sp.                                  | Sow thistle              | Asteraceae       |            |
| <i>Stachys</i> sp.                                  | Hedge-nettle             | Lamiaceae        |            |
| <i>Struthiopteris spicant</i>                       | Deer fern                | Blechnaceae      | native     |
| <i>Tellima grandiflora</i>                          | Fringe cups              | Saxifragaceae    | native     |
| <i>Tolmiea diplomenziesii</i>                       | Pig-a-back plant         | Saxifragaceae    | native     |
| <i>Trientalis latifolia</i>                         | Western starflower       | Myrsinaceae      | native     |



| Scientific Name   | Common Name              | Family        | Origin     |
|---|--------------------------|---------------|------------|
| <i>Trifolium</i> sp.  | Clover                   | Fabaceae      |            |
| <i>Trillium ovatum</i>                                      | Western trillium         | Melanthiaceae | native     |
| <i>Urtica dioica</i> subsp. <i>gracilis</i>                 | American stinging nettle | Urticaceae    | native     |
| <i>Vancouveria planipetala</i>                              | Redwood ivy              | Berberidaceae | native     |
| <i>Vicia gigantea</i>                                       | Giant vetch              | Fabaceae      | native     |
| <i>Vicia</i> sp.  | Vetch                    | Fabaceae      |            |
| <i>Viola sempervirens</i>                                   | Evergreen violet         | Violaceae     | native     |
| <i>Carex hendersonii</i>                                    | Henderson's sedge        | Cyperaceae    | native     |
| <i>Carex leptopoda</i>                                      | Slender-footed sedge     | Cyperaceae    | native     |
| <i>Luzula parviflora</i>                                    | small-flowered wood rush | Juncaceae     | native     |
| <i>Lilium columbianum</i>                                   | Columbia lily            | Liliaceae     | native     |
| <i>Prosartes hookeri</i>                                    | Drops of gold            | Liliaceae     | native     |
| <i>Prosartes smithi</i>                                     | Largeflower fairybells   | Liliaceae     | native     |
| <i>Anthoxanthum odoratum</i>                                | Sweet vernal grass       | Poaceae       | invasive   |
| <i>Arrhenatherum elatius</i>                                | Tall oat grass           | Poaceae       | introduced |
| <i>Avena fatua</i>  | Wild oat grass           | Poaceae       | invasive   |
| <i>Bromus carinatus</i>                                     | California brome         | Poaceae       | native     |
| <i>Bromus diandrus</i>                                      | Ripgut grass             | Poaceae       | invasive   |
| <i>Dactylis glomerata</i>                                   | Orchard grass            | Poaceae       | invasive   |
| <i>Festuca arundinacea</i>                                  | Tall fescue              | Poaceae       | invasive   |
| <i>Festuca perennis</i>                                     | Perennial rye grass      | Poaceae       | invasive   |
| <i>Holcus lanatus</i>                                       | Common velvet grass      | Poaceae       | invasive   |
| <b>SHRUBS</b>   |                          |               |            |
| <i>Baccharis pilularis</i>                                  | Coyote brush             | Asteraceae    | native     |
| <i>Berberis aquifolium</i> var. <i>aquifolium</i>           | Oregon-grape             | Berberidaceae | native     |
| <i>Gaultheria shallon</i>                                   | Salal                    | Ericaceae     | native     |
| <i>Menziesia ferruginea</i>                                 | Mock azalea              | Ericaceae     | native     |
| <i>Rubus parviflorus</i>                                    | Thimbleberry             | Rosaceae      | native     |
| <i>Rubus spectabilis</i>                                    | Salmonberry              | Rosaceae      | native     |
| <i>Rubus ursinus</i>  | California blackberry    | Rosaceae      | native     |
| <i>Sambucus racemosa</i> var. <i>racemosa</i>               | Red elderberry           | Adoxaceae     | native     |
| <i>Vaccinium ovatum</i>                                     | California huckleberry   | Ericaceae     | native     |
| <i>Vaccinium parvifolium</i>                                | Red huckleberry          | Ericaceae     | native     |
| <b>TREES</b>  |                          |               |            |
| <i>Alnus rubra</i>  | Red alder                | Betulaceae    | native     |
| <i>Sequoia sempervirens</i>                                 | Coast redwood            | Cupressaceae  | native     |
| <i>Notholithocarpus densiflorus</i> var. <i>densiflorus</i> | Tanoak                   | Fagaceae      | native     |
| <i>Pseudotsuga menziesii</i> var. <i>menziesii</i>          | Douglas-fir              | Pinaceae      | native     |
| <i>Frangula purshiana</i>                                   | Cascara                  | Rhamnaceae    | native     |
| <i>Acer macrophyllum</i>                                    | Bigleaf maple            | Sapindaceae   | native     |

**Appendix D. Section 4(f)**

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

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project . . . “requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires coordination with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

The activities associated with the project would occur adjacent to Del Norte Coast Redwoods State Park. Consultation with State Parks is ongoing; the Section 4(f) analyses are on the following pages.



**DEPARTMENT OF TRANSPORTATION**

NORTH REGION ENVIRONMENTAL  
DISTRICT 01  
1656 UNION STREET  
EUREKA, CA 95501  
(707) 572-7039  
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TTY 711



Making Conservation  
a California Way of Life.

September 27th, 2023

Mr. Victor Bjelajac, North Coast Redwoods District Superintendent  
California State Parks  
PO Box 2006  
Eureka, CA 95502

RE: EA 01-0K950 Damnation Creek Safety  
Section 4(f) Analysis and *de minimis* Determination

Dear Mr. Bjelajac:

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose a safety improvement project on U.S. Highway 101 between PM 15.60 to 16.20 in Del Norte County, California. The purpose of this project is to reduce the frequency and severity of collisions along this segment of the state highway.

The project is adjacent to Del Norte Coast Redwoods State Park (DNCRSP). Under Section 4(f) of the Department of Transportation Act of 1996, the Park is considered a Section 4(f) resource. Therefore, a Section 4(f) analysis must be conducted, a determination made, and Park concurrence obtained.

This letter is to inform you of Caltrans' intent to make a *de minimis* finding for the impacts to DNCRSP. The following pages provide detailed information related to Section 4(f) and Section 4(f) resources, and proposed project activities.

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**District 2**  
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1031 Butte Street, Redding, CA 96001 (W. Venture)

**District 3**  
703 B Street, Marysville, CA 95901

Victor Bjelajac, North Coast Redwoods District Superintendent  
Damnation Creek Safety Project  
September 27<sup>th</sup>, 2023  
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## **Description of Section 4(f)**

Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966 that established the requirement for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. The law, now codified in 49 U.S.C. Section 303 and 23 U.S.C. Section 138, applies only to the U.S. Department of Transportation (U.S. DOT) and is implemented by the Federal Highway Administration (FHWA) through the regulation 23 Code of Federal Regulations (CFR) 774. Section 4(f) applies to projects that receive funding from or require approval by an agency of the U.S. DOT. Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including *de minimis* impact determinations.

There are three types of “use” under Section 4(f):

- 1) Permanent Incorporation—when a Section 4(f) resource is acquired outright for a transportation project.
- 2) Temporary Occupancy—when there is temporary use of resource that is adverse in terms of Section 4(f)'s preservationist purpose. Temporary occupancy is not a Section 4(f) use if all the following conditions exist:
  - a. The land use is of short duration (defined as less than the time needed for the construction of the project)
  - b. There is no change in ownership of the land
  - c. The scope of the work must be minor
  - d. There are no temporary or permanent adverse changes to the activities, features, or attributes of the resource
  - e. The land must be fully restored to a condition at least as good as prior to the project
  - f. There must be documented agreement from the official(s) with jurisdiction over the resource with the above conditions

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- 3) Constructive Use—when the proximity impacts of a transportation project on a Section 4(f) resource, even without acquisition of the resource, are so great that the activities, features, and attributes of the resource are substantially impaired.

Before approving a project that uses a Section 4(f) resource, a determination must be made that either:

- 1) There is no feasible and prudent alternative that avoids the resource, and that the project includes all possible planning to minimize harm to the resource, or
- 2) The project would have a *de minimis* impact on the resource.

*A de minimis* impact is one that would not adversely affect the activities, features, or attributes of the Section 4(f) resource, and, subsequently, would not require an analysis of feasible and prudent avoidance alternatives. A determination of *de minimis* impact may be made when all three of the following criteria are satisfied:

- 1) The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
- 2) The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
- 3) The official(s) with jurisdiction over the resource are informed of Caltrans' intent to make the *de minimis* impact determination based on their written concurrence that the project would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

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Damnation Creek Safety Project  
September 27<sup>th</sup>, 2023  
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## ***Project Description***

### **01-0K950, PMs 15.6-16.2**

#### Project Description

The California Department of Transportation (Caltrans) proposes roadway grade improvements, road widening, and curve realignment on U.S. Highway 101 in Del Norte County between post miles (PM) 15.60 and 16.20 as part of a safety project. Additional project features include installation of approximately 350 feet of new Midwest Guardrail System (MGS) guardrails, installation of approximately 150 feet MGS Special guardrail, replacement of an existing drainage inlet (DI), construction of a new down drain, and installation of approximately 1130 feet of hot-mix asphalt (HMA) dikes.

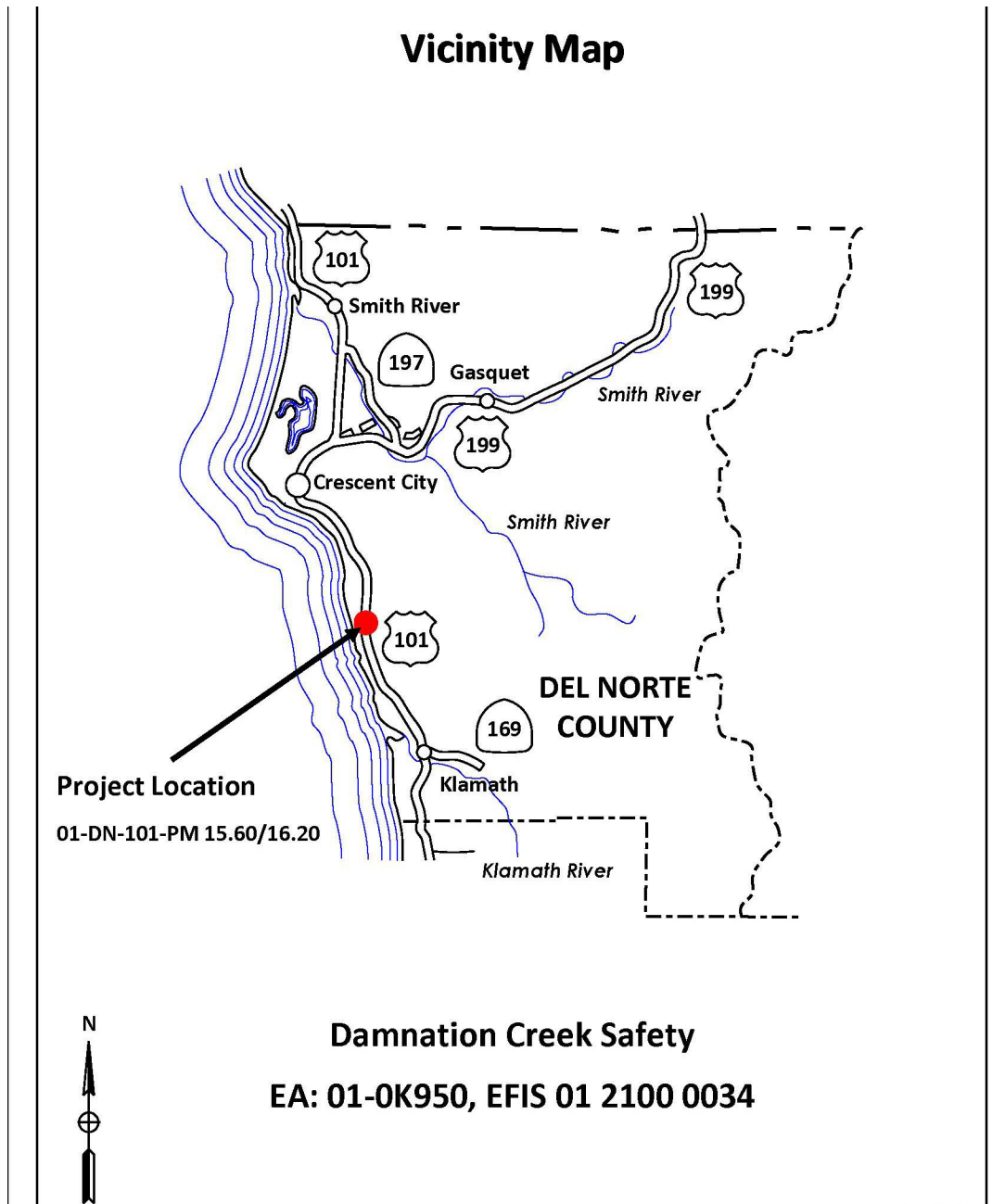
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**Figure 1. Project Location**

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## ***Description of the 4(f) Resource***

The National Park Service and California State Parks jointly manage Redwood National and State Parks, which totals 133,000 acres of land and Del Norte Coast Redwoods State Park (DNCRSP), Jedediah Smith Redwoods State Park, and Prairie Creek Redwoods State Park. These four parks are recognized by the United Nations as a World Heritage Site and an International Biosphere Reserve. The parks are home to coast redwoods and many other tree species including tanoak, madrone, red alder, big leaf maple, Douglas-fir, western hemlock, grand fir, California bay, and Sitka spruce. Redwood National and State Parks offer various recreational activities such as fishing, hiking, and camping and beach access. Various trails provide bike, equestrian, and pedestrian access. Many wildflower species, such as azalea, lupine, rhododendron, Columbia lily, and trillium, can be viewed from park trails. There are picnic areas, scenic drives and overlooks, wildlife watching locations, and tide pools. The coastal overlooks, such as Crescent Beach Overlook and Wilson Creek, provide opportunities to view marine mammals, such as gray whales. Roosevelt elk can be seen throughout the parks at Prairie Creek Redwoods State Park, Gold Bluffs Beach, along the Bald Hills Road, and in the Orick area. In the project vicinity, DNCRSP is accessible from U.S. 101 and is open every day and year-round.

DNCRSP was established in 1927. The park extends from the Pacific Ocean to the west, through old-growth redwood forests and into Mill Creek Basin and the west fork of Mill Creek. In the project vicinity, the closest developed campground is the Mill Creek Campground which is approximately 4.1 miles north of the project limits and within DNCRSP. This campground is accessed further north on US 101. The campground offers 143 sites and is open from May through September each year. The closest undeveloped backcountry campground is the DeMartin Campground, which is within Redwood National Park approximately 2.5 miles south of the project limits. The campground has 10 campsites and can be accessed from DNCRSP by foot along the California Coastal Trail. DNCRSP hosts a section of the California Coastal Trail, a network of trails that will span California, from Oregon to Mexico. The Pacific Coast Bike Route, which is a continuous bike route that spans the California coastline from Mexico to

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Oregon, extends through the entire north-south length of the park on U.S. 101. For recreational bicyclists traveling along the Del Norte coastline, U.S. 101 is the only continuous public road available through the park and to north and south destinations beyond the park.

The project area is bounded by the Del Norte Coast Redwoods State Park along U.S. Highway 101. Although the park is home to special status plant species, none were detected in the project area during floristic surveys. Significant natural resources in the park in the vicinity of the project area include stands of old-growth redwood forest and other forest habitat for federally and state-listed threatened and endangered northern spotted owls (*Strix occidentalis caurina*) and marbled murrelets (*Brachyramphus marmoratus*).

The project site is situated on the Redwood Highway, constructed to link Humboldt and Del Norte Counties. In 1933, the State of California Department of Public Works (now Caltrans) secured the title to the land encompassing the project area from the State Parks Commission with the stipulation that the land be utilized for highway construction and that such construction minimally impact the landscape's beauty.

While the project is within Caltrans right of way, the surrounding redwoods are a global heritage

## **Use of the 4(f) Resource**

### **Land Use**

Most of the use of State Park resources by the project are temporary, indirect, and minimal. There will be one small permanent easement of Park resources with the proposed Caltrans small drainage easement from State Parks. The temporary uses include temporary impact to trail access, temporary construction related noise increases, minor roadside vegetation removal, and

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minor change to the view during construction. The permanent use of State Park Resources involves a drainage feature that would conduct stormwater flow through State Park Property.

The easement at this location will not adversely affect the features, activities, or attributes of the State Park resource. The proposed activities are designed to improve the drainage system that channels water through the park, thereby reducing erosion and negative effects downstream. The easement site is not located within a trail, campground, or any other State Park facilities, and there is no evidence to suggest it has been used by recreational visitors. The easement is situated opposite the parking facilities, on the other side of the highway. The combination of a lack of road shoulder, absence of pedestrian facilities, and the steep slope makes it unlikely for visitors to access the easement. Additionally, although the jurisdiction over the easement site may change, no barriers will be erected that will alter the public's access. For these reasons, the *de minimis* finding can be made.

### **Project use of Forest Resources**

Potential use of forest resources through impacting views enjoyed by park visitors will be minimized. No living trees are proposed for removal in this project. Only one standing dead (snag) redwood tree approximately 15 feet tall with a 9-foot Diameter at Breast height (DBH) foot and minor roadside vegetation will be removed. No tree removal is proposed; however, construction activities could impact the health of adjacent trees due to possible damage to root systems.

Impacts to tree roots are often evaluated based on potential damage to four critical areas of roots called root zones, three of which are discussed below. The structural root zone (SRZ) is a circular area with the tree trunk at the center and a radius equal to three times the tree DBH (Smiley et al. 2002). The SRZ represents the area where roots can be found that are responsible for keeping the tree upright. Damage to roots in this root zone would affect the structural integrity of the tree, increasing the likelihood of potential tree failure.

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The absorber root zone (AHZ) is a circular area with the tree trunk at the center and a radius equal to five times the DBH (Smiley et al. 2002). This root zone represents the area where roots are found that are critical to the absorption of water and nutrients for the tree. Damage to roots in this root zone would affect the overall health and vitality of the tree but are not as critical to structural stability.

The third root zone is the largest and encompasses both the SRZ and the ARZ, the critical root zone (CRZ) is a circular area with the tree trunk at the center and a radius equal to twelve times the DBH (International Society of Arboriculture (ISA) 2017). This is commonly labeled as the minimum volume of roots necessary for tree health and stability (American National Standard Institute 2012).

Impacts to tree roots are often evaluated as percentages of the SRZ and ARZ that could be affected. Trees can withstand disturbance to some fraction of these root zones with little long-term effect to health and vitality. Mature redwood trees have been shown to overcome the loss of a large portion of its root system by rapidly regenerating a new root system, without noticeable reduction in tree vigor. (Stone and Vasey 1968 b:2–3). It has been documented that no significant loss of tree vigor has been observed in redwoods bordering highways, and paving does not have a significant effect on tree health as long as it covers less than half of the root zone." (Sturgeon 1964)

The area of root zones effected by this project are anticipated to be below the threshold that would require loss of any trees. The amount of disturbance tolerated by the tree varies by tree species, size, age, tree health, tree crown position, soil type among other variables and are best evaluated by an arborist.

A Certified Arborist with expertise in tree risk assessment was contracted to evaluate potential impacts to trees from construction. The arborist evaluated impacts to eighteen trees based on their evaluation of potential impacts from construction. The arborist was provided with specific construction activities that will be occurring within the vicinity of trees adjacent to the project.

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The arborist recommended a variety of Best Management Practices (BMPs) to help minimize or avoid any new impacts to trees in the project site. The spectrum of practices include:

- Having a Certified Arborist on site for specific construction activities that involve excavation near adjacent trees.
- Wrapping trees with from the base of the trunk up 8 feet to prevent potential damage from nearby equipment
- Installation of either drain rock or mulch to a depth of 3 inches or 6” inches respectively at a minimum 5 feet from the base of trees to prevent soil compaction where road structural elements will not be installed
- Where practicable, soil within the SRZ of large-diameter redwoods should be removed using hand tools such as picks and shovels, using hand-held pneumatic devices such as the air spade, or a combination of the two.
- Appropriate techniques to prevent fluids from running from the construction activities to any part of the tree dripline should be employed. Such materials include silt fencing or straw waddle installation.
- Appropriate techniques would be used when severing any roots over 2 inches in diameter to minimize the potential for post-construction root decay. Roots should be excavated to the extent practicable for them to be cleanly severed with a sharp-bladed cutting instrument, leaving no frayed edges. If frayed or jagged roots result from excavating with heavy equipment, they should be replaced with clean cuts.
- The removal of road base within 15 feet of the base of several trees shall be removed using hand tools, such as a digging bar, to prevent potential damage to roots located

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beneath the surface= If roots larger than 2 inches in diameter are located beneath the paved surface, the use of an air spade or shovels will be used to excavate the root for the arborist to provide guidance.

- Where practicable, consider erecting temporary high visibility fencing around the work area as far away from tree trunks as feasible to help reduce the impacts of accidental damage from construction equipment, vehicles, and staging materials
- A post construction tree inspection will be required for some trees to determine the extent of tree impacts and if there were additional impacts not anticipated. The results of the post construction inspection will determine if long-term monitoring would be required.

By adhering to these recommended practices, the Arborist concludes that impacts to trees in the project zone are anticipated to be minimal to moderate, with no impacts to tree health resulting in tree loss.

Areas where plants are removed during the project will be subject to erosion control treatments and replanting upon the completion of construction activities.

Trees were also evaluated for potential nesting platforms, structures, or cavities that could be used by listed species marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), fisher (*Pekania pennanti*), and Pacific marten (*Martes caurina humboldtensis*), and none were detected. In addition, it is unlikely these trees would provide suitable habitat for these species due to their proximity to the highway.

The impacts of construction from the project are not anticipated to adversely affect the use of resources by park visitors, including the old-growth redwood forest and its associated ecological resources. For these reasons, the *de minimis* finding can be made.

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**Use of Recreation Resources**

This park offers a variety of recreational activities designed to help visitors explore and understand the natural environment. There are numerous hiking trails available, providing access to diverse landscapes, including waterfalls and ocean views

Two trailheads are located within the project limits on Caltrans right of way, the California Coastal Trail access at PM 15.61 and the Damnation Creek Trailhead at PM 15.90. A pullout on the northbound side of US 101 at PM 15.61 providing access to the California Coastal Trail, will remain open for trail access during project construction. The Damnation Creek Trailhead pullout at PM 15.9 leads to the 1.4-mile Damnation Creek Trail. The Damnation Creek Trailhead would be closed for approximately 110 working days due to construction activities and public safety concerns related to one-way traffic.

Alternative routes via the California Coastal Trail and the Last Chance Trailhead on Enderts Beach Rd will maintain accessibility to the Damnation Creek Trail accessible during the project construction. The California Coastal Trail intersects with the Damnation Creek Trail approximately ¾ of a mile from U.S. 101. This alternate route allows the Damnation Creek Trail to be fully accessible for the duration of the project. The Damnation Creek Trail is also accessible via the Last Chance Trailhead on Enderts Beach Rd approximately 5 miles to the north via trail.

The project, while causing short-term impacts, will not permanently alter access to any recreational areas. The project aims to enhance safety, addressing past accidents involving vehicles and pedestrians at the Damnation Creek Trailhead, and sustain the Pacific Coast Bike Route segment.

Occasional heavy equipment back-up alarms and drilling for guardrail installation are the only construction-related noise that would exceed the ambient traffic noise levels. This may result in

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minor short-term disruption to the quiet surroundings of the park; however, no long-term noise impacts would result from the project.

Caltrans recognizes that the Damnation Creek Trailhead is a popular destination for access to DNCRSP. A public outreach campaign would help to inform park visitors of the trailhead closure. Caltrans will work with DNCRSP to increase public outreach to inform the public of the Trailhead closure.

The uses of this project do not adversely affect the activities, features and attributes of the State Park resources because the activities are temporary and would improve the safety of Park visitors. For these reasons, the *de minimis* finding can be made.

### **Use of Habitat**

#### **Marbled Murrelet**

The marbled murrelet (MAMU) is federally listed as threatened and state listed as endangered.

The project area does not provide suitable MAMU nesting habitat due to its proximity to the highway. Structurally there is potentially suitable nesting habitat in the general vicinity; therefore, presence of MAMU is assumed within the Biological Study Area (BSA). The BSA is within MAMU critical habitat.

Anticipated project-related impacts are limited to noise-related harassment to nesting MAMU and NSO individuals. Visual disturbance to MAMU and NSO nests is not anticipated as no activities are expected to occur within a visual line-of-sight of 328 feet (100 meters) from any known nest locations (CNDDDB 2023a).

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Daytime ambient noise levels within the ESL along US 101 are estimated as High (81-90 decibels [dB]). Any construction noise that exceeds 90 dB (which may include work activities such as jackhammering and pile driving) could result in disturbance or harassment of MAMU and/or NSO individuals.

Minor vegetation control would include the removal of one coast redwood snag which occur immediately adjacent to the existing highway, but still within critical habitat for MAMU. The removal of one snag (which do not provide suitable nesting habitat for MAMU) would not significantly impact MAMU critical habitat.

Under FESA, the proposed project may affect, is not likely to adversely affect MAMU. The Programmatic Letter of Concurrence (PLOC) issued by the USFWS (USFWS 2022) will be used for potential effects of the project on MAMU. BMPs related to construction noise would be implemented to minimize any impacts to MAMU. The project is not expected to affect MAMU critical habitat because no potentially suitable nest trees were removed or disturbed. Caltrans anticipates the project may affect but is not likely to adversely affect MAMU critical habitat. Caltrans has initiated consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of FESA for the potential effects of this project on MAMU and MAMU critical habitat and is seeking a Letter of Concurrence.

### **Northern Spotted Owl**

The northern spotted owl (NSO) is federally and state threatened.

The ESL does not likely provide suitable nesting or roosting habitat due to its proximity to the highway. The trees within the BSA may contain suitable foraging habitat for NSO and could contain suitable nesting or roosting habitat; therefore, this species may be present. There is no NSO critical habitat within the BSA. There is marginal NSO nesting and foraging habitat present within BSA #1 in the Redwood Forest and Woodland Communities. However, the documented presence of northern barred owl (*Strix varia*) in these areas likely precludes the presence of NSO

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within these areas as the northern barred owl is an aggressive species that displaces spotted owls, disrupts NSO nesting, and competes with NSO for food (Wiens et al., 2014). There is no USFWS-designated critical habitat for NSO within the project ESL or BSAs.

Daytime ambient noise levels within the ESL along US 101 are estimated as High (81-90 decibels [dB]). Sound levels for equipment typically used for proposed project activities are estimated as Moderate (71-80 dB) to Very High (91-100 dB) (Table 9). Any construction noise that exceeds 90 dB (which may include work activities such as jackhammering and pile driving) could result in disturbance or harassment of NSO individuals. BMPs related to construction noise would be implemented to minimize any impacts to NSO.

Under FESA, the proposed project may affect, but is not likely to adversely affect NSO. The Programmatic Letter of Concurrence (PLOC) issued by the USFWS (USFWS 2022) will be used for potential effects of the project on NSO.

Under CESA, the project would not result in take of NSO.

The uses of the project do not adversely affect the activities, features, and attributes of the State Park habitat because the project activities are temporary and have been designed to minimize the impacts to resources. For these reasons, the *de minimis* finding can be made.

### **Use of the viewshed**

Within the project boundary, the views are primarily composed of the surrounding redwood forest, with a glimpse of the Pacific Ocean visible near the project's southern edge. The viewshed is constrained on both sides of the highway due to the forest density and terrain elevation changes.

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The project scope would not substantially alter the scenic vistas of the area. A maximum increase of four feet in road elevation would not significantly impact the viewshed.

Temporary visual impacts would be present during construction, owing to the presence of construction equipment and alterations to the road surface. Additionally, minor temporary changes will occur to the roadside vegetation post-construction, subsiding once natural vegetation reoccupies the site.

The scenic views would not be significantly affected by the project. The uses of this project do not adversely affect the viewshed use of the State Park resources because the activities are temporary and minimal. For these reasons, the *de minimis* finding can be made.

### ***Avoidance and Minimization Measures***

The following measures will be included as part of the minimization measures:

1. No suitable northern spotted owl or marbled murrelet nest trees would be removed or altered.
2. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.
3. Before any ground-disturbing activities, the contractor would prepare a stormwater plan that includes erosion control measures and construction waste containment measures to protect

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Waters of the State during project construction. Construction may require one or more of the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.
  - Temporary sediment control and soil stabilization devices would be installed.
  - Existing vegetated areas would be maintained to the maximum extent practicable.
  - Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
  - Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
4. To prevent the spread of invasive species, straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.
  5. In order to not attract corvids (crows, ravens, jays) or other nest predators to threatened and endangered birds, food scraps and trash would be regularly removed from the site. Construction crews would be directed to not feed and/or attract wildlife. Food scraps and trash from the general traveling public would also be removed from the site and properly disposed of.
  6. Access for bicyclists would be maintained during project construction.

### ***De minimis Finding***

The project work requires a small permeant easement, temporarily inhibited trailhead access, a snag and minor vegetation removal along U.S. Highway 101, and temporary noise impacts with potential disturbance to NSO, MAMU and park visitors.

The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);

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therefore, the Damnation Creek Safety Project would constitute *de minimis* impacts under Section 4(f).

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**Public Input and Concurrence**

As part of the Section 4(f) process, the public was afforded the opportunity to comment on this evaluation and Caltrans’ intent to make a *de minimis* finding for the proposed emergency project activities within Del Norte Coast Redwoods State Park. This letter serves as the Section 4(f) evaluation and is being circulated to the public from (*dates pending*).

Please sign below to indicate Del Norte Redwoods State Parks’ concurrence that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under 4(f), returning this letter to me and retaining a copy for your agency.

DocuSigned by:  
  
A1FBEA008EE0488...

3/15/2024

Victor Bjelajac  
North Coast Redwoods District Superintendent

Date

If you have questions or need additional information, please contact me at [Tyler.W.Brown@dot.ca.gov](mailto:Tyler.W.Brown@dot.ca.gov) or (707) 684-6074.

Sincerely,



Tyler Brown  
Environmental Coordinator

Attachment(s):      1.      Project Plans

c:      XXXX

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*“Provide a safe and reliable transportation network that serves all people and respects the environment”*

### California Department of Transportation—North Region Environmental

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| District 1                          | District 2  | District 3                         |
|-------------------------------------|---|------------------------------------|
| 1656 Union Street, Eureka, CA 95501 | 1657 Riverside Drive, Redding, CA 96001 (DO)<br>1031 Butte Street, Redding, CA 96001 (W. Venture) | 703 B Street, Marysville, CA 95901 |

Victor Bjelajac, North Coast Redwoods District Superintendent  
Damnation Creek Safety Project  
September 27<sup>th</sup>, 2023  
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*"Provide a safe and reliable transportation network that serves all people and respects the environment"*

**California Department of Transportation—North Region Environmental**

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| <b>District 1</b>                   | <b>District 2</b>   | <b>District 3</b>                  |
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| 1656 Union Street, Eureka, CA 95501 | 1657 Riverside Drive, Redding, CA 96001 (DO)<br>1031 Butte Street, Redding, CA 96001 (W. Venture) | 703 B Street, Marysville, CA 95901 |

## **Appendix E. Responses to Public Comments**

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The following letters and comments were received during the CEQA public circulation period for the draft environmental document (Initial Study with Proposed Negative Declaration) which was circulated between December 22, 2023, and January 29, 2024. Caltrans District 1 staff also hosted a virtual public meeting on January 9, 2024, to share information and answer questions about the Damnation Creek Safety Project.

Written comments were received from two public agencies: the California Department of Parks and Recreation–North Coast Redwoods District and the California Highway Patrol. All comments received and Caltrans’ response are included below.





State of California • Natural Resources Agency

DEPARTMENT OF PARKS AND RECREATION

North Coast Redwoods District  
P.O. Box 2006  
Eureka, CA 95502  
(707) 445-6547

Gavin Newsom, Governor

Armando Quintero, Director

January 29, 2024

California Department of Transportation  
Attn: Tyler Brown  
1656 Union Street  
Eureka, CA 95501

RE: Comments on the California Department of Transportation Damnation Creek Safety Project, Del Norte County, Post Miles 15.6 to 16.2, EA 01-0K950/EFIS 0121000034,

Dear Tyler Brown,

On behalf of the North Coast Redwoods District (NCRD) of California Department of Parks and Recreation (CA State Parks), I am writing to provide our comments and requests regarding the *Draft Environmental Initial Study and Draft Section 4(f) Evaluation* (environmental document) prepared by the California Department of Transportation (Caltrans) for the Damnation Creek Safety Project located in Del Norte County at Post Miles 15.6 to 16.2. The environmental document was circulated starting in December 2023 and comments are due January 29, 2024.

Thank you for the opportunity to review and comment upon the Draft Environmental Document. CA State Parks, as the fee title owner and grantor of the easements, has a unique role under CEQA as both a trustee and a responsible agency. A trustee agency has jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. By law, CA State Parks is obligated to ensure that these resources are protected.

PROPOSED PROJECT

The project, as proposed by the California Department of Transportation (Caltrans) includes roadway grade improvements, road widening, and curve realignment on U.S. Highway 101 (U.S. 101). Additional project features include installation of 350' of new Midwest Guardrail System (MGS) guardrail, installation of approximately 150 feet MGS Special guardrail, replacement of an existing drainage inlet (DI), construction of a new down drain, and installation of approximately 1,130 feet of hot mix asphalt (HMA) dikes.

State Parks recognizes that there is a 6x higher than average collision rate in this area than for similar facilities and the project's goal intends to decrease this rate.

### GENERAL COMMENTS

This project is proposed to be implemented within the same post miles, 15.6-16.5, as the Last Chance Grade Permanent Restoration Project (12.7-16.5), with Environmental Documents currently in circulation. A discussion of the cumulative impacts or independence of each other was not found in the analysis.

### SPECIFIC COMMENTS:

- On page 4, the document states that except for the new downdrain, the project is entirely in the Caltrans ROW. The permanent easement from State Parks needs to be included as part of the permits and approvals. The size and location of the requested easement area should be identified in the project description. CA State Parks anticipates issuing a Right of Entry permit for construction activities while a Transfer of Jurisdiction is processed.
- On page 7, the document outlines best management practices addressing work proposed near marbled murrelet habitat. State Parks requests that the following BMP is included, *"No food scraps or wrappers will be left behind by Caltrans or their contractors following California State parks Crumb Clean Guidelines to reduce food subsidies to corvids from prolonged human presence. Caltrans and their contractors will properly dispose of all garbage; store food and other smelly items in airtight containers, or out of sight in a locked car."* This is addressed in the Section 4(f) letter, but it needs to be included under the Standard Measures and Best Management practices section of the CEQA document.
- On page 9, the document states that whenever possible, roots of trees greater than 24" diameter breast height would be severed using a combination of root friendly excavation and severance methods. State Parks maintains that avoidance of cutting tree roots greater than 2 inches is preferred. State Parks requests that if the potential to affect a trees absorbent roots or structural roots is observed by the onsite arborist, to consider alternatives to pruning/severing roots such as burying roots deeper, or if there is a potential for reducing the depth or adjusting placement of guardrails.
- On page 9, the document states the site would be restored by using a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan. Please list the native species included in this mix and adhere to NCRD Genetic Integrity guidelines when sourcing seed.
- On page 22, the document states the project is located in "Redwood State Park". It should be clarified that the location of the project is within the Del Norte Coast Redwoods State Park.
- On layout 2 (pdf page 158), the map shows the location of the proposed drainage easement and there appears to be a tree in the vicinity. Please provide the specifications about this tree in proximity to the requested permanent easement.

Thank you for the opportunity to provide comments. Please let me know or Rosalind Litzky at [Rosalind.Litzky@parks.ca.gov](mailto:Rosalind.Litzky@parks.ca.gov) know if you have any questions about any of these comments or request for clarification. We look forward to reviewing the final environmental document and engineering design.

Sincerely,

DocuSigned by:  
  
A1FBEA008EE0488...

Victor Bjelajac

Superintendent, North Coast Redwoods District

## **Caltrans response to California Department of Parks and Recreation–North Coast Redwoods District**

### GENERAL COMMENTS

*This project is proposed to be implemented within the same post miles, 15.6-16.5, as the Last Chance Grade Permanent Restoration Project (12.7-16.5), with Environmental Documents currently in circulation. A discussion of the cumulative impacts or independence of each other was not found in the analysis.*

Discussion of cumulative impacts referencing the adjacent Last Chance Grade Project have been added to Section 2.22 of this environmental document.

- *On page 4, the document states that except for the new down drain, the project is entirely in the Caltrans ROW. The permanent easement from State Parks needs to be included as part of the permits and approvals. The size and location of the requested easement area should be identified in the project description. CA State Parks anticipates issuing a Right of Entry permit for construction activities while a Transfer of Jurisdiction is processed.*

A description of the drainage easement was added to the project description in Section 1.2 of this environmental document and the anticipated permits have been updated to reflect the Right of Entry Permit.

- *On page 7, the document outlines best management practices addressing work proposed near marbled murrelet habitat. State Parks requests that the following BMP is included, “No food scraps or wrappers will be left behind by Caltrans or their contractors following California State parks Crumb Clean Guidelines to reduce food subsidies to corvids from prolonged human presence. Caltrans and their contractors will properly dispose of all garbage; store food and other smelly items in airtight containers, or out of sight in a locked car.” This is addressed in the Section 4(f) letter, but it needs to be included under the Standard Measures and Best Management practices section of the CEQA document.*



Section 1.4 the Standard Measures and Best Management Practices been updated to include a provision for management of trash and foodstuffs left or stored on site.

- *On page 9, the document states that whenever possible, roots of trees greater than 24" diameter breast height would be severed using a combination of root friendly excavation and severance methods. State Parks maintains that avoidance of cutting tree roots greater than 2 inches is preferred. State Parks requests that if the potential to affect a trees absorbent roots or structural roots is observed by the onsite arborist, to consider alternatives to pruning/severing roots such as burying roots deeper, or if there is a potential for reducing the depth or adjusting placement of guardrails.*

A licensed arborist will be on site during excavation near tree roots and will guide construction personnel to reduce impacts to potentially affected tree roots to the greatest extent possible, using methods they deem appropriate.

- *On page 9, the document states the site would be restored by using a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan. Please list the native species included in this mix and adhere to NCRD Genetic Integrity guidelines when sourcing seed.*

Caltrans plans to select a variety of seeds for the hydroseed mixture, ensuring compliance with the NCRD Genetic Integrity Standards and suitability for the project's specific location. The selection will be flexible, taking into account a range of species that meet these criteria. An example of the types of seed to be used are:

1. *Agrostis pallens* – Thin Grass
2. *Bromus carinatus* – California Brome
3. *Bromus vulgaris* – Common Brome
4. *Festuca rubra* – Red Fescue
5. *Lotus purshianus* – Spanish Clover
6. *Melica californica* -Coast Range Onion Grass

- *On page 22, the document states the project is located in “Redwood State Park”. It should be clarified that the location of the project is within the Del Norte Coast Redwoods State Park.*

This correction has been made (Section 2.1).

- *On layout 2 (pdf page 158), the map shows the location of the proposed drainage easement and there appears to be a tree in the vicinity. Please provide the specifications about this tree in proximity to the requested permanent easement.*

The layouts have been updated to show that the tree in the vicinity of the easement is a 1-foot DBH redwood tree.

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DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

Crescent City  
1630 Summer Lane Crescent  
City, CA 95531 (707) 218-2000  
(800) 735-2929 (TT/TDD)  
(800) 735-2922 (Voice)



January 29, 2024

File No.: 120.18007

Caltrans  
1656 Union Street  
Eureka, CA 95501

RE SCH# 2023120568

The California Highway Patrol, Crescent City Area received the “Notice of Preparation” of the Environmental document for Damnation Creek SCH #2023120568. After review, we have concerns regarding the potential impact this project could have for increased emergency response times to calls south of the project location.

Our concern relates to the road closures and traffic control at 101 PM 15.60 to 16.20. As a result of the closures California Highway Patrol Officers will have extended response times for emergency incidents south of the project location. The California Highway Patrol Crescent City Area is based north of the project location. The California Highway Patrol, Humboldt Area which is based out of Eureka is the closest California Highway Patrol office south of the Damnation Creek project.

Sincerely,

A handwritten signature in blue ink that reads "P. Roach".

P. Roach, Lieutenant  
Commander

Safety, Service, and Security



An Internationally Accredited Agency

## ***Caltrans Response to California Highway Patrol***

Thank you for submitting CHP's concerns regarding the Damnation Creek Safety Project. After discussion with Caltrans Work Zone Operations, it's clear that CHP and Caltrans regularly collaborate to address traffic control issues. To minimize response delays as much as possible during construction, a Transportation Management Plan will be prepared for this project.