FLUME CREEK CAPM PROJECT

INITIAL STUDY

with Mitigated Negative Declaration

SHASTA AND SISKIYOU COUNTIES, CALIFORNIA

DISTRICT 2 – SHA – 5 (Post Miles 58.0 to 67.019)

DISTRICT 2 – SIS – 5 (Post Miles 0.0 to 2.7)

EA 02-0J810 / EFIS 0219000164

Prepared by the
State of California Department of Transportation

Caltrans

January 2025

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FLUME CREEK CAPM PROJECT

Perform Pavement, Drainage, and Safety Improvements on Interstate 5 between Post Miles 58.0 and 67.019 in Shasta County, and Post Miles 0.0 to 2.7 in Siskiyou County

INITIAL STUDY

With Proposed Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

11/15/2024
Date of Approval

David DeMar, *Acting* Office Chief
North Region Environmental-District 2
California Department of Transportation
CEQA Lead Agency

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Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2024120559

Project Description

The California Department of Transportation (Caltrans) proposes to perform pavement, drainage, and safety improvements on Interstate 5 between Post Miles 58.0 and 67.019 in Shasta County and Post Miles 0.0 to 2.7 in Siskiyou County.

Determination

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

The project would have ***No Effect/No Impact*** on the following resources:

- Agriculture and Forest Resources
- Cultural Resources
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Recreation
- Tribal Cultural Resources

The project would have ***Less than Significant Impacts*** to the following resources:

- Aesthetics
- Air Quality
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

With the following mitigation measures incorporated, the project would have Less than Significant Impacts to Biological Resources:

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- To offset potential impacts to wildlife connectivity resulting from the raising of the median barrier, project implementation includes the following wildlife connectivity improvements:
    - Construct a 12-foot-wide by 12-foot-tall reinforced concrete box culvert under I-5 at PM 65.88.
    - To help direct wildlife to the proposed crossing, install an eight-foot-tall chain-link fence or other applicable fence type along both sides of the highway.
- To reduce the potential for wildlife to become trapped on the highway:
    - Install jump outs and/or deer gates along the proposed fence.
    - Include intermittent gaps as feasible along the length of the median barrier to allow wildlife to exit the roadway.

If approved, all project components could be constructed.

David DeMar, *Acting* Office Chief
California Department of Transportation
North Region Environmental–District 2

1/22/2025
Date

Initial Study / Mitigated Negative Declaration
EA 02-0J810 Flume Creek CAPM Project *January 2025*

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List of Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AADT	Annual Average Daily Traffic
AB	Assembly Bill
APE	Area of Potential Effects
AQAP	Air Quality Attainment Plan
AQMD	Air Quality Management District
BMPs	Best Management Practices
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP(s)	Criteria Area Pollutant
CAPM	Capital Preventative Maintenance
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
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_4	methane
CHP	California Highway Patrol
CIA	Cumulative Impact Analysis
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
Dbh	Diameter-at-Breast-Height

Department	Caltrans
DBH	Diameter Breast Height
DOT	Department of Transportation
DP	Director's Policy
ECL	Environmental Construction Liaison
EEP	Emergency Evacuation Plan
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
ºF	degrees Fahrenheit
FAA	Federal Aviation Administration
FC	Federal candidate species
FE	Federally endangered
FED	Final Environmental Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FP	fully protected
FT	Federally threatened
GHG	greenhouse gas
GRE	Geosynthetic Reinforced Embankment
GWP	Global Warming Potential
H_2S	Hydrogen sulfide
H&SC	Health & Safety Code
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
I-5	Interstate 5
IS	Initial Study
ISA	Initial Site Assessment
IS/MND	Initial Study / Mitigated Negative Declaration
MMT	million metric tons
$MMTC0_2e$	million metric tons of carbon dioxide equivalent
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990

Department	Caltrans
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NO_X	Nitrogen oxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NSVPA	Northern Sacramento Valley Planning Area
O_3	ozone
OHWM	Ordinary High Water Mark
OPR	Governor's Office of Planning and Research
PDT	Project Development Team
PM	particulate matter
PM(s)	post mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Project	Flume Creek CAPM Project
PRC	Public Resources Code (California)
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	Shasta County Air Quality Management District
SCS	Sustainable Communities Strategy
SC	State candidate species
SE	State endangered
SF_6	sulfur hexafluoride
SHS	State Highway System
SIP	State Implementation Plan (Air Quality)
SNC(s)	Sensitive Natural Community(is)
SO_2	sulfur dioxide
SO_4	sulfate
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SS	Standard Specification
SSP	Standard Special Provision
STAGE	Siskiyou Transit and General Express

Department	Caltrans
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
THVF	Temporary High Visibility Fencing
TMP	Transportation Management Plan
U.S. or US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
USFS	United States Forest Service
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WPCP	Water Pollution Control Program

CHAPTER 1. PROPOSED PROJECT

1.1 Project History

The California Department of Transportation (Caltrans) is proposing to rehabilitate approximately 12 miles of Interstate 5 (I-5) in northern Shasta County (between Post Miles [PMs] 58.0 and 67.019) and southern Siskiyou County (between PMs 0.0 and 2.7).

Interstate 5 is a principal arterial/interstate in the National Highway System and is used predominately for the movement of goods and longer interregional trips. The interstate links most of the metropolitan areas occurring in California, Oregon, and Washington, as well as trade between Mexico and Canada. Further, I-5 provides a continuous freeway connection between all major ports on the West Coast, including the ports of Los Angeles and Long Beach—the first and second busiest ports in the US, respectively.

Highway maintenance activities were last performed on this segment of highway in 2014. At present, various sections are exhibiting uneven pavement throughout the roadway, especially on the uphill (cut slope) sides, typically in the southbound lanes. Sub-surface moisture is compounding the movement of the underlying Portland Cement Concrete slabs.

Between 2019 and 2021, a minimum of 18 maintenance task orders were issued to maintain the structural integrity of the road.

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

1.2 Project Description

Project Objective

Purpose

The purpose of this project is to restore the facility to a state of good repair that requires minimal maintenance.

Need

By the project delivery year of 2026, approximately 45.4 lane miles within the project limits will be in fair condition. There are approximately 100 rocking concrete slab locations causing damage to the overlying pavement. There are drainage systems in various conditions that may cause damage to the roadway if not repaired or replaced. The Castle Creek Bridge and Castella Undercrossing have poor bridge health ratings. Much of the median barrier and guardrail are below standard height. The signing, striping, CCTV, and RWIS are also partially obsolete.

Proposed Project

The California Department of Transportation, using federal and state funding, proposes to rehabilitate Interstate 5 (I-5) through repaving activities, structural repairs, drainage improvements, and construction of supporting infrastructure. The limits of work occur between post miles 58.0 and 67.019 in Shasta County, and post miles 0.0 and 2.7 in Siskiyou County (Figures 1 and 2).

The proposed project would include the following improvements:

Roadway Improvements

- Overlay activities – rubberized hot-mixed asphalt
  - Overlay roadway, including the shoulders and median
  - Conform on- and off-ramps
  - Perform digouts at various locations
- Install shoulder backing to support edge of pavement
- Repair approximately 100 rocking concrete slabs
- Seal parking area at PM 62.36

Structures

Project implementation would include rehabilitation of the Castle Creek Bridge (PM 63.31) and Castella Bridge (PM 63.58) as follows:

- Install a 4.5-inch reinforced concrete 'deck-on-deck' with a 1-inch polyester concrete overlay
- Upgrade the existing bridge railing
- Replace the existing median barrier
- Construct new approach slabs

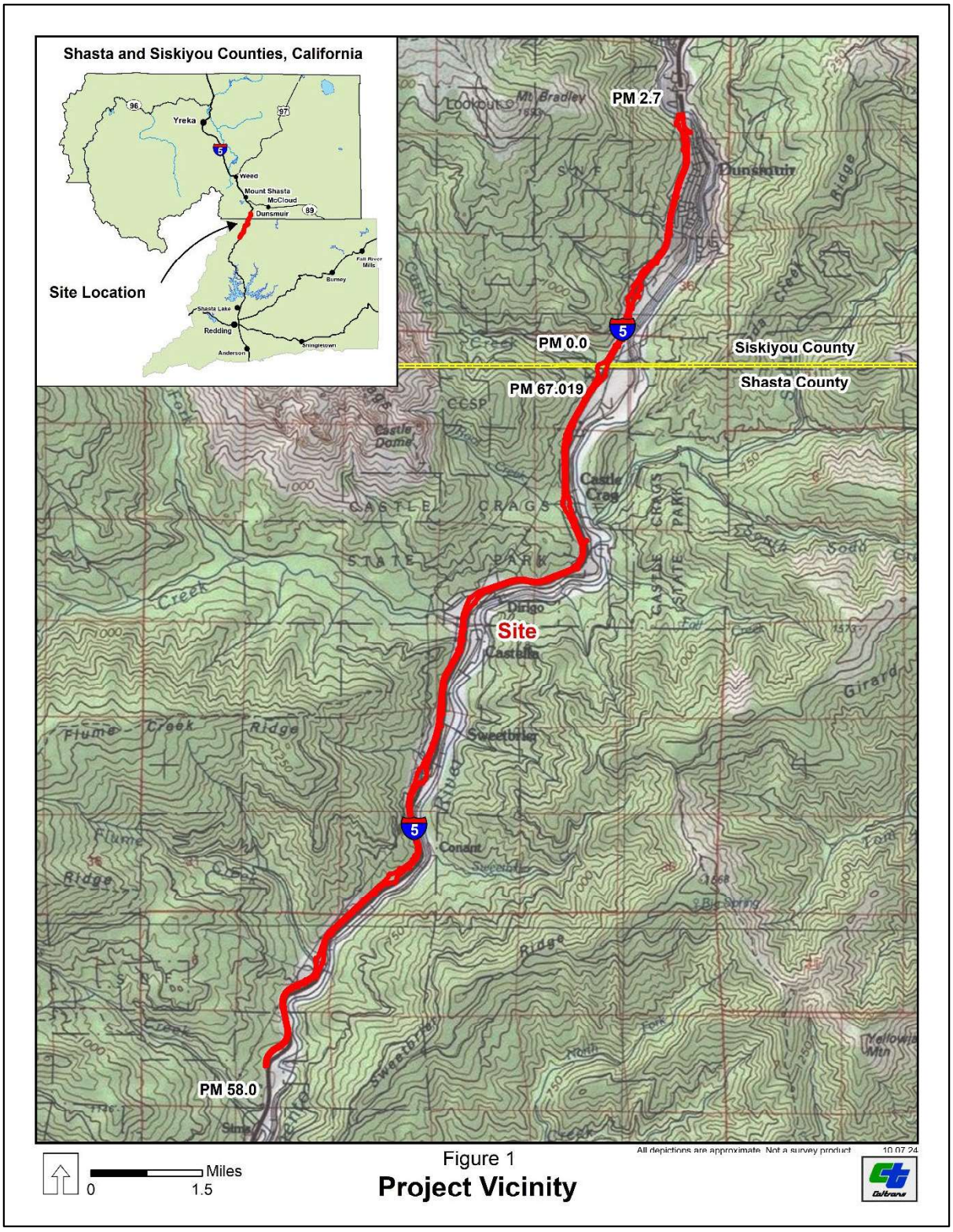

Figure 1. Project Vicinity

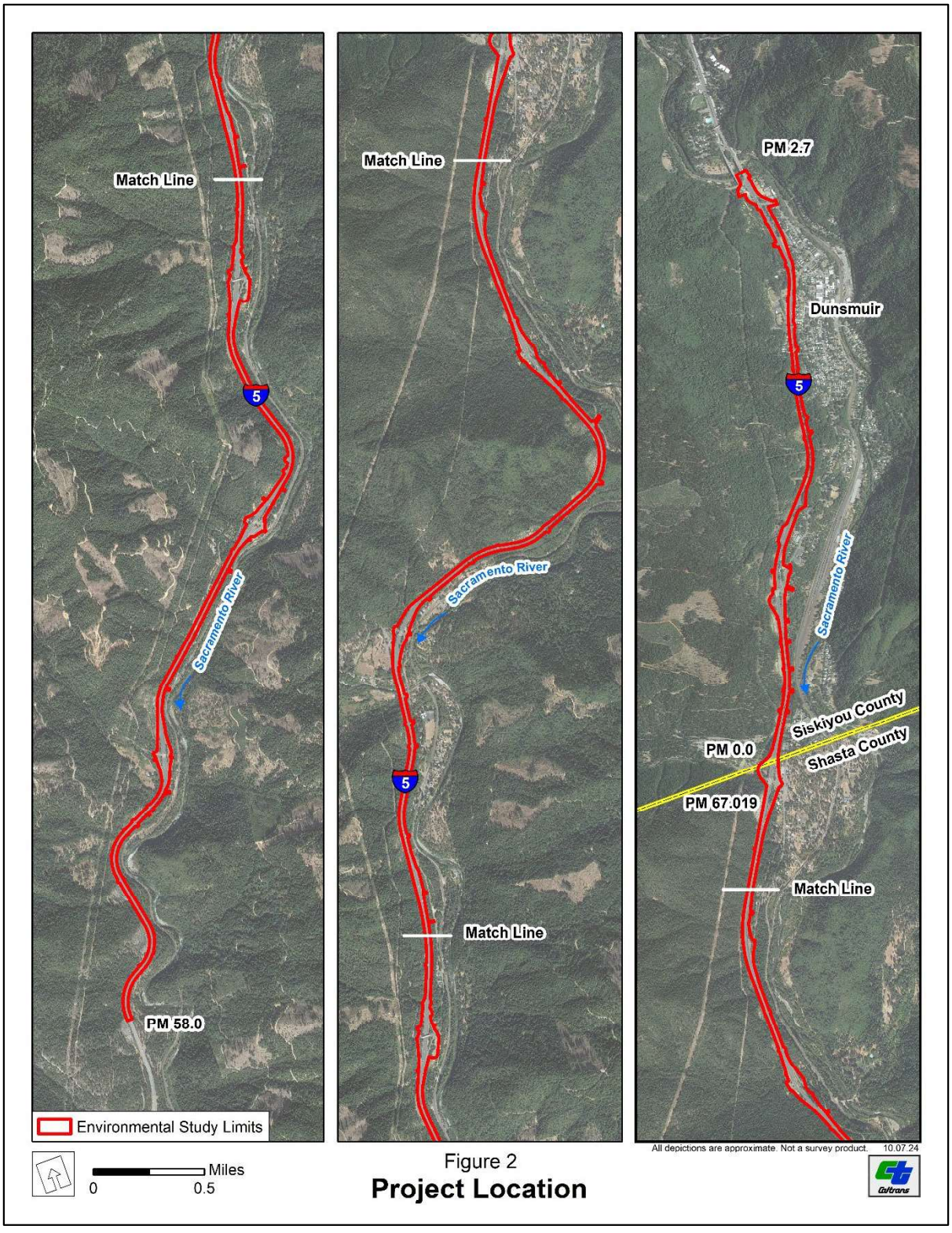

Figure 2. Project Location

Signs and Delineation

- Upgrade/replace signs to current standards.
- Install/apply recessed retroreflective pavement markers, as well as sprayable thermoplastic pavement striping/marking throughout the project corridor.

Traffic Safety

- Replace metal beam guardrail with Midwest Guardrail System steel-post guardrail in-place, and transition railing at bridge sites.
- Remove and replace approximately 11 miles of median barrier. The current median barrier height varies between 26 and 35 inches. To meet current standards, the median barrier height would be increased to 42 inches.

Transportation Management Systems

Upgrade the existing Road Weather Information System and Closed-Circuit Television stations in the community of Dunsmuir (PM 2.61). Replace ±30 damaged loops at the existing traffic monitoring stations.

Lighting

As part of the proposed project, seven new luminaires would be installed, and 13 luminaires replaced along various off-ramps. Luminaire installation would include minor trenching to provide power. The lighting locations/improvements are summarized in Table 1.

Table 1. Proposed Lighting Improvements

Luminaire Location	Replace	Add
Flume Creek Road - Northbound off-ramp	1	1
Conant Road - Southbound off-ramp	1	1
Sweetbrier Avenue - Northbound off-ramp	1	1
Sweetbrier Avenue - Southbound off-ramp	1	1
Castella - Northbound off-ramp	2	—
Castella - Southbound off-ramp	1	1
Soda Creek Road - Northbound off-ramp	1	1
Soda Creek Road - Southbound off-ramp	1	1
Crag View Drive - Northbound off-ramp	2	—

Luminaire Location	Replace	Add
Central Dunsmuir - Northbound off-ramp	2	—
Total:	**13**	**7**

Disposal/Borrow Sites

Project implementation would include approximately seven acres of ground disturbance; with a maximum excavation depth estimated at 10 feet. Excess soil material and construction debris would become the property of the contractor. No disposal and/or borrow sites are proposed.

Drainage Improvements

As part of the proposed project, drainage improvements, consisting of culvert installation/replacement, liner installation, drainage inlet replacement, headwall installation, and downdrain replacement, would be performed on 81 drainage systems. Additionally, various drainage inlets may need to be adjusted to grade. Further, culvert replacement activities may necessitate temporary clearwater diversions. The proposed drainage improvements would require vegetation removal. A detailed description of the proposed drainage improvements is provided below in Table 2. Culvert systems are often comprised of multiple segments, which are separated by drainage inlets or other structures. Culvert segments subject to replacement, including the number of drainage inlets are identified in the table.

Slope Stabilization

To address minor settling in the northbound lane at PM 1.1 in Siskiyou County, the roadway would be excavated and stabilized through construction of a geosynthetic reinforced embankment (GRE). The roadway would be excavated and backfilled in alternating horizontal layers of fill soil and geosynthetic reinforcement. The layers would extend up to the structural portion of the roadway. A drainage system would be included in the GRE.

Wildlife Management

Wildlife Crossing

A 12-foot-wide by 12-foot-tall reinforced concrete box culvert would be installed at PM 65.88 via cut and cover to allow wildlife to safely cross the highway.

Wildlife Fencing

An eight-foot-tall chain-link fence or other applicable fence type would be installed to direct wildlife under I-5. Wildlife fencing would be installed in conjunction with the proposed wildlife crossing. The estimated limits are included below.

- West of Highway—PMs 65.45 to 66.17
- East of Highway—PMs 65.45 to 66.10

To improve safety for animals and the traveling public, fence installation would include jump outs and/or deer gates, while the median barrier would include intermittent gaps along the length to allow wildlife to exit the roadway. Both elements would reduce the potential for wildlife to become trapped on the highway. Additionally, the fence design would include vehicle and/or pedestrian gates to accommodate maintenance activities.

New Impervious Area

The new impervious area is estimated at 0.01 acres.

Staging

Four staging areas have been identified along the project corridor: PMs 60.47 (northbound), 61.65 (northbound), 65.41 (southbound), and 0.95 (southbound).

Utilities

Within the project limits, I-5 supports overhead and underground utilities, including electric and fiber optic lines. Culvert replacement activities at PM 2.65 would require relocating an existing fiber optic line.

Right of Way

Caltrans would acquire temporary construction easements, including right-of-way acquisition at various locations to accommodate project activities.

Traffic Management

Project construction would utilize lane and ramp closures as needed.

Schedule

The work would be completed in three construction seasons and would require approximately 360 working days.

Table 2. Proposed Culvert Improvements

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
Shasta County						
58.01	2-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 324-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.25	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 88-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.33	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 52-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.40	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 104-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
58.67	2-3	Cut and Cover	—	—	—	Replace 18-inch-diameter by 45-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
58.77	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 56-foot-long culvert with a 24-inch-diameter culvert of the same length.
58.90	1-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 126-foot-long culvert with a 24-inch-diameter culvert of the same length. Add rock drain.
58.98	1-3	Cut and Cover	1	—	Yes	Replace 18-inch-diameter by 111-foot-long culvert with a 24-inch-diameter culvert of the same length. Install new flared end section at outfall.
59.05	4-6	Cut and Cover	2	—	—	Replace 18-inch-diameter by 160-foot-long culvert system with a 24-inch-diameter culvert system of the same length. Install slotted drain.
59.08	1-3	Cut and Cover	1	1	—	Replace 30-inch-diameter by 119-foot-long culvert with a 36-inch-diameter culvert of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
59.21	1-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 226-foot-long culvert system with a 24-inch-diameter culvert system of the same length. Install flared end section.
59.32	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 70-foot-long culvert with a 24-inch-diameter culvert of the same length.
59.35 (SB)	1-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 121-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.35 (NB)	2-7	Cut and Cover	5	—	—	Replace 18-inch-diameter by 194-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.60	1-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 197-foot-long culvert with a 24-inch-diameter culvert of the same length.
59.65	1-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 190-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.80	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 67-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.80	4-6	Cut and Cover	4	—	—	Replace 18-inch-diameter by 280-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
59.80	3-7	Cut and Cover	3	—	—	Replace 18-inch-diameter by 77-foot-long slotted drain culvert system with a 24-inch-diameter culvert system of the same length.
60.27	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 145-foot-long culvert system with a 24-inch-diameter culvert system of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
60.27	3-5	Cut and Cover	4	—	—	Replace 12-inch-diameter by 294-foot-long slotted drain culvert with a 24-inch-diameter culvert system of the same length.
60.35	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 83-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.45	1-7	Cut and Cover	3	—	—	Replace 18-inch-diameter by 612-foot-long culvert system with a 24-inch-diameter culvert system of the same length. Install slotted drain.
60.50	1-7	Cut and Cover	5	1	Yes	Replace 18-inch-diameter by 602-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
60.56	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 83-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.66	2-3	Cut and Cover	2	—	Yes	Replace 24-inch-diameter by 134-foot-long culvert with a culvert of the same dimensions.
60.73	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 84-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.83	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 50-foot-long culvert with a 24-inch-diameter culvert of the same length.
60.90	1-2	Cut and Cover	—	—	Yes	Replace 18-inch-diameter by 58-foot-long downdrain with a 24-inch-diameter downdrain of the same length.
60.90	2-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 361-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
61.00	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 101-foot-long culvert system with a 24-inch-diameter culvert system of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
61.10	2-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 50-foot-long slotted drain culvert with a 24-inch-diameter slotted drain culvert of the same length.
61.58	1-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 116-foot-long culvert system with a 24-inch culvert system of the same length.
61.58	5-6	Cut and Cover	1	—	—	Replace 18-inch-diameter by 265-foot-long culvert system with a 24-inch culvert system of the same length.
61.81	3-5	Cut and Cover	1	—	—	Replace 24-inch-diameter by 217-foot-long culvert system with a culvert system of the same length.
61.85	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 38-foot-long culvert with a 24-inch-diameter culvert of the same length.
61.89	1-2	Cut and Cover	—	—	—	Replace 18-inch-diameter by 86-foot-long culvert with a 24-inch-diameter culvert of the same length. Add flared-end section to inlet.
62.06	1-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 88-foot-long culvert with 24-inch-diameter culvert of the same length. Work includes flared-end section at inlet and slotted drain installation.
62.25	2-3	Cut and Cover	1	—	—	Replace 24-inch-diameter by 64-foot-long culvert with a culvert of the same length.
62.25	3-5	Cut and Cover	1	—	—	Replace 24-inch-diameter by 61-foot-long culvert with a culvert of the same length.
62.36	2-4	Cut and Cover	1	—	—	Replace 24-inch-diameter by 68-foot-long culvert system with a culvert system of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
62.49	1-2	Cut and Cover	—	—	—	Remove existing 18-inch-diameter by 47-foot-long culvert, including the drainage inlet.
62.68	3-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 20-foot-long slotted drain culvert with 24-inch-diameter slotted drain culvert of the same length.
62.78	3-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 20-foot-long slotted drain culvert with 24-inch-diameter slotted drain culvert of the same length.
63.08	1-3, 3-5	Cut and Cover	1	—	Yes	Install shallow 18-inch-diameter by 138-foot-long culvert system with 24-inch-diameter culvert system of the same length.
63.08	3-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 20-foot-long slotted drain culvert with a 24-inch-diameter slotted drain culvert of the same length.
63.18	1-5	Cut and Cover	1	—	—	Replace 18-inch-diameter by 185-foot-long culvert system with 24-inch-diameter culvert system of the same length.
63.30	2-3	Cut and Cover	1	—	—	Replace 12-inch-diameter by 15-foot-long culvert with 18-inch-diameter culvert of the same length.
63.44	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 245-foot-long culvert with 24-inch-diameter culvert of the same length.
63.61	1-7	Cut and Cover	5	—	Yes	Replace 24-inch-diameter by 475-foot-long culvert system with a culvert system of the same dimensions. Install new flared-end section at culvert inlet.
63.62	1-2	Cut and Cover	—	—	—	Replace 12-inch-diameter by 63-foot-long downdrain with a 24-inch-diameter downdrain of the same length.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
63.62	2-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 73-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
63.83	1-2	Cut and Cover	—	—	Yes	Replace 24-inch-diameter by 39-foot-long culvert with a culvert of the same dimensions.
63.93	4-6	Cut and Cover	—	—	—	Replace 18-inch-diameter by 28-foot-long slotted drain culvert system with a 24-inch-diameter slotted drain culvert system of the same length.
64.05	1-6	Cut and Cover	5	—	—	Replace 18-inch-diameter by 751-foot-long culvert system with 24-inch-diameter culvert system of the same length.
64.17	1-7	Cut and Cover	5	—	—	Replace 18-inch-diameter by 1,292-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
64.49	2-3	Cut and Cover	—	1	—	Replace 36-inch-diameter by 48-foot-long culvert with a culvert of the same dimensions.
64.57	1-5	Cut and Cover	4	—	—	Replace 18-inch-diameter by 849-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
64.70	1-2	Cut and Cover	—	—	Yes	Replace 18-inch-diameter by 154-foot-long culvert with a culvert of the same dimensions.
64.70	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 282-foot-long culvert with a 24-inch-diameter culvert of the same length.
64.70	3-5	Cut and Cover	2	—	—	Replace 18-inch-diameter by 568-foot-long culvert system with culvert system of the same dimensions.
64.96	1-3	Cut and Cover	1	1	—	Replace 24-inch-diameter by 428-foot-long culvert system with a culvert system of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
64.97	1-4	Cut and Cover	2	—	—	Replace 18-inch-diameter by 663-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
65.18	3-4, 5-6	Cut and Cover	—	—	—	Replace 18-inch-diameter by 66-foot-long slotted drain culvert system with a slotted drain culvert system of the same dimensions.
65.18	2-3, 5-7	Cut and Cover	—	1	—	Replace 30-inch-diameter by 96-foot-long culvert with a culvert of the same dimensions.
65.39	1-2	Cut and Cover	1	—	—	Replace 24-inch-diameter by 156-foot-long culvert with a culvert of the same dimensions.
65.41	1-4	Cut and Cover	2	—	Yes	Replace 18-inch-diameter by 163-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
65.42	1-5	Cut and Cover	2	—	Yes	Replace 18-inch-diameter by 141-foot-long culvert system with 24-inch-diameter culvert system of the same length. Work includes slotted drain installation.
65.43	2-3	Cut and Cover	1	—	—	Replace 30-inch-diameter by 177-foot-long culvert with 36-inch-diameter culvert of the same length.
65.43	3-4, 4-6, 3-7	Cut and Cover	2	1	—	Replace 24-inch-diameter by 145-foot-long culvert system with a culvert system of the same dimensions.
65.43	2-5	Cut and Cover	1	—	—	Replace 18-inch-diameter by 31-foot-long culvert with a culvert of the same dimensions.
65.50	1-4, 4-6	Cut and Cover	2	—	—	Replace 18-inch-diameter by 275-foot-long culvert system with 24-inch-diameter culvert system of the same length.
65.60	1-2	Cut and Cover	1	—	—	Replace 18-inch-diameter by 97-foot-long culvert with 24-inch-diameter culvert of the same length. Install flared-end section at inlet.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
65.78	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 97-foot-long culvert with 24-inch-diameter culvert of the same length.
65.88	1-3	Cut and Cover	—	—	—	Replace 30-inch-diameter by 253-foot-long culvert with a 12-foot-wide by 12-foot-tall by 140-foot-long precast reinforced concrete box culvert. This will serve as a wildlife crossing, while also conveying flow.
65.90	1-3	Cut and Cover	2	—	—	Replace 18-inch-diameter by 100-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
66.04	2-4	Cut and Cover	1	—	—	Replace 18-inch-diameter by 98-foot-long culvert system with culvert system of the same dimensions. Work includes slotted drain installation.
66.13	3-2	Cut and Cover	—	1	—	Replace 24-inch-diameter by 144-foot-long culvert with a culvert of the same dimensions.
66.17	1-3	Cut and Cover	1	—	Yes	Replace 18-inch-diameter by 191-foot-long culvert system with a 24-inch-diameter culvert system of the same length.
66.23	1-2	Cut and Cover	—	1	—	Replace 18-inch-diameter by 185-foot-long culvert with a 24-inch-diameter culvert of the same length. Install flared-end section at inlet.
66.52	1-2, 3	Cut and Cover	2	—	Yes	Replace 24-inch-diameter by 68-foot-long culvert with a culvert of the same dimensions. Replace grate at Inlet 3.
Siskiyou County						
0.16	1-2	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 94-foot-long culvert.
0.16	2-3	Cut and Cover	—	—	—	Replace 24-inch-diameter by 46-foot-long culvert with a culvert of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
0.26	1-2	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 191-foot-long culvert.
0.36	2-4	Cut and Cover	2	—	—	Replace 24-inch-diameter by 106-foot-long culvert with a culvert of the same dimensions.
0.36	3-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 28-foot-long slotted drain culvert with a slotted drain culvert of the same dimensions.
0.49	1-2	Cut and Cover	—	1	Yes	Install shallow 24-inch-diameter by 208-foot-long culvert/downdrain system. The existing system would be abandoned in place.
0.57	2-4	Cut and Cover	1	—	Yes	Replace 18-inch-diameter by 165-foot-long culvert system with a culvert system of the same dimensions. Install subsurface junction box.
0.69	1-2, 3-4	Cut and Cover	—	—	—	Perform joint repair on existing downdrain (1-2). For 3-4, replace 24-inch-diameter by 51-foot-long culvert with a culvert of the same dimensions.
0.78	1-2	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 404-foot-long culvert.
1.10	1-3	Cut and Cover	—	—	—	Replace eastern 20-foot section of 24-inch-diameter culvert (section 2-3); remove/reinstall 40-foot-long downdrain (section 1-2).
1.44	1-2	Cut and Cover	—	—	—	Replace 24-inch-diameter by 146-foot-long culvert with a culvert of the same dimensions.
1.52	1-2	Cure-in-Place Liner	—	—	Yes	Install cured-in-place liner within existing 24-inch-diameter by 123-foot-long culvert.
1.52	3-4	Cut and Cover	—	—	—	Replace 18-inch-diameter by 26-foot-long slotted drain culvert with a slotted drain culvert of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
1.52	2-5	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 24-inch-diameter by 524-foot-long culvert.
1.52	10-5, 11-5	Cut and Cover	—	—	—	Replace 18-inch-diameter by 39-foot-long slotted drain culvert with a slotted drain culvert of the same dimensions.
1.52	5-6, 5-7	Cut and Cover	1	—	—	Replace 18-inch-diameter by 68-foot-long culvert system with a culvert system of the same dimensions.
1.52	12-14	Cut and Cover	1	—	—	Replace 18-inch-diameter by 50-foot-long culvert with 24-inch-diameter culvert of the same length.
2.53	1-12	Cut and Cover	1	—	—	Replace 18-inch-diameter by 10-foot-long culvert with a culvert of the same dimensions.
2.53	2-3	Cut and Cover	1	—	—	Replace 18-inch-diameter by 46-foot-long culvert with a culvert of the same dimensions.
2.53	4-12	Cut and Cover	1	—	—	Replace 18-inch-diameter by 80-foot-long culvert with a culvert of the same dimensions.
2.53	4-6	Cut and Cover	1	—	—	Replace 18-inch-diameter by 53-foot-long culvert system with a culvert of the same dimensions.
2.53	5-8	Cut and Cover	—	—	—	Replace 18-inch-diameter by 97-foot-long culvert with a culvert of the same dimensions.
2.53	8-9	Cut and Cover	—	—	—	Replace 24-inch-diameter by 197-foot-long culvert with a culvert of the same dimensions.
2.53	9-10	Cut and Cover	—	—	—	Replace 18-inch-diameter by 21-foot-long culvert with a culvert of the same dimensions.
2.65	46-48, 46-47	Cut and Cover	2	—	—	Replace 18-inch-diameter by 88-foot-long culvert system with a culvert system of the same dimensions.
2.65	43-44, 43-45	Cut and Cover	1	—	—	Replace 18-inch-diameter by 63-foot-long culvert system with a culvert system of the same dimensions. Work includes slotted drain installation.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
2.65	36-40	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 30-inch-diameter by 366-foot-long culvert.
2.65	36-37	Cut and Cover	—	—	—	Replace 18-inch-diameter by 18-foot-long culvert with a slotted drain of the same dimensions.
2.65	33-35	Cut and Cover	—	1	—	Replace 18-inch-diameter by 46-foot-long culvert with a culvert of the same dimensions.
2.65	28-31	Cut and Cover	2	—	—	Replace 18-inch-diameter by 127-foot-long culvert system with a culvert system of the same dimensions. Work includes slotted drain installation.
2.65	25-28	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 30-inch-diameter by 207-foot-long culvert.
2.65	23-24	Cut and Cover	1	—	—	Replace 18-inch-diameter by 38-foot-long culvert with a culvert of the same dimensions.
2.65	23-25	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 36-inch-diameter by 349-foot-long culvert.
2.65	23-27	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 36-inch-diameter by 306-foot-long culvert.
2.65	21-27	Cure-in-Place Liner	—	—	—	Install cured-in-place liner within existing 36-inch-diameter by 107-foot-long culvert.
2.65	21-22	Cut and Cover	1	—	—	Replace 18-inch-diameter by 51-foot-long culvert with a culvert of the same dimensions.
2.65	13-14	Cut and Cover	—	—	—	Replace 24-inch-diameter by 37-foot-long concrete pipe with a pipe of the same dimensions.
2.65	2-4	Cut and Cover	—	—	—	Replace 24-inch-diameter by 188-foot-long culvert with a culvert of the same dimensions.
2.65	2-3	Cut and Cover	—	—	—	Replace 36-inch-diameter by 83-foot-long culvert with culvert of the same dimensions.

Post Mile	Segment Replacement Between Structures	Installation Method	Replace Drainage Inlet	Install Headwall at Inlet	Install Rock Slope Protection	Proposed Improvements
2.65	7-8	Cut and Cover	1	—	—	Replace 36-inch-diameter by 39-foot-long culvert with a culvert of the same dimensions.
2.65	3-6	Cut and Cover	1	—	—	Install new 24-inch-diameter by 105-foot-long culvert between structures 3 and 6.
2.65	2-6	Cut and Cover	—	—	—	Remove 18-inch-diameter by 59-foot-long downdrain system.
2.65	1-2	Abandon	—	—	—	Abandon existing 18-inch-diameter by 94-foot-long culvert and drainage inlet.

No-Build Alternative

This 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 project site primarily occurs within Caltrans right of way. Several temporary construction easements would be required on private lands. Permanent right of way take is required to accommodate the project. Land uses within the city of Dunsmuir are primarily commercial and residential. Surrounding lands uses along the remainder of I-5 consist primarily of public lands and undeveloped private lands. The Union Pacific Railroad tracks parallel the east side of I-5 along the entire project limits.

1.3 Permits and Approvals Needed

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

Table 3. Agency, Permit/Approval Status

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement	Following Final Environmental Document (FED)
State Water Resources Control Board (SWRCB)	Construction General Permit	Following FED
Regional Water Quality Control Board (RWQCB)	Water Quality Certification	Following FED
U.S. Army Corps of Engineers (USACE)	Nationwide Permit	Following FED

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 to a project situation. They are measures that typically result from laws, permits, agreements, guidelines, resource management plans, and resource agency directives and policies. They predate the project's proposal, and apply to all similar projects. For this reason, these measures and practices do not qualify as project mitigation under CEQA; rather, they are included as part of the project description in environmental document. and the effects of the project are analyzed with these measures in place.

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. Any project-specific avoidance, minimization, or mitigation measures that would be applied to reduce the effects of project impacts are listed in relevant sections of Chapter 2.

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 would have Temporary High Visibility Fencing (THVF) 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 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 October 1 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within five days prior to vegetation removal. If an active nest is located, the biologist would coordinate with the California Department of Fish and Wildlife (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.

B. Pre-construction surveys for active raptor nests within one-quarter mile of the construction area would be conducted by a qualified biologist within one week prior to initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance due to construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

C. To prevent attracting corvids (birds of the Corvidae family which include jays, crows, and ravens), 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.

D. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians and fish). To ensure adherence to permit conditions, the biological monitor would be present during activities such as installation and removal of dewatering or diversion systems. In-water work restrictions would be implemented.

E. An Aquatic Species Relocation Plan, or equivalent, would be prepared by a qualified biologist and include provisions for pre-construction surveys and the appropriate methods or protocols to relocate any species found. If previously unidentified threatened or endangered species are encountered, or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects. This Plan may be included as part of the Temporary Creek Diversion System Plan identified in BR-5.

F. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.

G. Surveys would be performed for foothill yellow-legged frog and nesting birds during the breeding season for each construction season (every year of construction). If species are discovered during construction, work would stop in the area of discovery and coordination with the appropriate resource agencies would occur.

H. A Limited Operating Period would be observed, whereby all construction activities would occur during daytime hours and between January 31 and October 1, which is the time of year when nesting birds would not be expected to have dependent young.

I. A Limited Operating Period would be observed, whereby all in-stream work below the ordinary high water mark (OHWM) would be restricted to the period between June 15 and October 15 to protect water quality.

BR-3: Invasive Species

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

B. Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.

C. 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 ESA

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. If applicable, a Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan would also address measures for riparian areas temporarily impacted by the project.

C. Prior to the start of work, THVF and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, and intermittent streams, where appropriate. No work would occur within fenced/flagged areas.

D. Where feasible, the structural root zone 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.

E. 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.

F. 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.

BR-5: Streams

A. The contractor would be required to prepare and submit a Temporary Creek Diversion System Plan to Caltrans for approval prior to any creek diversion. Depending on site conditions, the plan may also require specifications for the relocation of sensitive aquatic species (see also Aquatic Species Relocation Plan in BR-2F). Water generated from the diversion operations would be pumped and discharged according to the approved plan and applicable permits.

B. In-stream work would be restricted to the period between June 15 and October 15 to protect water quality (see also BR-2I). Construction activities restricted to this period include any work below the OHWM. Construction activities performed above the OHWM of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP), and/or project permit requirements.

C. See BR-4C for THVF information.

Cultural Resources

CR-1: Caltrans would coordinate with applicable Native American tribes and incorporate measures to protect tribal resources, including potential work windows associated with tribal ceremonies.

CR-2: If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find.

CR-3: 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. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent.

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 shall 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 (CCR), 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_2. This replanting would help offset any potential CO_2 emissions increase.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific *Lead Compliance Plan* (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."

Noise

N-1: The contractor would be required to conform to the 2022 Caltrans Standard Specification, Section 14-8.02 "Noise Control" which states, "Control and monitor noise from work activities." and, "Do not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m."

Transportation

TT-1: 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 Interstate 5 throughout the construction period.

UE-2: Caltrans would coordinate with utility providers to plan for relocation of any utilities to ensure utility customers would be notified of potential service disruptions before relocation.

UE-3: The project is located within a "*Very High*" CAL FIRE Fire Hazard Severity Zone (FHSZ). The contractor would be required to submit a jobsite Fire Prevention Plan as required by the California Division of Occupational Safety and Health before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities.

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 CGP), 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.
- Water generated from the dewatering operations would be discharged on-site for dust control and/or to an infiltration basin, or disposed of offsite.
- 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.
- For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the CGP), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of these 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.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the 2016 Caltrans Storm Water Management Plan (State Water Resources Control Board [SWRCB] 2016). 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	**Yes**
Agriculture and Forest Resources	No
Air Quality	**Yes**
Biological Resources	**Yes**
Cultural Resources	No
Energy	**Yes**
Geology and Soils	**Yes**
Greenhouse Gas Emissions	**Yes**
Hazards and Hazardous Materials	**Yes**
Hydrology and Water Quality	**Yes**
Land Use and Planning	No
Mineral Resources	No
Noise	**Yes**
Population and Housing	No
Public Services	**Yes**
Recreation	No
Transportation	**Yes**
Tribal Cultural Resources	No
Utilities and Service Systems	**Yes**
Wildfire	**Yes**
Mandatory Findings of Significance	**Yes**

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 it's 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/eliminating, 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 (California Public Resources 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.

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 Affected Environment 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 Environmental Study Limits 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 of 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 needed for different biological resources.

Biological Study Area (BSA): The BSA encompasses the ESL plus a 200-foot buffer outside of the ESL for biological resources which could potentially be affected by the project (e.g., noise, visual, etc.).

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
Would the project: a) Have a substantial adverse effect on a scenic vista?				✓
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
Would the project: 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?				✓
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities" (California Public Resources Code [PRC] Section 21001[b]).

Affected Environment

The proposed project is located within the California's Northern Sacramento Valley. The Central Valley of California meets at the convergence of the Klamath and Coastal Mountain Ranges to the northwest and west, with the Cascade Mountain range to the northeast and east. Terrain of the area varies from low valleys to steep forested mountains. Interstate 5 (I-5) is bounded by the Cascade Mountain range to the east and north and the Coast Mountain range to the west. Mount Lassen, located in Lassen Volcanic National Park, is the county's highest peak at 10,457 feet above mean sea level, whereas the lower elevations of 400 to 700 feet above mean sea level occur on the valley floor around the city of Redding. Coniferous forest is the main vegetation in the mountain regions. Other areas are characterized by grassland, oak woodland, and cultivated/pastureland.

The Sacramento River and Union Pacific railroad tracks occur immediately east of the site.

Environmental Consequences

The *Visual Impact Assessment* (VIA) (Caltrans 2024a) prepared for the project concluded that project activities would result in negligible visual changes to the environment. As discussed further below, the project would not have a substantial adverse effect on a scenic vista; would not damage scenic resources; would not substantially degrade the existing visual character or quality of public views of the site and its surroundings; and would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. As part of the proposed project, Standard Measures AR-1 through AR-4 (Section 1.4) would be implemented.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.1—Aesthetics

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

NO IMPACT. Scenic vistas consist of expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as mountains, hills, valleys, watercourses, outcrops, and natural vegetation, as well as man-made scenic structures. Scenic resources in the project area include the Klamath, Coastal Mountain, and Cascade Mountain ranges. These scenic resources would remain intact. Visual impacts associated with the project are limited to minor tree removal at various culvert locations. Project implementation would not have an adverse effect on a scenic vista. Thus, there would be no impact.

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

NO IMPACT. No State Scenic Highways have been designated within the project limits. The nearest officially designated State Scenic Highway is State Route 151 (Shasta Dam Boulevard) in Shasta County. The nearest eligible highway is a segment of I-5 between the city of Redding and the Pit River Bridge, which is located approximately 30 highway miles south of the project site. Neither the designated nor eligible scenic route are visible from the project site. Therefore, the proposed project would have no impact to scenic resources within a designated State Scenic Highway.

c) Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.)

NO IMPACT. Principal viewers in the project area include motorists on I-5 and people residing in the area. As described above, scenic resources in the project area include the Klamath, Coastal Mountain, and Cascade Mountain ranges. These resources would not be impacted. Given the nature of the proposed improvements, the project would not substantially degrade the existing character or quality of the public views of the site and its surroundings. Therefore, there would be no impact.

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

LESS THAN SIGNIFICANT IMPACT. The proposed project includes additional highway on- and off-ramp lighting at select locations along I-5. The purpose of the lighting is to improve public safety. The proposed locations already support highway lighting. As such, the proposed lights would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, potential impacts associated with new lighting would be less than significant.

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
Would the project: 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?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: 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))?				✓
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as data maintained by the California Department of Conservation. Given the absence of agricultural lands, and that tree removal would be limited (i.e., select culvert locations and portions of the wildlife fencing alignment), agricultural and forest lands would not be impacted.

Discussion of CEQA Environmental Checklist Question 2.2—Agriculture and Forest Resources

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

NO IMPACT. According to the California Department of Conservation (2024a), the project would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural use. Thus, there would be no impact.

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

NO IMPACT. The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. As proposed, the project would not convert prime farmland, unique farmland, or farmland of statewide importance, nor does it include any components that would have a direct or indirect effect on farmland. According to the California Department of Conservation (2024b), project implementation would not affect a Williamson Act contract. Thus, there would be no impact.

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

NO IMPACT. Areas abutting the project site largely consist of forest land. Further, according to the County of Shasta and County of Siskiyou zoning maps (County of Shasta 2023 and County of Siskiyou 2023), a few areas are zoned timberland and timberland production. Project implementation may require minor tree removal; however, said activities would not conflict with or cause rezoning of timberland and/or timber production lands. Thus, there would be no impact.

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

NO IMPACT. As described above in Question C, the project may result in minor tree removal. This activity would not result in the loss of forest land or conversion of forest land to non-forest use. Thus, there would be no impact.

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

NO IMPACT. As described above in Question A, the proposed project would not result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Thus, there would be no impact.

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
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?				✓
Would the project: 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?			✓	
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?			✓	
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

Regulatory Setting

The federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality, while the California Clean Air Act is its corresponding state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (CARB) set standards for the concentration of Criteria Area Pollutants (CAPs).

For the federal CAA, ambient concentrations are known as the National Ambient Air Quality Standards (NAAQSs). There are six federal CAPs: Ozone (O_3), carbon monoxide (CO), particular matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead.

The California CAA establishes maximum concentrations for the six federal CAPs, as well as four additional air pollutants: sulfate (SO_4), hydrogen sulfide (H_2S), visibility reducing particles, and vinyl chloride. The four additional standards are intended to address regional air quality conditions, not project-specific emissions. These maximum concentrations are known as the California Ambient Air Quality Standards (CAAQSs). The CARB has jurisdiction over local air districts and has established its own standards for each CAP under the CAAQS. For areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and State air quality standards.

The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this analysis, a parallel "Conformity" requirement under the federal CAA also applies. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Affected Environment

The project site occurs in the northern end of the Sacramento Valley surrounded by the Cascade Mountains to the northeast and east and the Klamath and Coastal Mountains to the northwest and west. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Pollutant concentrations may intensify when a temperature inversion layer traps air at lower levels below an overlying layer of warmer air. Due to relatively stable atmospheric conditions, pollutants will not disperse until atmospheric conditions become unstable. Shasta County is located in the Sacramento Valley Air Basin and Siskiyou County is located in the Northeast Plateau Air Basin.

The project site is located in Shasta County (PMs 58.0 to 67.019) and Siskiyou County (PMs 0.0 to 2.7). The segment occurring in Shasta County is under the jurisdiction of the Shasta County Air Quality Management District (SCAQMD); the Siskiyou County segment is under the jurisdiction of the Siskiyou County Air Pollution Control District (Siskiyou County

AQMD). Both segments are also under the jurisdiction of the CARB. The project site is located in an attainment/unclassified area for all current NAAQS. Therefore, conformity requirements do not apply. Regarding state air quality standards, the project site is located in an attainment or unclassified area for carbon monoxide (CO), nitrogen dioxide (NO_2), particular matter ($PM_{2.5}$), particulate matter (PM_{10}), lead, and sulfur dioxide (SO_2), while ozone (O_3) is considered non-attainment (Shasta County only) (CARB 2022a).

Environmental Consequences

The *Air Quality Analysis* prepared for the project (Caltrans 2024b) concluded that because the project is not a capacity-increasing project, no long-term air quality impacts resulting from highway operation would occur. However, during construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include CO, nitrogen oxides (NOx), volatile organic compounds (VOCs), directly emitted PM_{10} and $PM_{2.5}$, and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut and fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM_{10}, $PM_{2.5}$, and small amounts of CO, SO_2, NOx, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site, and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the United States Environmental Protection Agency (U.S. EPA) to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Caltrans' standard specifications on dust

minimization require use of water or dust palliative compounds which would reduce potential fugitive dust emissions during construction.

In addition to dust-related PM_{10} emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NOx, VOCs and some soot particulate (PM_{10} and $PM_{2.5}$) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. However, these emissions would be temporary and limited to the immediate area surrounding the construction site.

Sulfer dioxide is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm sulfur); therefore, SO_2-related issues due to diesel exhaust would be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site increases.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.3—Air Quality

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

NO IMPACT. As previously described, the project site is located in an attainment/unclassified area for all current NAAQS. Regarding state air quality standards, with the exception of ozone (Shasta County only), the project is located in an attainment or unclassified area for all criteria pollutants. As described under the Regulatory Setting section, for areas within the State that have not attained air quality standards, the CARB works with local air districts to develop and implement attainment plans to obtain compliance with both federal and state air quality standards.

The SCAQMD, along with other air districts in the Northern Sacramento Valley Air Basin, jointly prepared an Air Quality Attainment Plan (AQAP) for the purpose of achieving and maintaining healthful air quality throughout the air basin. The Northern Sacramento Valley Planning Area (NSVPA) 2021 Triennial AQAP constitutes the region's State Implementation Plan (SIP). The NSVPA 2021 AQAP includes updated strategies and regulations for the three-year period of 2021 through 2024. Shasta County has determined that their primary emphasis in implementing the 2021 Attainment Plan is to attempt to reduce emissions from mobile sources through public education and grant programs. With AQAP compliance, the project would not conflict with or obstruct implementation of the area's air quality plan; thus, there would be no impact.

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

LESS THAN SIGNIFICANT IMPACT. The proposed project would not increase operational emissions; however, there would be a temporary increase in criteria pollutants during project construction. As construction emissions are temporary in nature, the project would not result in a cumulatively considerable net increase of any criteria pollutant. Thus, impacts would be considered less than significant.

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

LESS THAN SIGNIFICANT IMPACT. Sensitive receptors are individuals or groups of people that are more affected by air pollution than others, including young children, the elderly, and people weakened by disease or illness. Locations that may contain high concentrations of sensitive receptors include residential areas, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. For the purposes of this project, pollutants consist of construction emissions and fugitive dust associated with earthwork. With the exception of the city of Dunsmuir (I-5 in Siskiyou County PMs 1.3 to 2.7), the project corridor primarily comprises forested lands, with sparse pockets of residential properties. Two sensitive receptors, Castle Rock Elementary School (I-5 Shasta County PM 63.1) and Dunsmuir High School (I-5 Siskiyou County PM 2.0), are located within a 0.25-mile of the project corridor. Given the linear nature of the project, work occurring adjacent to the schools would be of relatively short duration; thus, potential impacts to sensitive receptors would be less than significant.

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

LESS THAN SIGNIFICANT IMPACT. Construction activities have the potential to emit odors from diesel equipment, fugitive dust, and paving (asphalt). Odors from construction are intermittent and temporary, and generally would not extend beyond the construction area. Due to the temporary and intermittent nature of construction odors, impacts would be less than significant.

2.4 Biological Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?				✓
Would the project: 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?			✓	
Would the project: 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?				✓
Would the project: 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?		✓		

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

Affected Environment

The proposed project is located within California's Northern Sacramento Valley. The Central Valley of California meets at the convergence of the Klamath and Coastal Mountain Ranges to the northwest and west, with the Cascade Mountain range to the northeast and east. The areas' terrain varies from low valleys to steep forested mountains. I-5 is bounded by the Cascade Mountain range to the east and north and the Coast Mountain range to the west. The site is bisected by several major streams, including Root, Flume, Little Castle, and Castle Creeks. Bisecting streams discharge to the Sacramento River. Coniferous forest is the main vegetation in the mountain regions. Other areas are characterized by grassland and oak woodland.

The climate of the project vicinity consists of hot summers and cool winters. The average annual temperature is approximately 54.1 degrees Fahrenheit (°F). Monthly mean maximum temperatures range from a high of 103°F in July to a low of 21°F in December and January. Daily high temperatures commonly exceed 95°F during the summer. The average precipitation is 58.12 inches per year.

A *Natural Environment Study* (NES) (Caltrans 2024c) was prepared for the project. Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from CDFW. See Chapter 3 for a summary of these coordination efforts and professional contacts.

Sensitive Natural Communities

During the field review, Caltrans identified riparian habitat (i.e., sensitive natural communities) along select streams within the project limits.

Wetlands and Other Waters

During the field review, Caltrans identified multiple streams (i.e., other waters) that bisect the site via bridges and culverts. On-site streams flow east across the site and ultimately discharge to the Sacramento River. No wetlands were observed during the field review.

Plant Species

This section addresses special-status plant species, including USFWS Candidate and sensitive species, CDFW Species of Special Concern, and CNPS rare and endangered plants.

As documented in Appendix C—USFWS, CDFW-CNDDB, and CNPS species lists with Potential to Occur Table, 69 special-status plant could potentially occur in the region. Based on habitat requirements, the following 16 species could potentially occur within the Environmental Study Limits (ESL):

- Butte County fritillary (CNPS 3.2)
- California globe mallow (CNPS 1B.2)
- Cantelow's lewisia (CNPS 1B.2)
- Clustered lady's-slipper (CNPS 4.2)
- Mountain lady's-slipper (CNPS 4.2)
- Niles' harmonia (CNPS 1B.1)
- Northern clarkia (CNPS 4.3)
- Oregon fireweed (CNPS 1B.2)
- Redwood lily (CNPS 4.2)
- Shasta County arnica (CNPS 4.2)
- Shasta maidenhair fern (CNPS 4.3)
- Shasta snow-wreath (CNPS 1B.2)
- Stebbins' harmonia (CNPS 1B.2)

- Thread-leaved beardtongue (CNPS 4.2)
- Tracy's eriastrum (CNPS 3.2)
- Waldo daisy (CNPS 2B.3)

As documented in the Potential to Occur Table (Appendix C), given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and/or the species were not observed during botanical surveys, the species would not be present. See Appendix C for an evaluation of the potential for each listed species to occur within the ESL.

Animal Species

This section addresses special-status animal species, including USFWS and NMFS Federal candidate (FC) species, and CDFW State candidate (SC) species and Species of Special Concern (SSC).

As documented in Appendix C, 12 special-status animal species could potentially occur in the region. However, based on habitat requirements, six species could potentially occur within the ESL.

- Fisher (SSC)
- Foothill yellow-legged frog–North Coast DPS (Pop. 1) (SSC)
- Monarch butterfly (FC)
- Spotted bat (SSC)
- Townsend's big-eared bat (SSC)
- Western mastiff bat (SSC)

As documented in the Potential to Occur Table (Appendix C), given the lack of suitable habitat and the species were not observed during field surveys, the species would not be present. See Appendix C for an evaluation of the potential for each listed species to occur within the ESL.

Threatened and Endangered Species

This section addresses plant and animal species that are specifically listed as "threatened" or "endangered" under the Federal or State Endangered Species Acts, including Federally threatened (FT), Federally endangered (FE), and State endangered (SE).

As documented in Appendix C, two threatened or endangered plant species, Lassics lupine and whitebark pine, could potentially occur within the region. However, because the site is outside the elevation range of these species, neither Lassics lupine or whitebark pine have the potential to occur within the ESL.

As documented in Appendix C, 12 threatened and/or endangered animal species could potentially occur in the region. However, based on habitat requirements, Caltrans has determined only one species, bald eagle—State Endangered and State Fully Protected—could potentially occur within the ESL.

As documented in the Potential to Occur Table (Appendix C), no stick nests were observed during the field survey; thus, the species would not be present. See Appendix C for an evaluation of the potential for each threatened and/or endangered species to occur within the ESL.

Invasive Species

The following invasive species were observed with the project footprint: scotch broom, bullthistle, tree of heaven, and fig.

Environmental Consequences

The proposed culvert improvements would result in temporary and permanent impacts to riparian habitat and streams (i.e., other waters). Temporary and permanent impacts to riparian habitat are estimated at ±0.02 and ±0.005 acres, respectively. Temporarily disturbed riparian areas would be restored to preconstruction contours and replanted with a regionally appropriate seed mix.

With respect to streams, culvert replacement activities would be performed in-kind (i.e., no change in length) along the entire project corridor via cut and cover or liner installation. Depending on the maintenance needs of the applicable culvert system, improvements may also include installation of the following features: flared end sections, inlet headwalls, drainage inlets, subsurface junction boxes, and/or rock slope protection. Temporary and permanent impacts to streams are estimated at ±265 linear feet (±0.01 acres) and ±11 linear

feet (±0.002 acres), respectively. Temporarily disturbed stream areas would be restored to preconstruction contours. Permanent impacts to riparian habitat and streams would be mitigated through the purchase of in-lieu fee credits.

With respect to special-status species and threatened and/or endangered species, given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and/or the species were not observed during surveys, none of these species would be impacted by the proposed project.

To improve wildlife connectivity across I-5, a 12-foot-wide by 12-foot-tall reinforced concrete box culvert and associated fencing would be installed near PM 65.88.

Standard Measures BR-1 through BR-5 (Section 1.4) would be implemented.

Avoidance, Minimization and Mitigation Measures

To offset potential impacts to wildlife connectivity resulting from the raising of the median barrier, the project would include the following wildlife connectivity improvements:

- Construct a 12-foot-wide by 12-foot-tall reinforced concrete box culvert at PM 65.88.
- To help direct wildlife to the proposed crossing, install an eight-foot-tall chain-link fence or other applicable fence type along both sides of the highway. The estimated fence limits include:
    - Western fence - PMs 65.45 to 66.17
    - Eastern fence – PMs 65.45 to 66.10
- To reduce the potential for wildlife to become trapped on the highway:
    - Install jump outs and/or deer gates along the proposed fence
    - Include intermittent gaps along the length of the median barrier to allow wildlife to exit the roadway

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

NO IMPACT. As previously discussed under the Affected Environment section, as documented in the Potential to Occur Table (Appendix C), 16 special-status species could potentially occur within the ESL. However, given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and the species were not observed during botanical surveys, the species would not be present. Thus, there would be no impact.

Animal Species

NO IMPACT. As previously discussed under the Affected Environment section, as documented in the Potential to Occur Table (Appendix C), five special-status animal species could potentially occur within the ESL. However, as documented in the Potential to Occur Table (Appendix C), given the lack of suitable habitat and the species were not observed during field surveys, the species would not be present. Thus, there would be no impact.

Threatened and Endangered Species

As discussed earlier under the Affected Environment section, two threatened and endangered plant species and two threatened, endangered, or candidate animal species could potentially occur within the ESL. However,-given the lack of suitable habitat, the ESL is outside the geographical/elevational range of the species, and/or the species were not observed during the field surveys, the species would not be present.

Under FESA, Caltrans has determined there would be *no effect* to the following federally listed and federal candidate species :

- Lassics lupine–federal and state endangered
- Monarch butterfly–federal candidate

Under CESA, Caltrans has determined there would be *no effect* to the following state listed, state candidate, and state fully protected species:

- Lassics lupine–state endangered
- Bald eagle–state endangered and state fully protected

Invasive Species

As previously discussed, several invasive species were observed with the project footprint. Implementation of Standard Measure BR-3 (Section 1.4) would serve to minimize the introduction and/or spread of invasive species.

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?***

LESS THAN SIGNIFICANT IMPACT. The proposed culvert improvements would result in temporary and permanent impacts to riparian habitat and streams (i.e., other waters), both of which are considered sensitive natural communities. Temporary and permanent impacts to riparian habitat are estimated at ±0.02 and ±0.005 acres, respectively. Temporarily disturbed riparian areas would be restored to preconstruction contours and replanted with a regionally appropriate seed mix.

Temporary and permanent impacts to streams are estimated at ±265 linear feet (±0.01 acres) and ±11 linear feet (±0.002 acres), respectively. Temporarily disturbed stream areas would be restored to preconstruction contours. Permanent impacts would be mitigated through the purchase of in-lieu fee credits. Based on the proposed scope of work, impacts to sensitive natural communities would be less than significant.

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?*

NO IMPACT. As discussed earlier under the Affected Environment section, no wetlands were observed during the field review. Thus, there would be no impact.

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?*

LESS THAN SIGNIFICANT IMPACT *WITH MITIGATION INCORPORATED*. The project area is located within the Pacific Flyway, and it is possible that birds could nest in or adjacent to the study area. Nesting birds, if present, could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from tree removal and/or construction equipment operating in an area with an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults.

Construction activities, particularly those involving vegetation removal, have the potential to directly impact nesting birds, if present. In the local area, most birds nest between February 1 and September 30. In accordance with Standard Measure BR-2, the potential for adversely affecting nesting birds would be greatly minimized by removing vegetation and conducting construction activities either before February 1 or after September 30. If this is not possible, a nesting survey would be conducted within one week prior to removal of vegetation and/or the start of construction.

If active nests are found in the project site, Caltrans would implement measures to comply with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures,

seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

According to the California Essential Habitat Connectivity Project (Spencer et. al. 2010), the project corridor occurs within an essential connectivity area (i.e., a wildlife migratory corridor) (Figure 3). As part of the Project, the limits of I-5 between the cities of Redding and Mt. Shasta were identified as a barrier to wildlife.

Deer, bear, and other animals known to the region are commonly observed traveling within the project limits. The project corridor includes a limited number of undercrossings (e.g., highway overpasses), which are utilized by wildlife to cross the highway. Further, small to medium diameter (e.g., 18 to 36 inch) culverts are available to smaller animals. The project corridor includes barbed-wire fencing along portions of the right-of-way; however, it does not serve as a wildlife barrier. Given on-site conditions, animals are able to access the highway, creating a safety issue for animals and the traveling public.

Traffic volumes along I-5, in combination with high vehicle speeds, result in periodic animal strikes within the project limits. Further, the existing median barrier (26 to 35 inches tall) serves as a potential impediment to animals crossing the highway. As proposed, the median barrier height would be increased to 42 inches tall to meet current safety standards. The raising of the median barrier could potentially make it more difficult for animals to cross the highway.

To improve wildlife connectivity across I-5, project implementation includes construction of a 12-foot-wide by 12-foot-tall reinforced concrete box culvert at PM 65.88 (Figure 3). The crossing site is centrally located within the essential connectivity area. To help direct wildlife to the proposed crossing, an eight-foot-tall chain-link fence or other applicable fence type would be installed along both sides of the highway. The western fence would be installed between approximately PM 65.45 and 66.17, while the eastern fence would be installed between approximately PM 65.45 and 66.10.

To improve safety for animals and the traveling public, fence installation would include jump outs and/or deer gates, while the median barrier would include intermittent gaps to allow wildlife to exit the roadway. Both elements would reduce the potential for wildlife to become trapped on the highway. Additionally, the fence design includes vehicle and/or pedestrian gates to accommodate maintenance activities. During final design, the Caltrans Project Development Team would determine the appropriate median barrier gap width and interval.

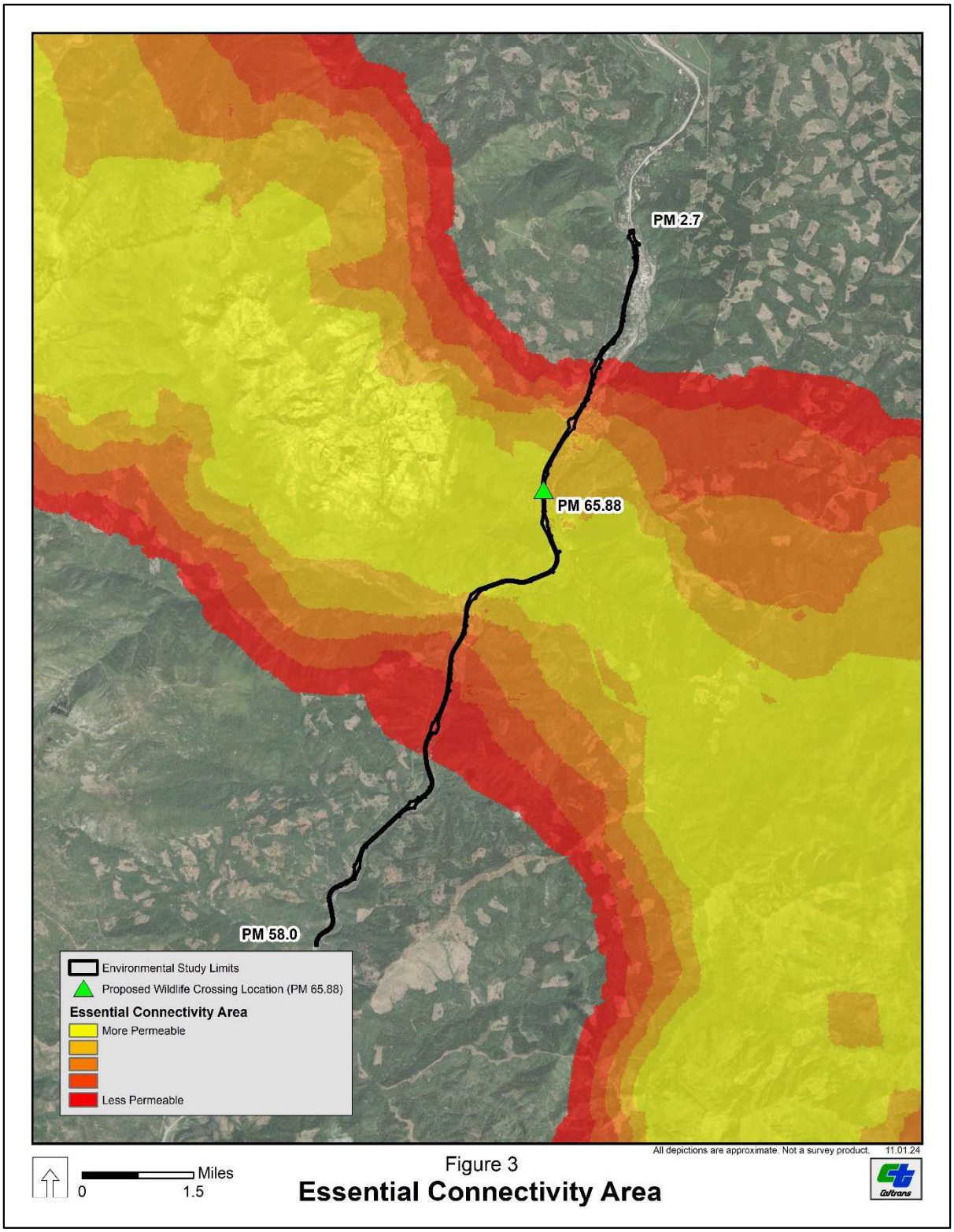

Figure 3. Essential Connectivity Area

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?

NO IMPACT. The project site occurs on lands managed by the State of California (i.e., Caltrans), which is not subject to local policies or ordinances. Therefore, there would be no conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Thus, there would be no impact.

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?

NO IMPACT. A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. A Natural Community Conservation Plan (NCCP) is a State planning document administered by CDFW. No HCPs, NCCPs, or other habitat conservation plans occur on the project site or in the surrounding area. As such, there would be no conflict with an HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Thus, there would be no impact.

2.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				✓
Would the project: b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				✓
Would the project: 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 *Historic Properties Survey Report* dated July 9, 2024 (Caltrans 2024d). Caltrans consulted with applicable California Native American tribes; none of the tribes consulted provided notification of the presence or potential presence of tribal cultural resources, defined in Public Resources Code Section 2107, within the project area. Further, no cultural resources were observed within the project area during the field surveys.

It is Caltrans' policy to avoid cultural resources whenever possible. Compliance with Caltrans Standard Specifications to protect buried cultural materials, including human remains, that may be encountered during construction would ensure that the project would have no adverse effect on historic/archaeological resources pursuant to § 15064.5 or on buried human remains.

Given the determinations above, the project would have no impact on cultural resources.

Discussion of CEQA Environmental Checklist Question 2.5—Cultural Resources

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

NO IMPACT. The cultural resources study included literature and records review of the project area, Native American outreach, and an archaeological field survey of the project area. The purpose of these efforts was to identify and evaluate any cultural resources that may exist within the project area and to assess any effects that the project might have related to the cultural resources.

Based on the results of the records search and field review, the site does not support historical resources. Because the project Area of Potential Effects (APE) does not contain historic resources listed or eligible for listing on the California Register of Historical Resources, the project would have no impact to historical resources pursuant to § 15064.5. Thus, there would be no impact.

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

NO IMPACT. Based on the results of the records search and field review, the site does not support archaeological resources. It is Caltrans' policy to avoid cultural resources whenever possible. To ensure the project would have no adverse effects on archaeological resources, as discussed in Section 1.4, Caltrans would implement Standard Measures CR-1 through CR-3 to ensure no adverse effects to unknown archaeological resources. With implementation of these standard measures, the project would not cause a substantial adverse change to an archaeological resource. Thus, there would be no impact.

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

NO IMPACT. The project area does not include any known cemeteries, burial sites, or human remains. Caltrans would implement Standard Measure CR-3 in the unlikely event human remains are encountered. The project is not expected to disturb any human remains, including those interred outside of dedicated cemeteries. Thus, there would be no impact.

2.6 Energy

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

Regulatory Setting

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

CEQA Guidelines Section 15126.2(b) and CEQA Guidelines Appendix F—Energy Conservation require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

Affected Environment

The project area supports existing infrastructure within Caltrans' right-of-way that requires the input of electricity to operate. This includes closed-circuit television systems, changeable message signs, roadside weather information systems, and luminaires.

Energy use in the project area is also affected by the amount of traffic that passes through the project area, the rate of travel, and patterns of travel. Depending on the location, this section of highway currently supports an annual average daily traffic volume between 19,100 and 21.300 vehicles.

Environmental Consequences

An *Energy Analysis Report* was prepared for the project (Caltrans 2024e). Project implementation includes the construction of new and replacement luminaires at select locations along I-5 (Section 1.2, Table 1). Luminaire installation would result in construction and operational energy usage. During construction, there would be a minor short-term increase in energy use due to the operation of construction vehicles/equipment, as well as traffic control operations. Additionally, the as-built project would result in a minor increase in energy consumption resulting from luminaire usage.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.6—Energy

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

LESS THAN SIGNIFICANT IMPACT. Project implementation would result in construction and operational energy usage. During construction, there would be a minor short-term increase in energy use due to the operation of construction vehicles/equipment, and traffic control (e.g., lane closures would increase vehicle idling - an inefficient energy use). Additionally, the as-built project would result in a minor increase in energy consumption resulting from streetlight installation/usage. The proposed lighting would not be wasteful or inefficient. The purpose of the lighting is to improve vehicle safety. The minor temporary increase in energy usage associated with construction activities, including the operation of streetlighting would result in a less-than-significant impact.

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

NO IMPACT. As proposed, new energy usage associated with the project is limited to a minor amount of street lighting. The proposed street lighting would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, there would be no impact.

2.7 Geology and Soils

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?			✓	
Would the project: 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?				✓
Would the project: 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?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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?				✓
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

Regulatory Setting—Geology and Soils

The primary laws governing geology and soils include:

- Historic Sites Act of 1935–16 USC 461 et seq.
- CEQA–California Public Resources Code (PRC) 21000

Affected Environment—Geology and Soils

The project site occurs in the northern Sacramento Valley, which is surrounded by the Cascade Mountains to the northeast and east and the Klamath and Coastal Mountains to the northwest and west. According to the *Paleontological Resources Assessment (*Caltrans 2024f), the underlying geology in the project area consists of ultramafic rocks, volcanic (igneous) rocks, or nonmarine (continental) sedimentary rocks of sandstone, shale, and conglomerate that are moderately to well consolidated. The volcanic rocks date to the Mesozoic and Tertiary periods, while the sedimentary rocks likely date to the Eocene.

The project site is not located in an area that has a known active earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map (California Department of Conservation 2024c). The project location occurs in an area with a low potential for seismic ground shaking from earthquakes (California Department of Conservation 2024d). The project location is not characterized by seismic-related ground failure and/or liquefaction (California Department of Conservation 2024). Based on data maintained by the Department of Conservation (2024f), the project site does not occur within a mapped slide area.

Expansive soils are those that contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them. A soil's shrink-swell potential is determined through linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The amount and type of clay minerals in the soil influence the change in volume. According to data maintained by the Natural Resources Conservation Service (NRCS 2024), the linear extensibility of on-site soils is considered low to moderate. Road rehabilitation would primarily occur within the existing road prism, which is constructed on fill and overtopped with pavement (i.e., impervious surface). As such, the presence of expansive soils would not impact the proposed project.

Environmental Consequences

The project would include grading and excavation, which would disturb approximately seven acres of topsoil. These activities have the potential to cause soil erosion and may result in the minimal loss of soil. To minimize the potential for soil erosion, the contractor will prepare a Storm Water Pollution Prevention Plan (SWPPP). All construction site Best Management Practices will follow the most current edition of the Construction Site Best Management Practices (BMPs) Manual.

Mitigation Measures

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

Discussion of CEQA Environmental Checklist Questions 2.7a-e)—Geology and Soils

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

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

NO IMPACT. According to the Alquist-Priolo Earthquake Fault Zoning Maps, the closest known fault is the Stephens Pass Fault Zone, located approximately 25 miles northeast of the project area. Given the absence of known earthquake faults in the area, the project would not result in a rupture. Thus, there would be no impact.

ii) Strong seismic ground shaking?

NO IMPACT. According to seismic ground shaking data maintained by the California Department of Conservation, the potential for strong seismic ground shaking is low. Based on the project location and work scope, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Thus, there would be no impact.

iii) Seismic-related ground failure, including liquefaction?

NO IMPACT. Liquefaction results from an applied stress on the soil, such as earthquake shaking or other sudden change in stress condition, and is primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction, soils lose strength and ground failure may occur. This is most likely to occur in alluvial (geologically recent, unconsolidated sediments) and stream channel deposits, especially when the groundwater table is high. According to data maintained by the California Department of Conservation, California regions susceptible to liquefaction are limited to the San Francisco Bay Area and the Los Angeles Basin. Thus, there is no potential for impacts resulting from seismic-related ground failure, including liquefaction.

iv) Landslides?

NO IMPACT. The project site occurs in the northern end of the Sacramento Valley surrounded by the Cascade Mountains to the northeast and east and the Klamath and Coastal Mountains to the northwest and west. Based on data maintained by the Department of Conservation, the project site does not occur within a mapped slide area. Further, the nearest mapped slide area is located approximately 90 miles to the west. Thus, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

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

LESS THAN SIGNIFICANT IMPACT. Project activities would primarily be performed within the existing road prism, minimizing the potential for substantial soil erosion or the loss of topsoil. Additionally, BMPs for erosion and sediment control would be implemented in accordance with standard practices. Further, Caltrans would obtain coverage under the State's Construction General Permit, which requires development of a SWPPP that includes BMPs to control erosion and sedimentation and prevent damage to streams and aquatic habitat. With implementation of Caltrans standard erosion and sediment control practices, coverage under the State's Construction General Permit, and implementation of Standard Measure GS-1 (Section 1.4), the potential for soil erosion and loss of topsoil would be less than significant.

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

NO IMPACT. On-site slope stability is addressed in Question a(iv) above. Considering site topography, the absence of slides in the surrounding area, and implementation of Standard Measure GS-1 (Section 1.4), the project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. Thus, there would be no impact.

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

NO IMPACT. Some soils have a potential to swell when they absorb water and shrink when they dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. When these soils swell, the change in volume can exert significant pressure on loads that are upon them. A soil's shrink-swell potential is determined through linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The amount and type of clay minerals in the soil influence the change in volume. According to data maintained by the Natural Resources Conservation Service, the linear extensibility of on-site soils is considered low to moderate. Road rehabilitation would primarily occur within the existing road prism, which is constructed on fill and overtopped with pavement (i.e., impervious surface). Based on the above information, the proposed project would not create substantial risks to life or property. Therefore, there would be no impact.

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

NO IMPACT. The proposed project does not include the installation or use of alternative wastewater disposal systems. Therefore, there would be no impact.

Regulatory Setting—Paleontological Resources

Several sections of the California Public Resources Code protect paleontological resources, including Sections 5097.5 and 30244.

Affected Environment

Paleontological resources and fossils are found primarily in sedimentary rock deposits. According to the *Paleontological Resources Assessment* (Caltrans 2024f) prepared for the project, rock formations on the project site consist of tertiary volcanic (igneous) rocks or nonmarine (continental) sedimentary rocks of sandstone, shale, and conglomerate that are moderately to well consolidated.

Environmental Consequences

On-site rock formations are unlikely to support paleontological resources. No impacts are anticipated.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.9f)—Paleontological Resources

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

NO IMPACT. The *Paleontological Resources Assessment* concluded that on-site volcanic and sedimentary rocks are unlikely to contain scientifically significant fossils. Based on the results of the Paleontological Resources Assessment, as well as implementation of Standard Measure GS-2 (Section 1.4), there would be no impact to paleontological resources.

2.8 Greenhouse Gas Emissions

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
Would the project: 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_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 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_2 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_2.

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

FEDERAL

To date, no nationwide numeric mobile-source GHG reduction targets have been established; however, federal agencies are mandated to consider the effects of climate change in their environmental reviews.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) is the basic national charter for protection of the environment which establishes policy, sets goals, and provides direction for carrying out the policy. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In May 2024, the White House Council on Environmental Quality (CEQ) issued the National Environmental Policy Act Implementing Regulations Revisions Phase 2 (89 Federal Regulation 35442). The CEQ regulations do not establish numeric thresholds of significance, but mandate that federal agencies consider the effects of climate change in their environmental reviews, including direct, indirect, and cumulative impacts. The CEQ regulations further require that agencies quantify greenhouse gas emissions, where feasible, from the proposed action and alternatives. The regulations also direct agencies to identify reasonable alternatives that reduce climate change-related effects.

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 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 (U.S. EPA 2021). 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 site occurs in a rural area, with an economy based on natural resources and agriculture. I-5 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR 3, which is located approximately 25 miles to the west. Traffic counts are moderate. Generally speaking, the Union Pacific Railroad tracks parallel the east side of I-5 along the entire project limits. The Shasta Regional Transportation Agency and Siskiyou County Transportation Commission facilitate transportation development in the project area. The Shasta County General Plan Air Quality, Circulation, and Energy elements address GHGs in the project area. The Siskiyou County General Plan does not reference GHGs.

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 2022 were 5,489.0 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 15% of total U.S. emissions in 2022 [U.S. EPA 2024a].) While total GHG emissions in 2022 were 17% below 2005 levels, they increased by 1% over 2021 levels. Of these, 80% were CO_2, 11% were CH_4, and 6% were N_2O; the balance consisted of fluorinated gases. From 1990 to 2022, CO_2 emissions decreased by only 2% (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28% in 2022 and continues to be the largest contributing sector (Figure 3). Transportation activities accounted for 37% of U.S. CO_2 emissions from fossil fuel combustion in 2022. This is a decrease of 0.5% from 2021 (U.S. EPA 2024a, 2024b)).

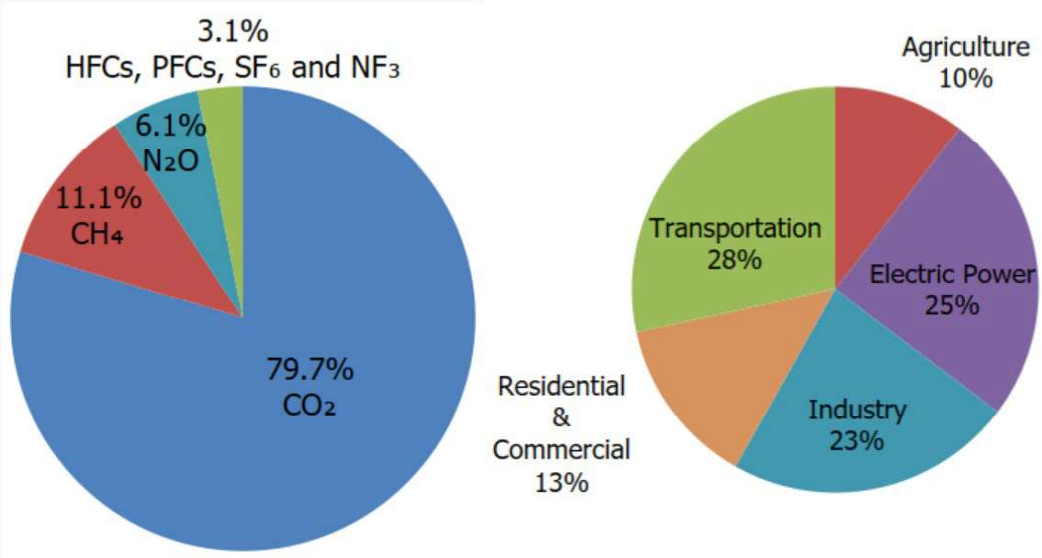

Figure 4. U.S. 2022 Greenhouse Gas Emissions

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 2021 despite growth in population and state economic output (Figure 4). Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 5) (CARB 2023).

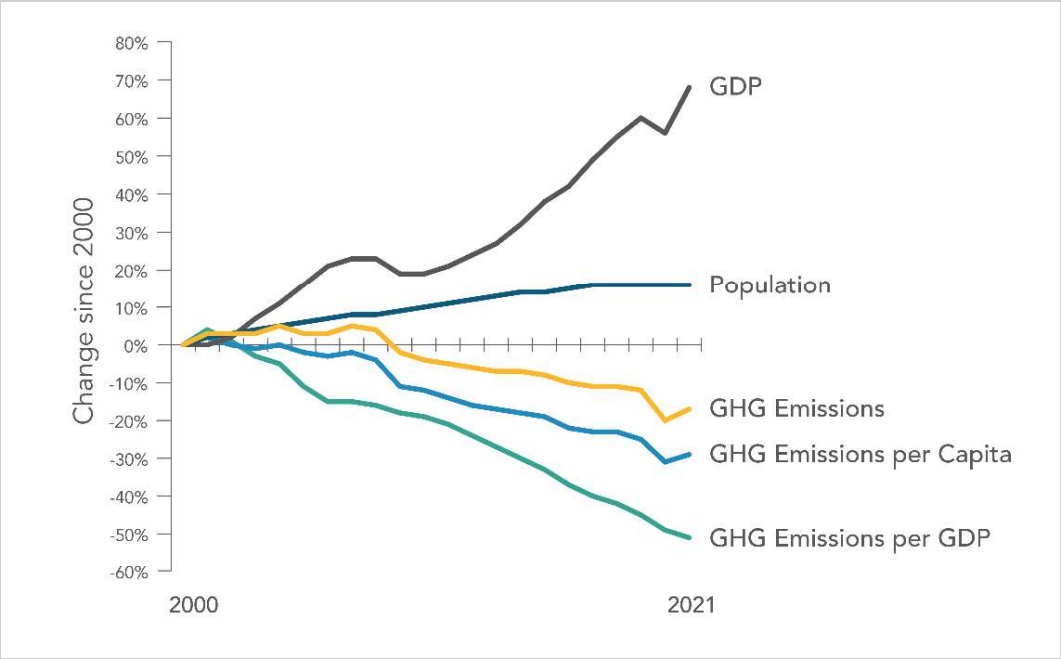

Figure 5. Change in California GDP, Population, and GHG Emissions since 2000

(Source: CARB 2023)

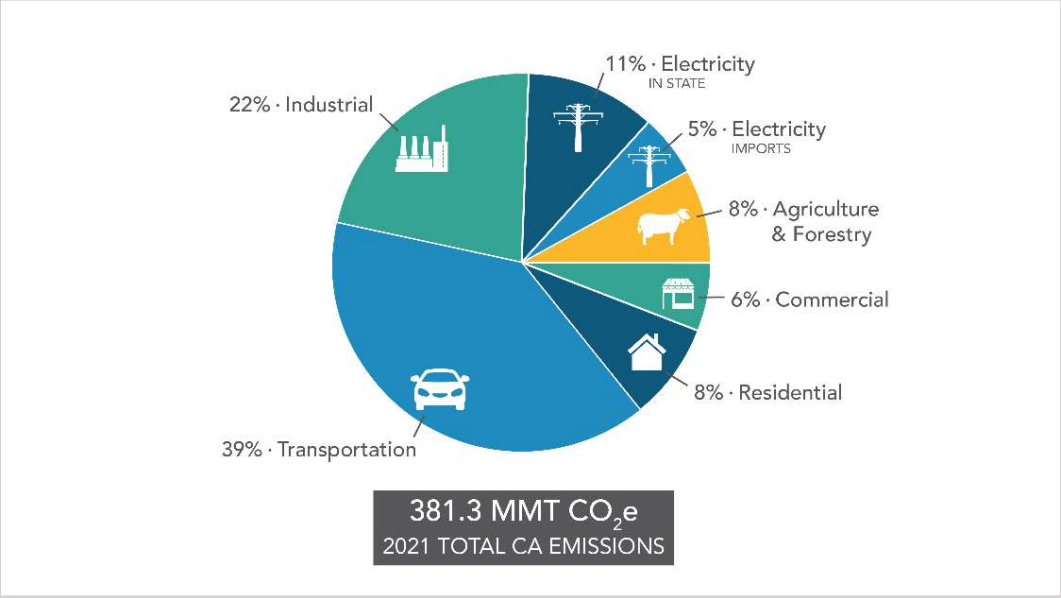

Figure 6. California Greenhouse Gas Emissions by Economic Sector

(Source: CARB 2023)

Assembly Bill (AB) 32 required 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. 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 Senate Bill (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, 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 (southern portion only) is included in the RTP/SCS for the Shasta County Regional Transportation Agency (the area's Regional Transportation Planning Agency (RTPA)). The regional reduction target for the Shasta County RTPA is 4% percent by 2035 (CARB 2021). With respect to Siskiyou County (northern portion of project site), the Siskiyou County Transportation Commission is the regional transportation planning agency for the project area. As provided in Table 4, regional policies and strategies have been established to help reduce greenhouse gases.

Table 4. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Shasta County	
Shasta County Regional Transportation Agency *2022 Regional Transportation Plan & Sustainable Communities Strategy for the Shasta Region* (adopted December 14, 2023) (Shasta County Regional Transportation Agency 2022)	Potential Strategies: • Population and employment shift to Strategic Growth Areas and Increased Residential Densities to Strategic Growth Areas • Increase public transportation frequency on select routes • Accelerate delivery of active transportation investments • Improve bus stops • Implement GoShasta Regional Active Transportation Plan • Accelerate utilization of regional Zero-Emission Vehicle Charging Infrastructure • Accelerate car sharing in traffic analysis zones that have sufficient residential densities to support car sharing • Implement planned bike and scooter share programs
Shasta County Bicycle Transportation Plan (adopted June 2010)	Commuting Goal • Strive for a 5% increase in bicycle commuters in Shasta County by 2020 by encouraging bicycling for reasons of reducing traffic congestion, energy conservation, air quality, reducing of greenhouse gas emissions, health, economy and employment.
Siskiyou County	
Siskiyou County Local Transportation Commission *2021 Regional Transportation Plan* (August 2021)	Goal 17 • Include climate change strategies in transportation investment decisions

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_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. 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_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent", or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2).

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 perform pavement rehabilitation and culvert replacement/drainage improvements, which 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 I-5, 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 traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

The CAL-CET2021 v1.0.2 was used to estimate average carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), black carbon (BC), and hydrofluorocarbon-134a (HFC-134a) emissions from construction activities. (Caltrans 2024b). Table 4 below summarizes estimates of GHG emissions during the construction period for the project.

Table 5. Estimate of Total GHG Emissions during Construction

Construction Year	CO_2	CH_4	N_2O	BC	HFC-134a	CO_2e*
	tons					metric
2026	272	0.007	0.012	0.014	0.006	264
2027	769	0.017	0.041	0.025	0.022	752
2028	158	0.002	0.004	0.004	0.006	156
Total	**1,199**	**0.027**	**0.065**	**0.052**	**0.034**	**1,172**

*Quantity of GHG is expressed as carbon dioxide equivalent (CO2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFC134a by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, BC and HFC-134a is 1, 25, 298, 460 and 1,430, respectively. Totals may not add due to rounding.

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7-1.02C, Emissions Reduction, requires contractors to 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 to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

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

Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

In response to AB 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 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 (OPR 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 EO 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 percent 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 percent 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 will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

- 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 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 five 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_2. This replanting would help offset any potential CO_2 emissions increase.

Adaptation

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 that 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.

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 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 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 scales 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 Analysis

Sea Level Rise

The proposed project is outside the Coastal Zone and not in an area subject to sea level rise. Accordingly, direct impacts to transportation facilities due to projected sea level rise are not expected.

Precipitation and Flooding

According to the Flood Emergency Management Agency (FEMA) Flood Map Service Center (Panels 06093C3432D, 06093C3433D, 06093C3434D, 06093C3441D, effective January 19, 2011; Panels 06089C0050G and 06089C0325G, effective March 17, 2011), the project site is located within several designated flood hazard zones. The Caltrans District 2 Climate Change Vulnerability Assessment (Caltrans 2018) mapped projected changes in 100-year storm precipitation under a business-as-usual GHG emissions scenario. The 100-year storm metric is commonly used in highway design. The District Climate Change Vulnerability Assessment does not indicate precipitation changes during the project's design life that would require adaptive changes to the drainage design. The proposed culverts have been sufficiently sized to maintain flows and would accommodate the 100-year storm event.

Wildfire

According to CAL FIRE's Fire Hazard Severity Zone mapping tool (CAL FIRE 2024), the project site primarily comprises State Responsibility Areas, while the City of Dunsmuir is a Local Responsibility Area. The State Responsibility Area's Hazard Severity Zone designation is considered "very high". Pavement rehabilitation and supporting infrastructure would be confined to the project footprint and would not introduce structures or users into the area that would be vulnerable to wildfire. To minimize potential wildfire damage to

highway infrastructure, guardrail replacement would include steel posts, while culvert replacement would consist of concrete or corrugated steel pipes. Further, Caltrans Standard Specifications mandate fire prevention procedures, including a Fire Prevention Plan, to avoid accidental fire starts during construction. Based on the above information, the project would not cause or exacerbate the risk of wildfire, regardless of climate conditions.

Temperature

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would 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
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
Would the project: 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?				✓
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
Would the project: 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?				✓
Would the project: 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?				✓

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

Regulatory Setting

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

The primary laws governing hazardous materials, waste and substances include:

- California Health and Safety Code–Chapter 6.5
- Porter-Cologne Water Quality Control Act–§ 13000 et seq.
- CFR Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

Affected Environment

An *Initial Site Assessment* (ISA) was completed on February 21, 2024 (Caltrans 2024g). The purpose of the ISA was to identify any hazardous wastes/materials within and adjacent to the project area that could affect the design, constructability, feasibility, and/or the cost of the project.

The records review included a review of federal, state, and local databases and maps. As documented in the ISA, lead-contaminated soils may exist throughout the project limits due to the historical use of leaded gasoline on the roadway, pollutants may be present in treated wood, and lead/chromium may be present in yellow and white road striping.

Environmental Consequences

Project construction would not impact any Cortese sites. Implementation of the project would include culvert replacement activities, treated wood post guardrail replacement, pavement rehabilitation, removal of a small amount of yellow and white road striping from the roadway surface, and excavation activities along the roadway. Project activities have the potential to release a minimal amount of hazardous wastes/materials into the environment.

Compliance with Caltrans Standard Specifications related to the proper handling of soils containing aerially deposited lead, treated wood, and asphalt grindings associated with road striping would ensure that these activities do not release hazardous wastes/materials into the environment.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.9—Hazards and Hazardous Materials

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

LESS THAN SIGNIFICANT IMPACT. The project would not result in any long-term impacts related to the transport of hazardous materials. During construction activities, it is anticipated that limited quantities of hazardous substances, such as gasoline, diesel fuel, etc., would temporarily be brought into the project area.

As documented in the ISA, lead-contaminated soils may exist throughout the project limits due to the historical use of leaded gasoline on the roadway. Additionally, hazardous levels of lead and chromium are known to exist in the yellow color traffic stripes. Further, pollutants may be present in treated wood (i.e., guardrail posts). As discussed in Section 1.4, implementation of Standard Measures for lead contamination (Standard Measure HW-1), traffic strip paint (Standard Measure HW-2), and treated wood posts (Standard Measure HW-

3) would address such activities. Further, construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws and implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, impacts would be less than significant.

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

NO IMPACT. Project construction could potentially result in the accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. However, construction contractors would be required to comply with applicable federal and State environmental and workplace safety laws and implement BMPs for the storage, use, and transportation of hazardous materials. Therefore, the project is not expected to create a significant hazard to the public or the environment involving the release of hazardous materials into the environment. Thus, there would be no impact.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

LESS THAN SIGNIFICANT IMPACT. According to the Shasta and Siskiyou County Offices of Education, Castle Rock Union Elementary School and Dunsmuir High School are located within 0.25 miles of the project site. As described under Questions A and B, the project would not result in any long-term impacts related to the transport of hazardous materials. Although project construction would involve the use of relatively small quantities of hazardous substances, work would be conducted in accordance with applicable federal and state environmental and workplace safety laws, and potential impacts could occur only during construction activities. Thus, impacts would be less than significant.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

NO IMPACT. The ISA did not identify any active clean-up sites occurring within the project limits.

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?

NO IMPACT. According to the Federal Aviation Administration (FAA) (FAA 2024), the nearest airport is Dunsmuir Municipal Mott Airport, approximately 3.6 miles north of the project site. Due to the distance between the airport and the project site, there would be no impact.

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

LESS THAN SIGNIFICANT IMPACT. The proposed project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. A temporary increase in traffic could occur during construction and could interfere with emergency response times. However, construction-related traffic would be spread over the duration of the construction schedule and would be minimal on a daily basis. In addition, construction activities would be subject to a Transportation Management Plan (TMP) (Standard Measure TT-1) (Section 1.4). Furthermore, Caltrans would notify and coordinate with local emergency authorities to ensure the proper function of public services. With implementation of a TMP, and advanced coordination with local emergency authorities, the project would not impair or physically interfere with an adopted emergency response or emergency evacuation plan. Therefore, impacts during construction would be less than significant.

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

NO IMPACT. As part of the proposed project, the contractor would prepare an Emergency Evacuation Plan (EEP) for work activities that restrict passage through the work zone. The EEP would outline protocol for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster. With preparation and implementation of the EEP, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Thus, there would be no impact.

2.10 Hydrology and Water Quality

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

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

Regulatory Setting

The primary laws and regulations governing hydrology and water quality include:

- Federal: Clean Water Act (CWA)–33 USC 1344
- Federal: Executive Order for the Protection of Wetlands–EO 11990
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act– Sections 13000 et seq.

Affected Environment

The project area is located within the Sacramento Hydrologic Basin Planning Area, which is located within the Sacramento River watershed and is managed by the Central Valley Regional Water Quality Control Board. The project area receives moderate rainfall. The average annual precipitation recorded in nearby Mt. Shasta between 1948 and 2010 is 39.94 inches.

On-site streams are tributary to the Sacramento River, which flows south along the eastern margin of the site. The project site does not support wetlands.

As documented in the *Water Quality Assessment Report* (Caltrans 2024h), beneficial uses in the Sacramento River for the project area are identified as:

- Agricultural Supply (AGR)—Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing.
- Water Contact Recreation (REC-1)—Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.
- Non-Contact Water Recreation (REC-2)—Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Cold Freshwater Habitat (COLD)—Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Wildlife Habitat (WILD)—Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Environmental Consequences

Construction activities that have the potential to impact hydrology include culvert work, the addition of new/redeveloped impervious surfaces, and excavation/grading activities. No FEMA regulatory base floodplains would be affected by the project.

Culvert replacement activities would require a minor amount of work within streams (i.e., install flared-end sections, rock slope protection, etc.). Construction-related impacts on the hydrology and water quality of affected streams would be negligible. The project would increase the impervious area by ±0.01 acres. Due to the small increase in impervious area, no permanent treatment best management practices (BMP) are warranted. Additionally, post-construction stormwater flows would not exceed pre-construction stormwater flows. Further, excavation/grading activities would minimally alter the natural topography of the project area, but would not substantially alter the hydrology.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.10—Hydrology and Water Quality

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

LESS THAN SIGNIFICANT IMPACT. The proposed project would result in the permanent fill of waters, which are under the jurisdictions of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Compliance with the resource agency permit conditions would ensure that the project would not violate any waste discharge requirements or otherwise substantially degrade surface or groundwater quality (e.g., use of silt fencing, straw wattles, gravel berms, rock check dams, as well as revegetating disturbed areas through hydroseeding or other similar measure). Thus, impacts would be less than significant.

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

NO IMPACT. The proposed project would not require groundwater supplies for construction or operation. As part of the proposed project, steel-post guardrail, including transition railing at bridge sites, would be installed to maintain public safety. These safety elements would result in approximately 0.01 acres of new impervious area. As the new impervious area would be spread out along miles of roadway, these safety elements would not interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Thus, there would be no impact.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site?

LESS THAN SIGNIFICANT IMPACT. Project activities would primarily be performed within the existing road prism, minimizing the potential for substantial soil erosion or the loss of topsoil. Additionally, as discussed in Section 1.4, Standard Measures WQ-1 and WQ-2 would be implemented during construction activities. Because BMPs for erosion and sediment control would be implemented in accordance with standard practices, the potential for substantial erosion or siltation on-or off-site would be less than significant.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

NO IMPACT. As stated in Question B, guardrail and bridge railing installation would result in a minor increase in the amount of impervious surface, which would result in a minor increase in surface runoff. Further, new impervious surfaces would increase the runoff rate. However, with guardrail and bridge rail installation representing a narrow margin along the project limits, the project would not substantially increase the rate or amount of surface runoff, nor would it result in flooding on- or off-site. Thus, there would be no impact.

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

NO IMPACT. The existing I-5 drainage system, including the proposed drainage improvements, exhibit sufficient flow capacity to accommodate the minor increase in runoff. As the project would not provide substantial additional sources of polluted runoff, nor would it exceed the capacity of existing or planned stormwater drainage facilities, there would be no impact.

(iv) impede or redirect flood flows?

NO IMPACT. The proposed culverts have been sufficiently sized to maintain flows associated with the 100-year storm event. The project would not impede or redirect flood flows; thus, there would be no impact.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

NO IMPACT. A tsunami is a wave generated in a large body of water (typically the ocean) by fault displacement or major ground movement. Given that the Pacific Ocean is approximately 95 miles west of the project area, there is no risk of inundation of the project area by a tsunami. (California Department of Conservation 2023g). A seiche is a large wave generated in an enclosed body of water in response to ground shaking. The closest large body of water to the project site is the Sacramento River, which flows south along the eastern portion of the site. It is not expected that seismic activity could create a large wave in the Sacramento River that would inundate the project area. Therefore, there would be no potential for release of pollutants due to inundation by seiche or tsunami.

As previously described (Chapter 2.8 Greenhouse Gas Emissions – Precipitation and Flooding), the project site is located within several designated flood hazard zones. There is a possibility of accidental release of hazardous substances in flood zones due to project inundation. In accordance with Standard Measure WQ-1, the project would be subject to a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include such measures as stockpiling materials, storing liquid waste containers, washing vehicles and equipment, and fueling/maintaining vehicles and equipment at least 100 feet from a concentrated flow of stormwater, a drainage course, or an inlet within the floodplain; or at least 50 feet outside the floodplain. Compliance with existing state regulations would ensure there is no potential for release of pollutants due to inundation by a flood. Thus, there would be no impact.

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

NO IMPACT. The proposed project would result in the permanent fill of waters, which are under the jurisdictions of U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Compliance with resource agency permit conditions would ensure that the project would not violate a Water Quality Control Plan or Sustainable Groundwater Management Plan. Thus, there would be no impact.

2.11 Land Use and Planning

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?				✓
Would the project: 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. As proposed, the project is consistent with existing zoning, plans, and other applicable land use controls. Because the proposed project would not divide an established community, nor would it conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigation an environmental effect, potential impacts are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.11—Land Use and Planning

a) Would the project physically divide an established community?

NO IMPACT. Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). The proposed highway improvements would not create a barrier for existing or planned development. Therefore, there would be no impact.

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

NO IMPACT. As discussed in each resource section of this Initial Study, the proposed project is consistent with applicable laws and regulations. Therefore, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

2.12 Mineral Resources

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
Would the project: 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 proposed, the project would not result in the loss of availability of a known mineral resource or a locally-important mineral resource recovery site. Thus, potential impacts to mineral resources are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.12—Mineral Resources

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

NO IMPACT. According to the Department of Conservation (2024h), two active mines, Spring Hill and Mt. Shasta Pit (sand and gravel operations), occur approximately nine miles north of the project site. The project would have no impact on nearby mining operations. According to the Department of Conservation (2024i), there are no occurrences of mineral resources in Siskiyou County. Regarding Shasta County, a Surface Mining and Reclamation Act mineral land classification study of alluvial sand and gravel, crushed stone, volcanic cinders, limestones, and diatomite has been conducted. The southernmost portion of the project site is mapped as Mineral Resource Zone-3 (MRZ-3)—areas containing known and/or inferred occurrences of resources of undetermined quality, quantity, or significance.

Given the distance to active mining operations, and that project activities would primarily be limited to the existing road prism, the proposed project would not result in the loss of availability of a known mineral resource. Thus, there would be no impact.

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

NO IMPACT. As stated in Question A, the project site does not support mines. Further, with project activities primarily limited to the existing road prism, the project would not impact mapped mineral resources. The project would not result in the loss of availability of a locally-important mineral resource recovery site. Thus, there would be no impact.

2.13 Noise

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in: a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
Would the project result in: 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?				✓

Regulatory Setting

The primary laws governing noise are NEPA and CEQA.

Affected Environment

Interstate 5 within the project area is subject to a moderate level of noise disturbance on a daily basis due to vehicles traveling at high speeds on I-5. Based on surrounding land uses, the project site is exposed to moderate background noise levels.

In noise/vibration studies, the following are considered sensitive receptors: hospitals, schools, homes, daycare facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to noise and vibration. Several sensitive receptors (i.e., homes and schools) occur within a 1/4-mile radius of the project site within the City of Dunsmuir.

Environmental Consequences

According to the *Noise Study* (Caltrans 2024i), the project is considered a Type III project (i.e., no permanent noise). Because the project would not involve permanent noise-producing activities, noise abatement is not warranted.

During construction, temporary noise impacts would occur from the use of stationary and mobile construction equipment and vehicles during construction. Construction vehicles and equipment could include excavators, compressors, generators, haul trucks, pavers, and material loaders. Project construction noise levels would fluctuate depending on the construction phase, equipment type, and quantity and duration of use. Project noise levels could be up to 90 decibels. Once built, noise levels would not increase above existing baseline noise levels. Once built, the project would not be a source of permanent ground-borne vibrations. Although ground-borne vibrations may be noticeable during construction, they would be temporary in duration and minimal in magnitude.

Compliance with Caltrans Standard Measure N-1 (Section 1.4) would ensure that any noise impacts during construction would be minimal.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.13—Noise

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

LESS THAN SIGNIFICANT IMPACT. The project would not involve the introduction of permanent noise-producing activities. Temporary noise impacts would occur from the use of mobile construction equipment and vehicles during construction.

Construction vehicles and equipment could include excavators, compressors, generators, haul trucks, pavers, and material loaders. Project construction noise levels would fluctuate depending on the construction phase, equipment type, and quantity and duration of use. Project construction would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project, nor would it substantially impact sensitive receptors. As discussed in Section 1.4, Standard Measure N-1 would be implemented to control and monitor noise from work activities. Although the proposed project would result in elevated noise levels during construction activities, such noise levels would not be in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, impacts would be less than significant.

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

NO IMPACT. Once built, the project would not be a source of permanent ground-borne vibrations. Although ground-borne vibrations may occur during construction, they would be temporary in duration and minimal in magnitude and would not be considered excessive. Thus, there would be no impact.

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

NO IMPACT. The nearest airport is the Dunsmuir Municipal Mott Airport, approximately 3.6 miles north of the project site. Due to the distance between the airport and the project site, the project would not expose people residing or working in the project area to excessive noise levels. Thus, there would be no impact.

2.14 Population and Housing

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. As proposed, the project would not induce substantial unplanned population growth in an area, either directly, nor would it displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Thus, potential impacts to population and housing are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.14— Population and Housing

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

NO IMPACT. Because the proposed project does not involve construction of residences or businesses, nor does it include applicable infrastructure improvements, the project would not induce population growth. Therefore, there would be no impact.

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

NO IMPACT. Project activities primarily consist of pavement rehabilitation and culvert replacement activities. Project activities would not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, there would be no impact.

2.15 Public Services

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

Regulatory Setting

The primary law governing public services is CEQA.

Affected Environment

The project site is located on I-5, which facilitates public services for surrounding residential, commercial, and industrial users. Siskiyou Transit and General Express (STAGE) is Siskiyou County's public transit service provider; no bus services are offered along the corridor within Shasta County. In addition to STAGE, school districts provide transit services for students. The nearest schools are Castle Rock Elementary School (Shasta County PM 63.1) and Dunsmuir High School (Siskiyou County PM 2.0). Emergency service providers that operate within the project area include various firefighting agencies (e.g.,

Shasta County and Siskiyou County fire departments and CAL FIRE); Shasta County and Siskiyou County Sheriff's departments and the California Highway Patrol (CHP); and ambulances that transport patients to local hospitals. The nearest medical facility is Mercy Medical Center in the city of Mt. Shasta, located approximately nine road miles northwest of the proposed project site.

Environmental Consequences

The project would include traffic control measures when partial closure of the roadway is required during construction. During traffic control operations, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. As such, impacts to school buses transporting students to schools, public transportation services, and emergency response agencies would be minimal. Upon project completion, the project would not result in operational impacts to public services.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.15—Public Services

> ***a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities.***

LESS THAN SIGNIFICANT IMPACT. The project would primarily consist of pavement rehabilitation, culvert rehabilitation/drainage improvements, structural repairs, and construction of supporting infrastructure. These activities would not result in the need for new or physically altered facilities, including fire or police protection services, schools, parks, or other public facilities. As traffic delays associated with construction activities are temporal in nature, impacts to fire or police protection, and schools are considered less than significant. Construction activities would not result in impacts to parks or other public facilities. Overall, project implementation would result in a less than significant impact.

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. As proposed, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities, nor would it include recreational facilities or require the construction or expansion of recreational facilities. Thus, potential impacts to are not anticipated.

Discussion of CEQA Environmental Checklist Question 2.16—Recreation

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

NO IMPACT. Site development would not increase the use of existing neighborhood and regional parks or other recreation facilities. Therefore, there would be no impact.

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

NO IMPACT. Site development does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact.

2.17 Transportation

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

Regulatory Setting

The primary laws and regulations governing transportation and traffic are CEQA, 23 CFR 652, 49 CFR 27, 29 USC 794, and the Americans with Disabilities Act (42 USC § 12101).

Affected Environment

Interstate 5 (I-5) is a principal arterial/interstate in the National Highway System used for predominately longer interregional trips and the movement of goods. I-5 links most metropolitan areas in the states of California, Oregon, and Washington, as well as trade between Mexico and Canada. I-5 provides a continuous freeway connection between all major ports on the west coast, including the ports of Los Angeles and Long Beach—the first and second busiest ports in the U.S., respectively.

Within the project area, I-5 consists of four 12-foot-wide paved lanes, each with 6 to 8-foot-wide inside and 10 to 12-foot-wide outside shoulders. The posted speed limit is 65 miles per hour. Pursuant to the *Traffic Study* (Caltrans 2024j), the annual average daily traffic (AADT) is approximately 20,100, with trucks representing 33.4 percent.

The project is consistent with transportation goals/objectives included in the Circulation Elements of the Shasta County and Siskiyou County General Plans, as well as the Shasta County Regional Transportation Plan and Siskiyou County Regional Transportation Plan.

Environmental Consequences

As proposed, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. No geometric design features or alternate uses are proposed. Project implementation includes traffic control measures when partial closure of the roadway is required during construction. During traffic control operations, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. Prior to the start of construction, all emergency response agencies in the project area will be notified of the project construction schedule and will have access to I-5 throughout the construction period.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.17—Transportation and Traffic

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

NO IMPACT. With no proposed changes to highway operations, as well as preparation/implementation of a Transportation Management Plan (Standard Measure TT-1) (Section 1.4), the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Thus, there would be no impact.

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

NO IMPACT. Section 15064.3 of the CEQA Guidelines describes the specific considerations for evaluating a project's transportation impacts. Generally, Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project.

Construction of the project would not increase capacity of the State Highway System or induce an increase in VMT. Therefore, an induced travel analysis for VMT is not required under CEQA. Once built, the project would result in no operational impacts on the traveling public. Project implementation includes traffic control measures when partial closure of the roadway is required during construction. During traffic control operations, travel time through the work locations is expected to be delayed by only a few minutes for all modes of travel. As such, impacts to the traveling public (e.g., motorists, school buses transporting students to schools, bicyclists, and pedestrians) would be minimal. As described above, the project would not result in an increase in VMT; thus, there would be no impact.

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

NO IMPACT. The proposed project would not result in the geometric alteration of I-5 or result in an incompatible use; therefore, would not substantially increase hazards to the traveling public. Thus, there would be no impact.

d) Would the project result in inadequate emergency access?

LESS THAN SIGNIFICANT IMPACT. Emergency access would be maintained throughout construction. Further, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to I-5 throughout the construction period (Standard Measure UE 1) (Section 1.4). Although emergency personnel would be subject to traffic control-related measures, impacts would be less than significant.

2.18 Tribal Cultural Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in 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: 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				✓
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 Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Historic Property Survey Report* dated July 9, 2024 (Caltrans 2024d). During Caltrans' tribal consultation efforts and the records review, no listed or eligible for listing sites in the California Register of Historical Resources or in a local register of historical resources, as defined in Public Resources Code § 5024.1(k), were identified. Further, Caltrans did not identify any resources meeting the criteria set forth in subdivision (c) of Public Resources Code 5024.1. Thus, there would be no impact.

Discussion of CEQA Environmental Checklist Question 2.18—Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in the 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:

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).

NO IMPACT. Between September 2023 and April 2024, Caltrans contacted applicable tribal representatives through e-mail, telephone, and letter correspondence to inform the tribe of the project. Caltrans provided detailed information on the proposed project. The tribes have not yet responded; however, consultation is ongoing. No known tribal cultural resources are known to occur on the project site. Thus, there would be no impact.

b) 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.

NO IMPACT. Caltrans, as lead agency, has not identified any resources in the project area that would be significant to a California Native American tribe. As the project does not have the potential to cause a substantial adverse change in the significance of a tribal cultural resource, there would be no impact.

2.19 Utilities and Service Systems

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?			✓	
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				✓
Would the project: 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?				✓
Would the project: 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?				✓
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

Regulatory Setting

The primary law governing utilities and service systems is CEQA.

Affected Environment

Within the project limits, I-5 supports overhead and underground utilities, including electric and fiber optic lines.

Environmental Consequences

Project implementation would include various drainage improvements along I-5 and lighting improvements at various on- and off-ramps. Further, culvert replacement activities at PM 2.65 would require relocating an existing fiber optic line. Based on the scope of work, the project would not require a water supply or wastewater treatment facilities. Solid waste generated during pavement rehabilitation would be disposed of in accordance with all federal, state, and local statutes.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.19—Utilities and Service Systems

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

LESS THAN SIGNIFICANT IMPACT. Project implementation would include various drainage improvements along I-5 and lighting improvements at various on- and off-ramps. Regarding relocation, an existing fiber optic line would be relocated at PM 2.65 to allow for culvert replacement activities. Stormwater drainage improvements, light installation, and fiber optic line relocation are not expected to cause significant environmental effects. Therefore, impacts would be less than significant.

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

NO IMPACT. As the project primarily consists of pavement rehabilitation and culvert replacement, the project would not require a water supply. Thus, there would be no impact.

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

NO IMPACT. As the project primarily consists of pavement rehabilitation and culvert replacement, the project would not require wastewater treatment facilities. Thus, there would be no impact.

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

NO IMPACT. The proposed project would generate solid waste, mainly from removal of pavement on I-5. The construction contractor would be responsible for disposing of all construction waste in accordance with all federal, state, and local statutes related to solid waste disposal. Thus, there would be no impact.

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

NO IMPACT. Caltrans would ensure through contractual obligations that the contractor complies with all federal, state, and local statutes related to solid waste disposal. Thus, there would be no impact.

2.20 Wildfire

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near State Responsibility Areas (SRAs) or lands classified as *very high* Fire Hazard Severity Zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			✓	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

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 (FHSZ). The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these *very high* Fire Hazard Severity Zones.

Regulatory Setting

The primary law governing wildfire is CEQA.

Affected Environment

Areas abutting the project site largely comprise forest lands. The project site is primarily located in a State Responsibility Area, which is designated as a "*very high*" Fire Hazard Severity Zone (CAL FIRE 2024).

Environmental Consequences

During construction activities, work activities could restrict passage through the work area. To ensure local residents and the traveling public can safely evacuate during an emergency, the contractor would prepare an Emergency Evacuation Plan (EEP). The EEP would outline safety protocols in the event of a fire or other natural disaster.

Avoidance, Minimization and Mitigation Measures

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

Discussion of CEQA Environmental Checklist Question 2.20—Wildfire

If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT IMPACT. According to CAL FIRE's Fire Hazard Severity Zone mapping tool (CAL FIRE 2024), the project site primarily comprises State Responsibility Areas, while the city of Dunsmuir is considered a Local Responsibility Area. The State Responsibility Area's Fire Hazard Severity Zone designation is considered "*very high*" (Figure 6).

As part of the proposed project, the contractor would prepare an EEP for work activities that restrict passage through the work zone. The EEP would outline protocols for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster. The project would not substantially impair an adopted emergency response or evacuation plan; thus, impacts would be less than significant.

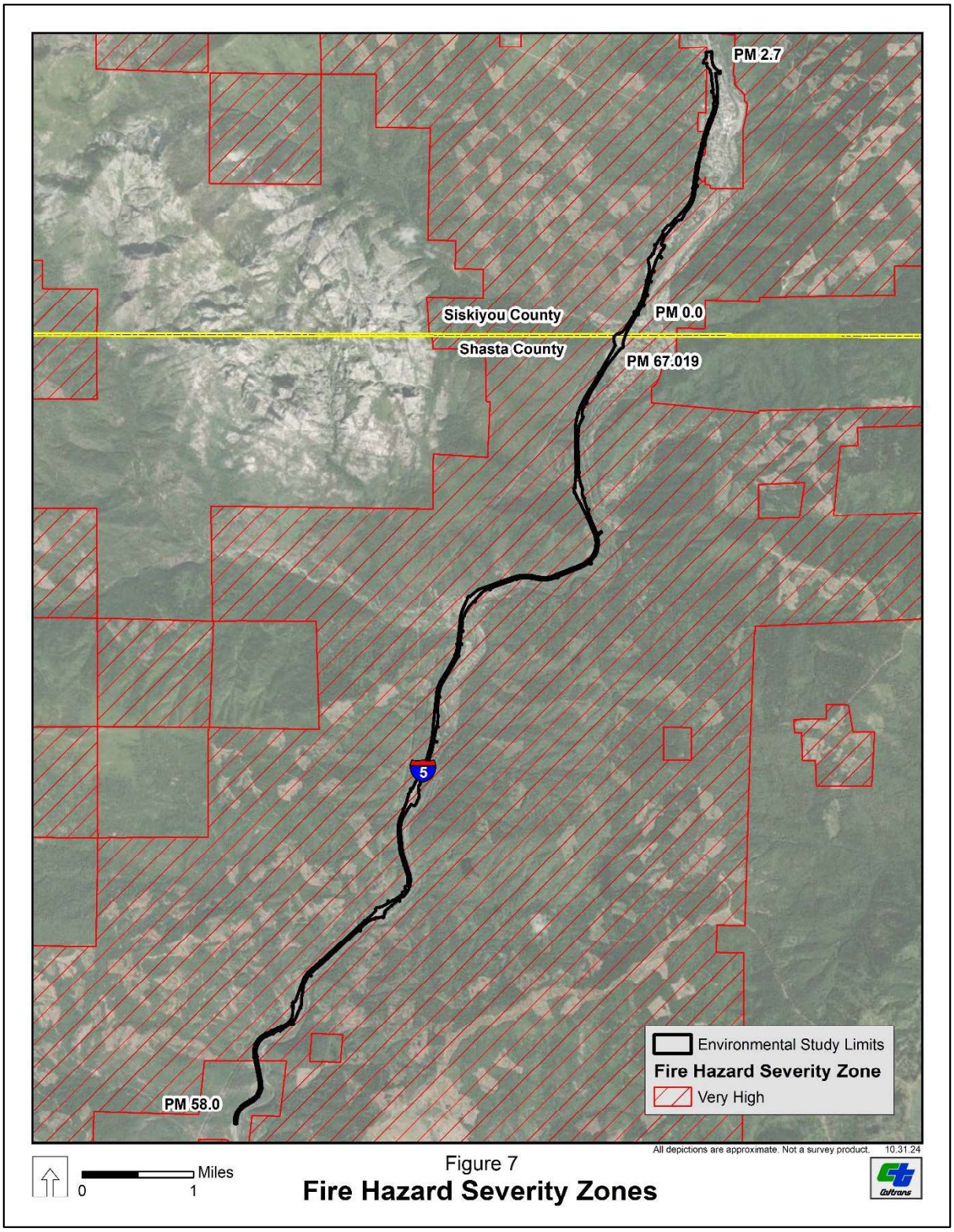

Figure 7. Fire Hazard Severity Zones

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

NO IMPACT. Project activities are primarily limited to pavement rehabilitation and culvert replacement; thus, site occupancy is not applicable. Therefore, project implementation would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Thus, there would be no impact.

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?

NO IMPACT. Project activities primarily consist of pavement rehabilitation and culvert replacement. The project does not include fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Thus, there would be no impact.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

NO IMPACT. As discussed in Section 2.7 (Geology and Soils) under Question A(iv), no mapped slide areas occur within the project area. Although some sections of I-5 are in a designated flood hazard area, the project does not include any components that would increase flood risks. Therefore, there is minimal risk for downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Thus, there would be no impact.

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
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)				✓
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

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

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

LESS THAN SIGNIFICANT *WITH MITIGATION INCORPORATED*. As discussed in Section 2.4, with implementation of the proposed mitigation measure (wildlife fencing), potential impacts would be less than significant.

b) Does the project 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.)

NO IMPACT. As proposed, the project would not contribute to any potential cumulatively considerable impacts to waters. Project-related impacts to other resources referenced in this document would have a negligible contribution to any potential cumulatively considerable impacts. Thus, there would be no impact .

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

LESS THAN SIGNIFICANT IMPACT. As discussed in the applicable environmental resource sections above, the proposed project is expected to result in environmental effects. However, these effects would not cause substantial adverse effects on human beings, either directly or indirectly. Thus, impacts would be less than significant.

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.

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." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. As proposed, the project would not result in a significant cumulative impact to resources. Given this, an Environmental Impact Report (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

See Table 6 below.

Circulation

The Draft Initial Study/Mitigated Negative Declaration was circulated between December 13, 2024 and January 13, 2025. An online public hearing was conducted on December 19. Public comments were received from various members of the public. These comments and Caltrans response to comments are presented in Appendix D. Following circulation of this draft document, including review and response to public comments, the project development team determined the Flume Creek CAPM Project was the preferred alternative.

Table 6. Agency Coordination and Professional Contacts

Date	Personnel	Notes
April 27, 2023	John Carroll, Caltrans Archaeologist, Northeast Information Center (NEIS)–California Historical Resources Information System (CHRIS)	Caltrans submitted records search request to NEIC/CHRIS
May 5, 2023	John Carroll, Caltrans Archaeologist; NEIS–CHRIS	NEIC/CHRIS provided results of records search to Caltrans

Date	Personnel	Notes
September 13, 2023	John Carroll, Caltrans, Archaeologist; NAHC	Caltrans submitted records search request to NAHC
October 12, 2023	Ryan Rzab, Castle Crags State Park Peace Officer; John Luper, Caltrans Coordinator	Telephone discussion regarding wildlife connectivity
November 13, 2023	John Carroll, Caltrans Archaeologist; NAHC	NAHC provided results of requested records search
November 25, 2023	Ryan Rzab, Castle Crags State Park Peace Officer; Deborah Petersen, Caltrans Right of Way Agent	E-mail correspondence regarding wildlife connectivity
April 24, 2024	Theresa Tillson, Caltrans Biologist; Richard Lis, California Department of Fish and Wildlife	Impact discussion regarding riparian and stream resources.
June 14, 2024	Ryan Bradshaw, Caltrans Archaeologist; Shasta-Trinity National Forest	Caltrans sent initial letter and records search request to Shasta-Trinity National Forest
June 18, 2024	Ryan Bradshaw, Caltrans Archaeologist; Shasta-Trinity National Forest	Shasta-Trinity National Forest provided record search results and requested copy of project documentation
September 16, 2024	Michelle Clark, Caltrans Biologist; Richard Lis, California Department of Fish and Wildlife	Field meeting regarding wildlife connectivity

CHAPTER 4. LIST OF PREPARERS

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

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John Carroll	Archaeologist
Rajive Chadja	Hazardous Waste Specialist
Christopher Dennis	Paleontological Specialist
Buster Hansen	Engineer
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Julia Riggins	Landscape Architect
Carolyn Sullivan	Senior Environmental Planner
David DeMar	*Acting* Environmental Office Chief
Theresa Tillson	Biologist
Kelly Timmons	Project Manager

CHAPTER 5. DISTRIBUTION LIST

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CHAPTER 6. REFERENCES

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APPENDIX A. PROJECT LAYOUTS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	PGNUM	TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

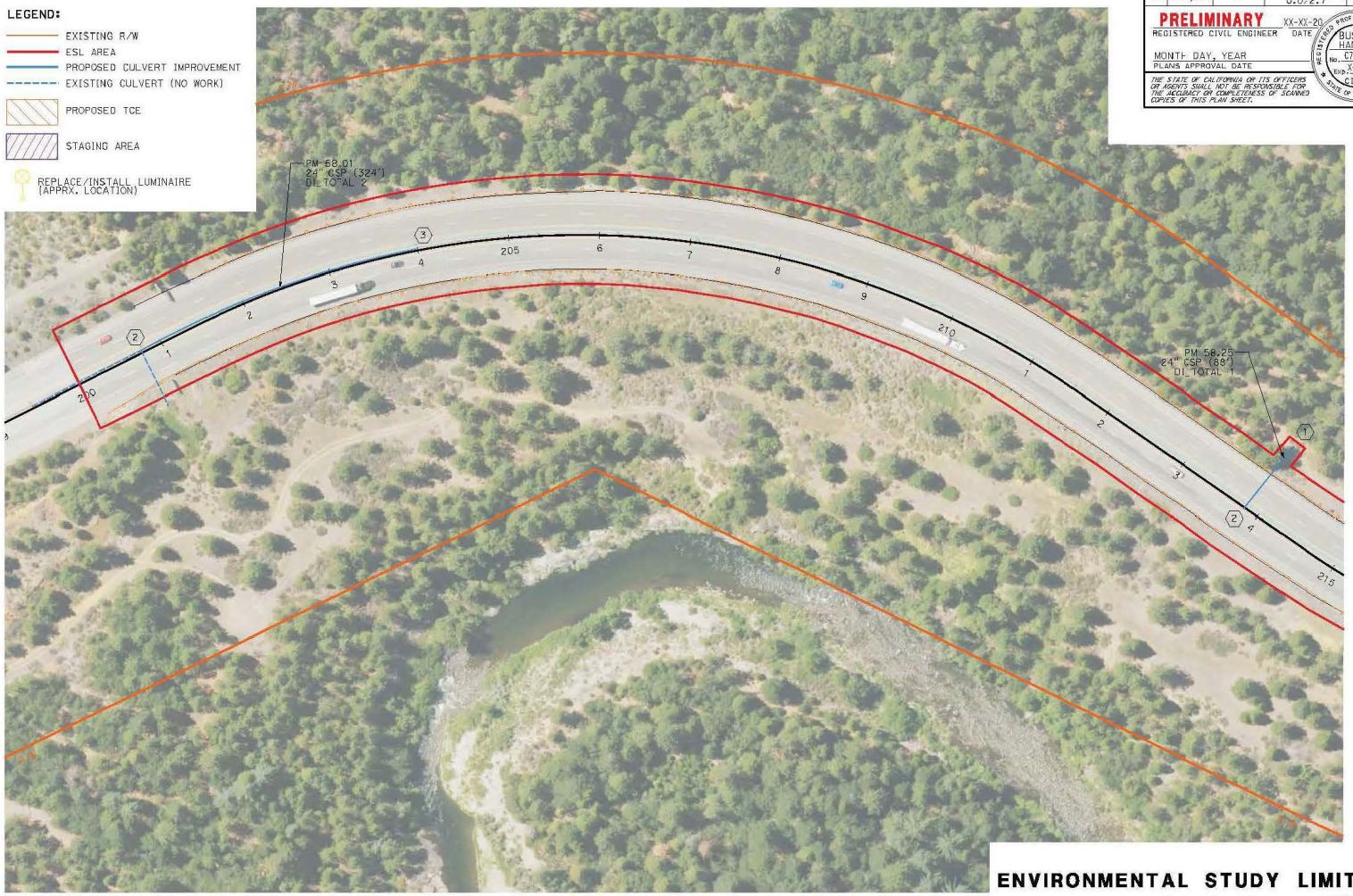
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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

LEGEND:

- EXISTING R/W
- ESL AREA
- PROPOSED CULVERT IMPROVEMENT
- EXISTING CULVERT (NO WORK)
- PROPOSED TCE
- STAGING AREA
- REPLACE/INSTALL LUMINAIRE (APPRX. LOCATION)



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A GURNEY	CALCULATED-DESIGNED BY FABIO ROMERO	REVISED BY		
		CHECKED BY BUSTER HANSEN	DATE REVISED		

P:\proj\02\dja10\design\Mapping\ESL\0219000164er001.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\ESL\0219000164er001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164

LAST REVISED | DATE PLOTTED => 10/30/2024 | TIME PLOTTED => 12:23:46 PM

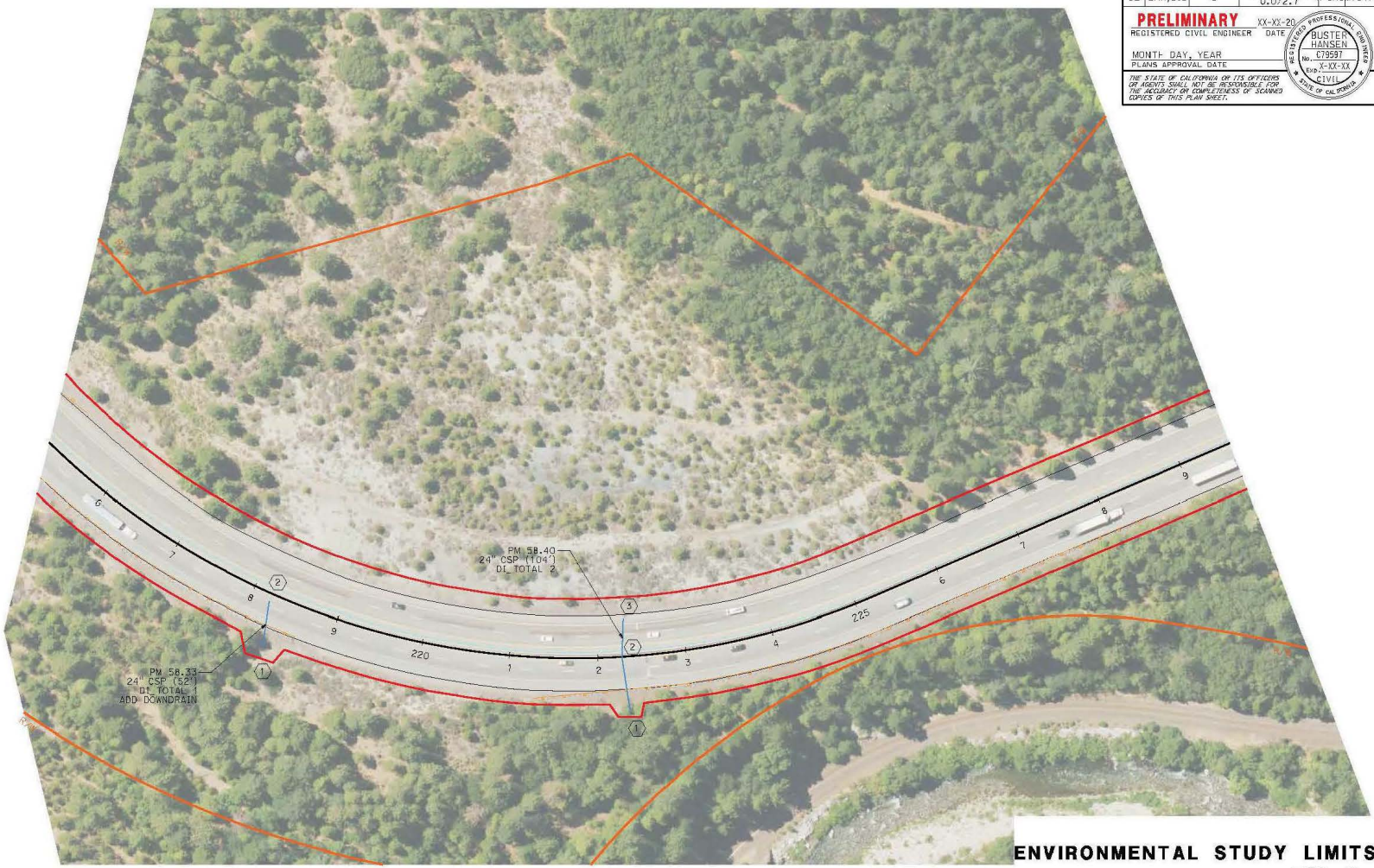
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS
ESL-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

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TIME PLOTTED => 12:28:02 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

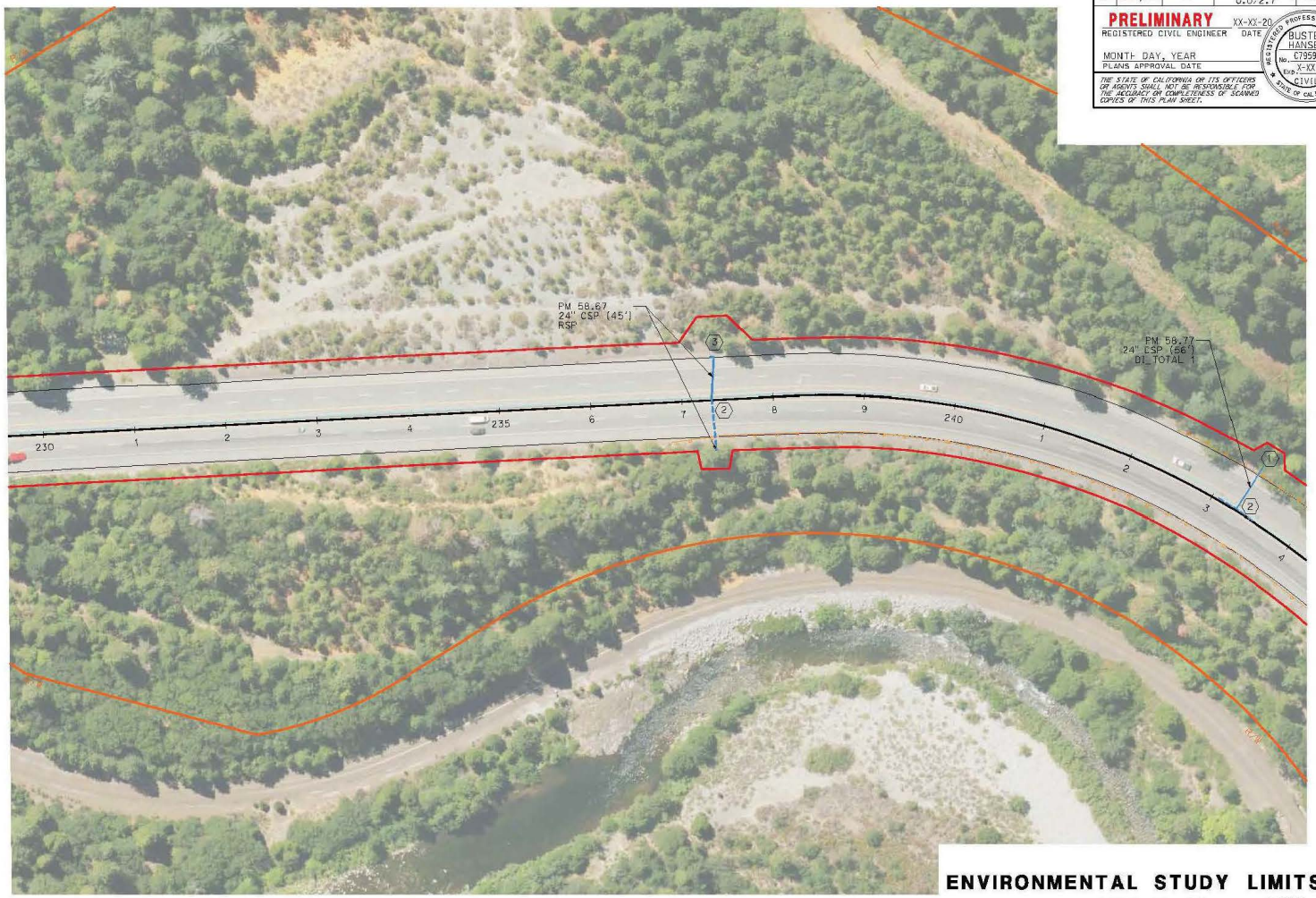
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

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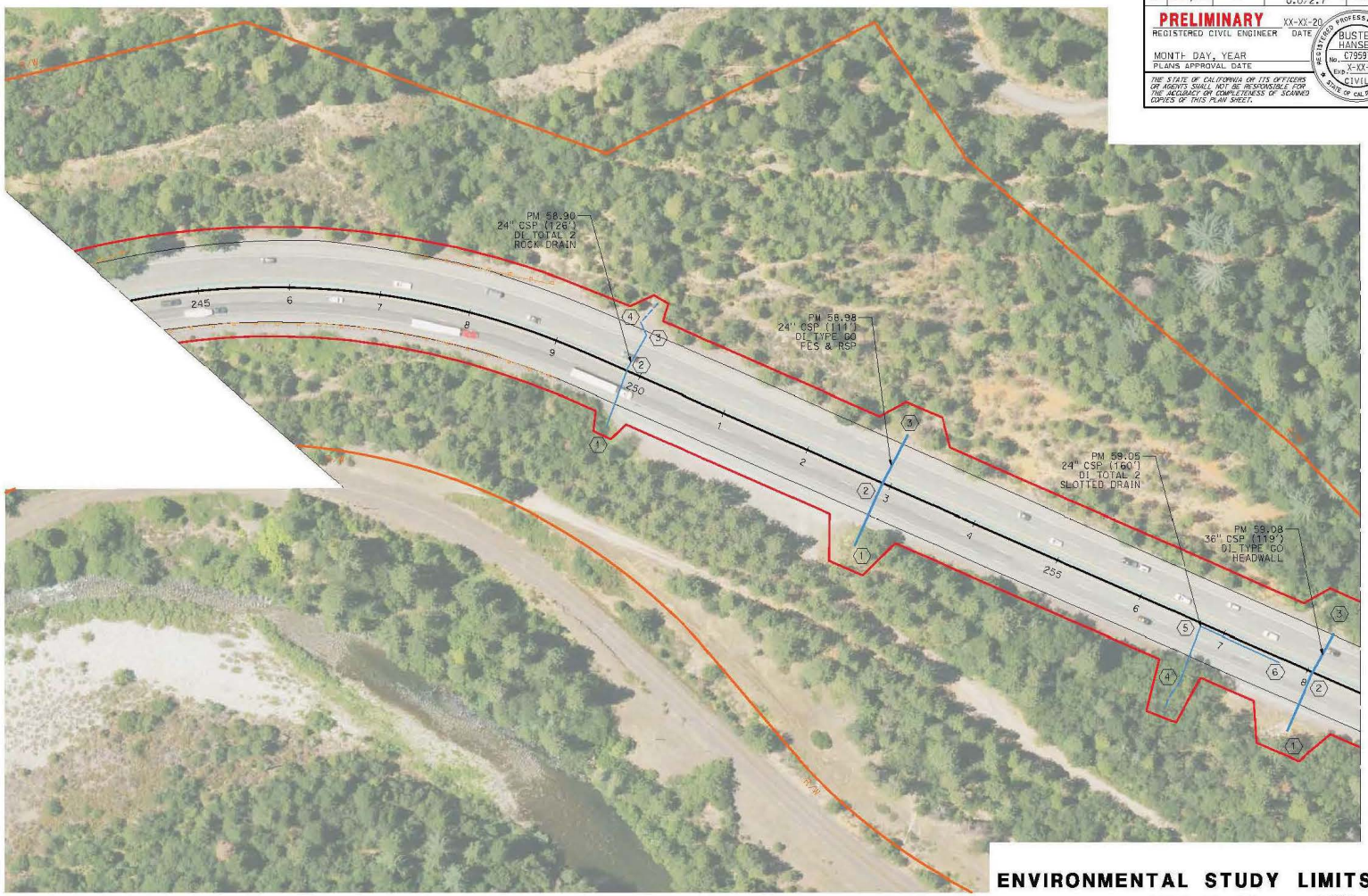
DATE PLOTTED => 10/30/2024
TIME PLOTTED => 12:32:13 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\ESL\0219000164er003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp X-XX-XX
CIVIL
STATE OF CALIFORNIA

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ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-4**

	REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	FABIO ROMERO
CHECKED BY	BUSTER HANSEN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

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LAST REVISED
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TIME PLOTTED => 12:36:15 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

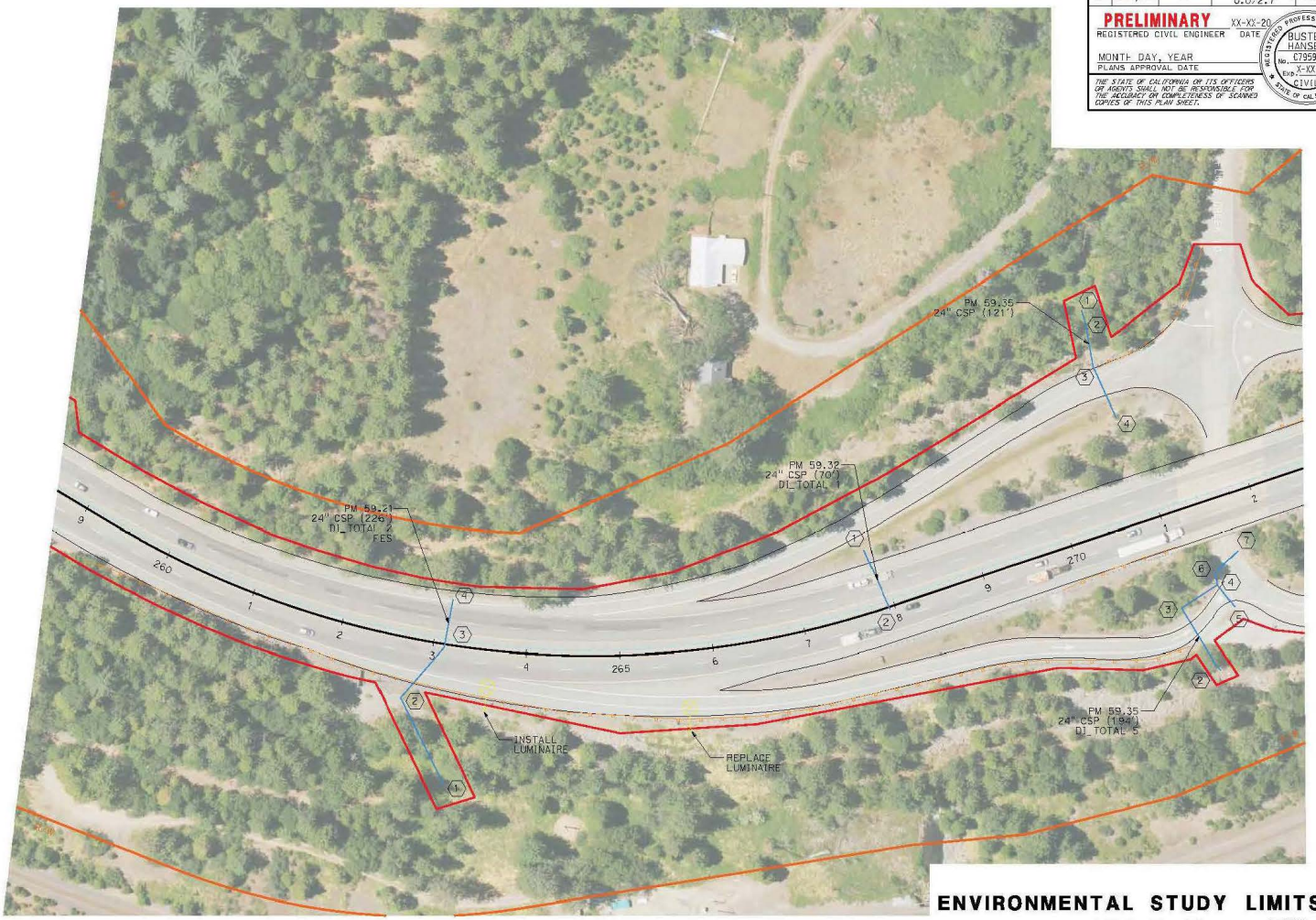
BUSTER HANSEN No. C79597 Exp. X-XX-XX CIVIL

REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

MONTH DAY, YEAR

PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er005.dgn

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TIME PLOTTED => 12:40:15 PM

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|---|---|---|---|---|---|

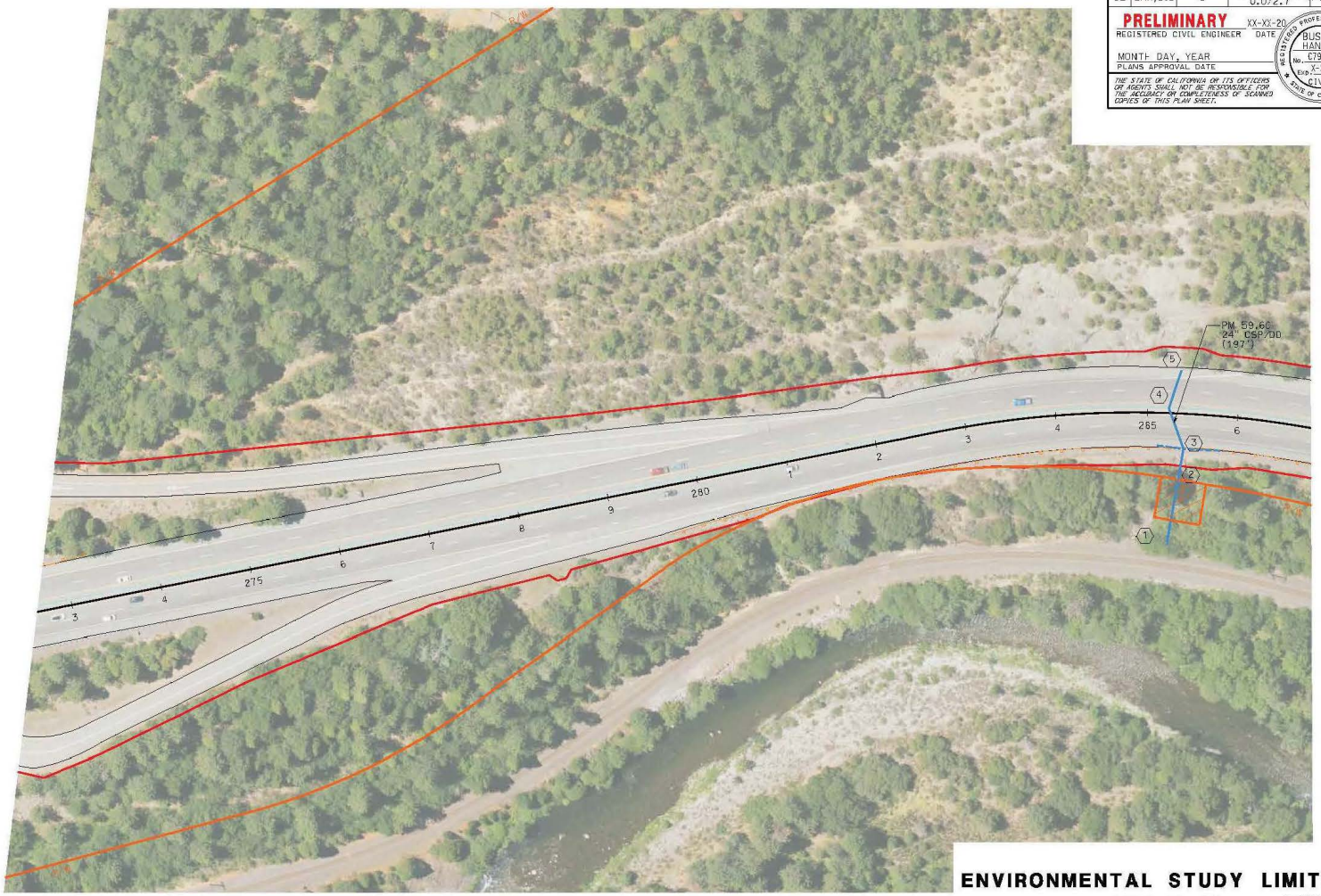
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-6**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	FABIO ROMERO
CHECKED BY	BUSTER HANSEN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

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TIME PLOTTED => 12:03:20 PM

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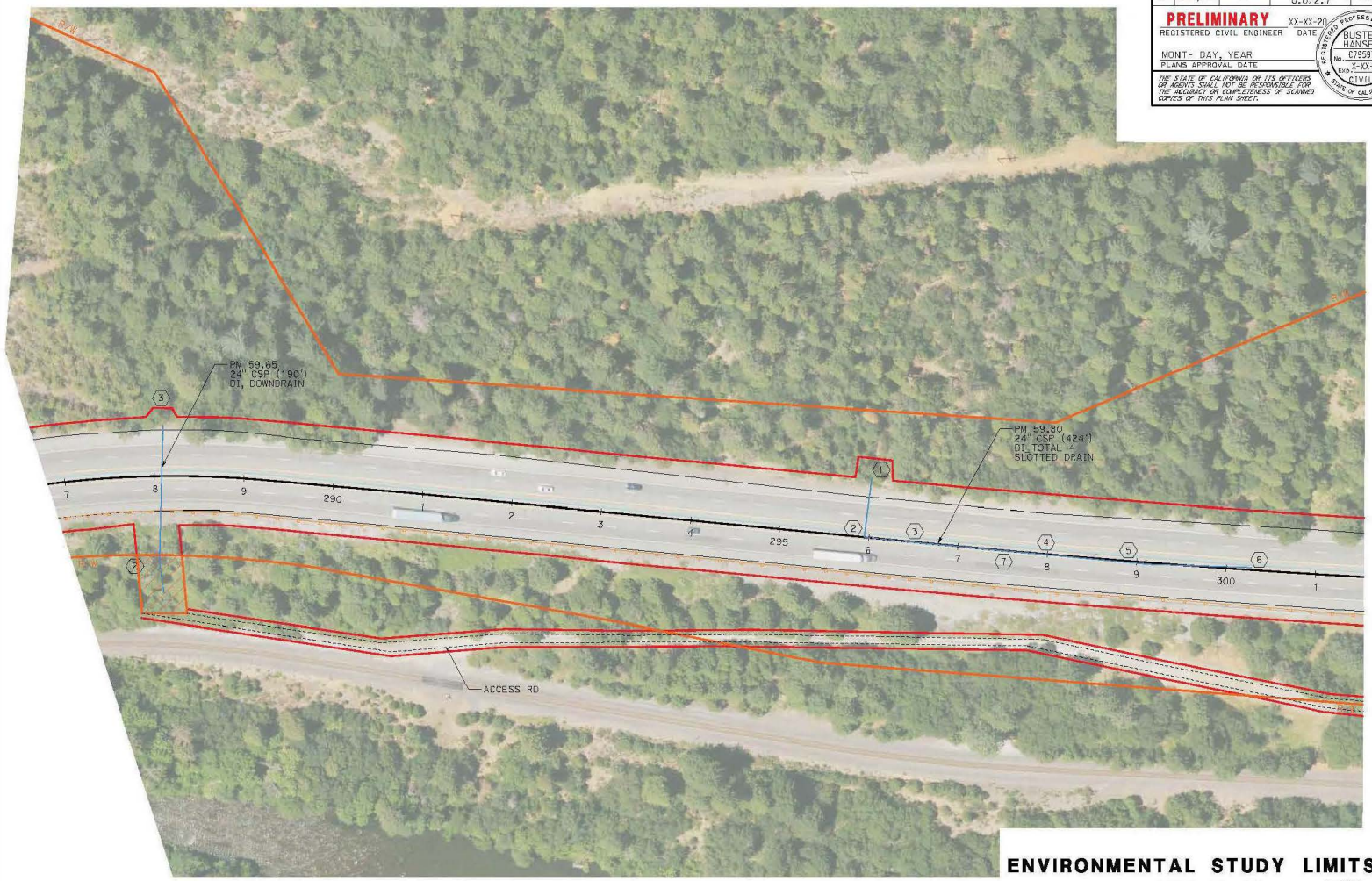

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

P:\proj\02\dj810\design\Mapping\ESL\0219000164er007.dgn

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-7**

LAST REVISED
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A GURNEY	CALCULATED-DESIGNED BY FABIO ROMERO	REVISED BY		
		CHECKED BY BUSTER HANSEN	DATE REVISED		

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

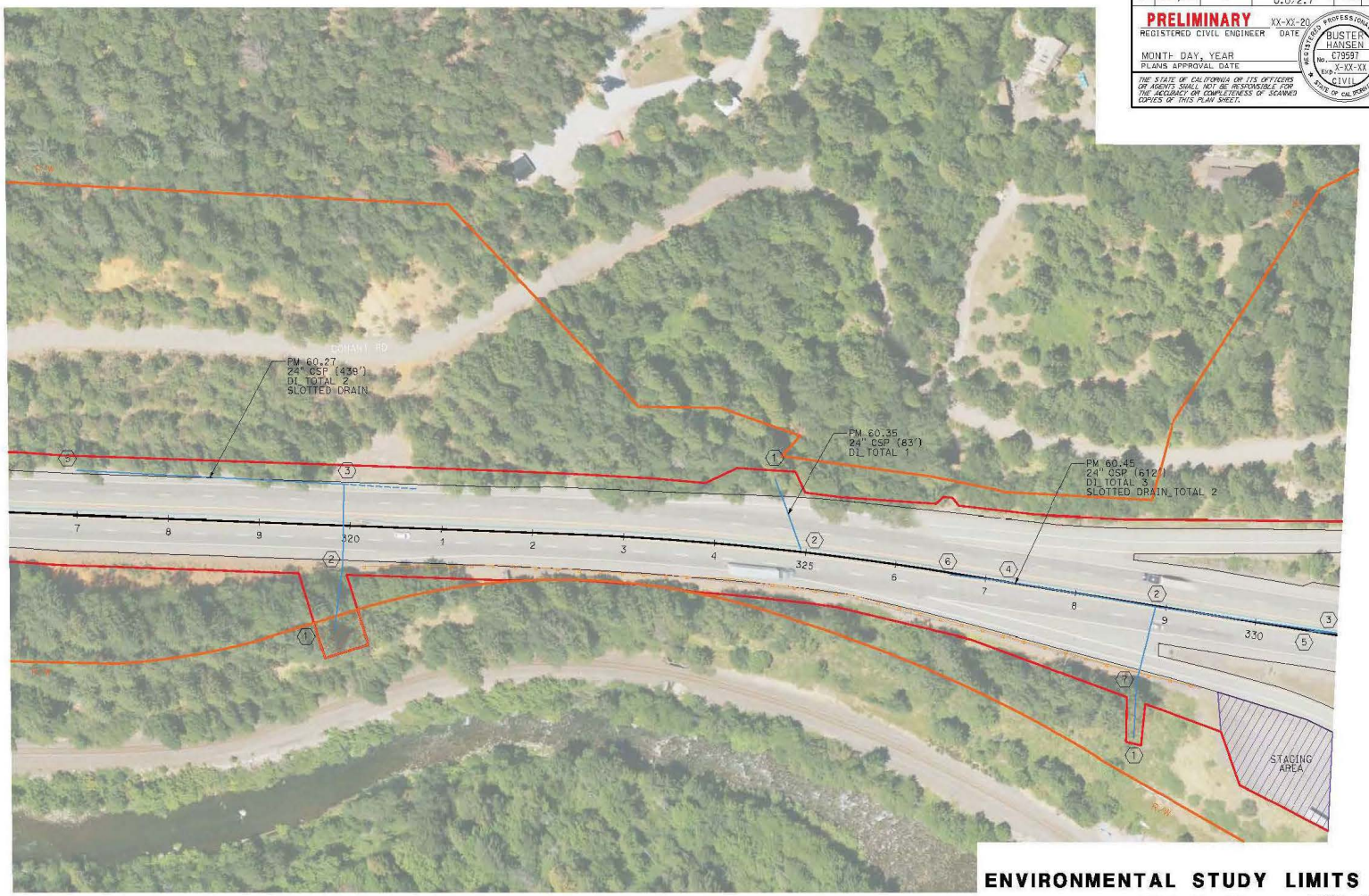
PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
DESIGN	TRAVIS A GURNEY	CHECKED BY	DATE REVISED
		FABIO ROMERO	
		BUSTER HANSEN	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er009.dgn

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TIME PLOTTED => 12:13:13 PM

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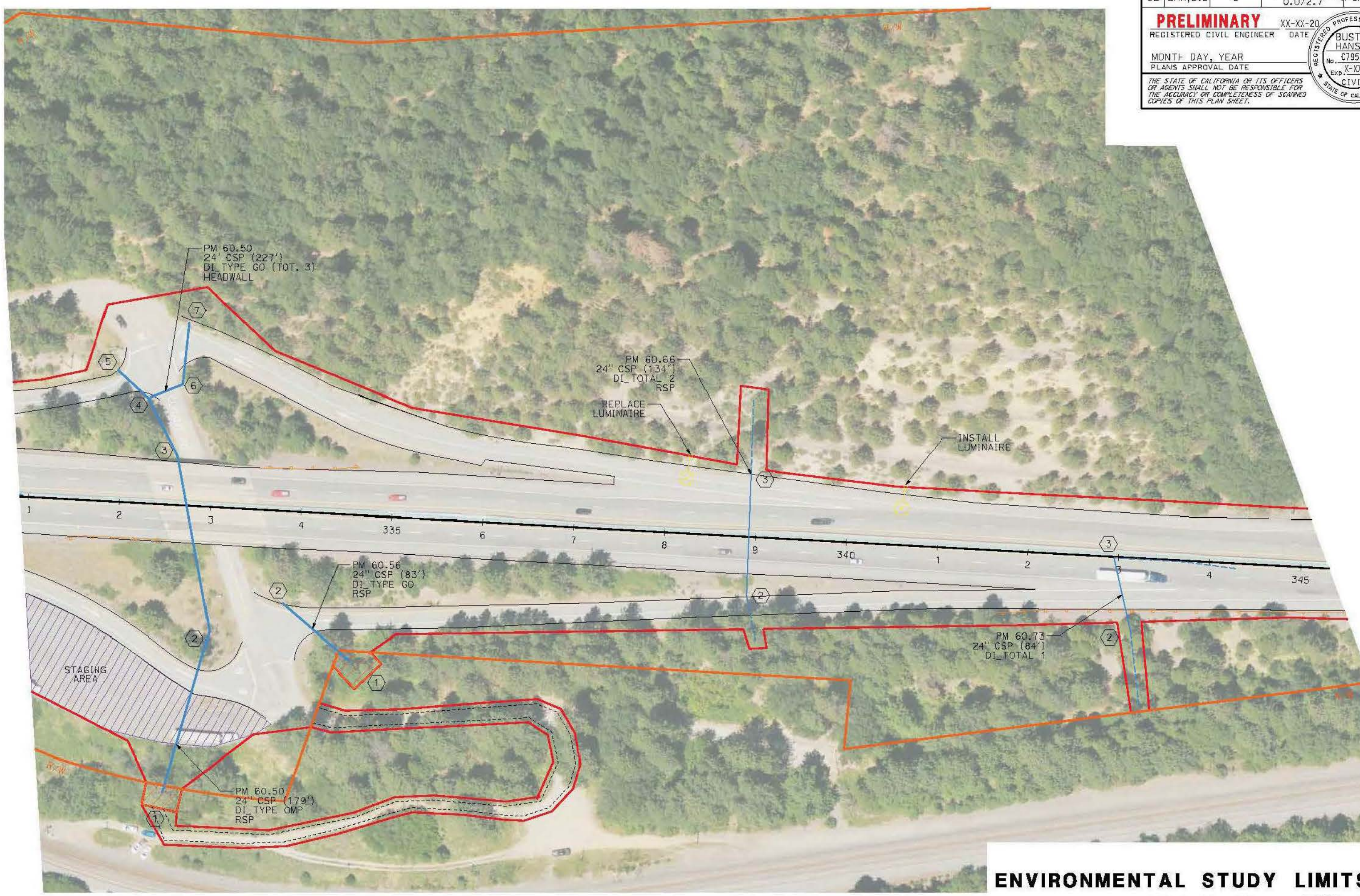
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER BUSTER HANSEN No. C79597 Exp. X-XX-XX CIVIL STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN
REVISED BY
DATE REVISED

P:\proj\3\02-0J810\design\Mapping\ESL\0219000164er010.dgn

DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:18:50 PM
LAST REVISION

BORDER LAST REVISED 7/2/2010
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DGN FILE => ...\ESL\0219000164er010.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE 0219000164

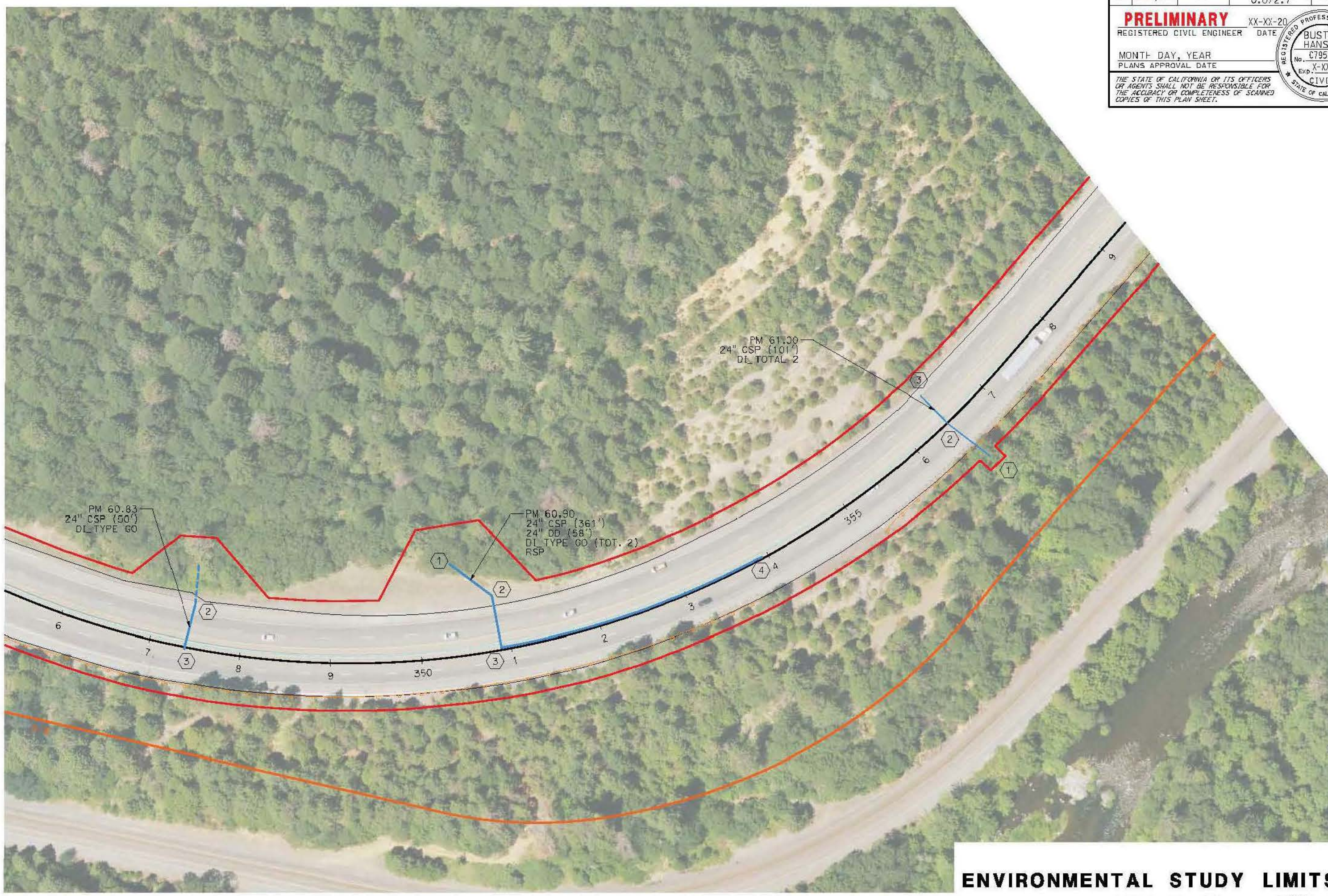
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNUM	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER BUSTER HANSEN No. C79597 Exp. X-XX-XX CIVIL STATE OF CALIFORNIA

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY
TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED

P:\proj3\02\0J810\design\Mapping\ESL\0219000164er011.dgn

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TIME PLOTTED => 9:02:21 AM
LAST REVISION

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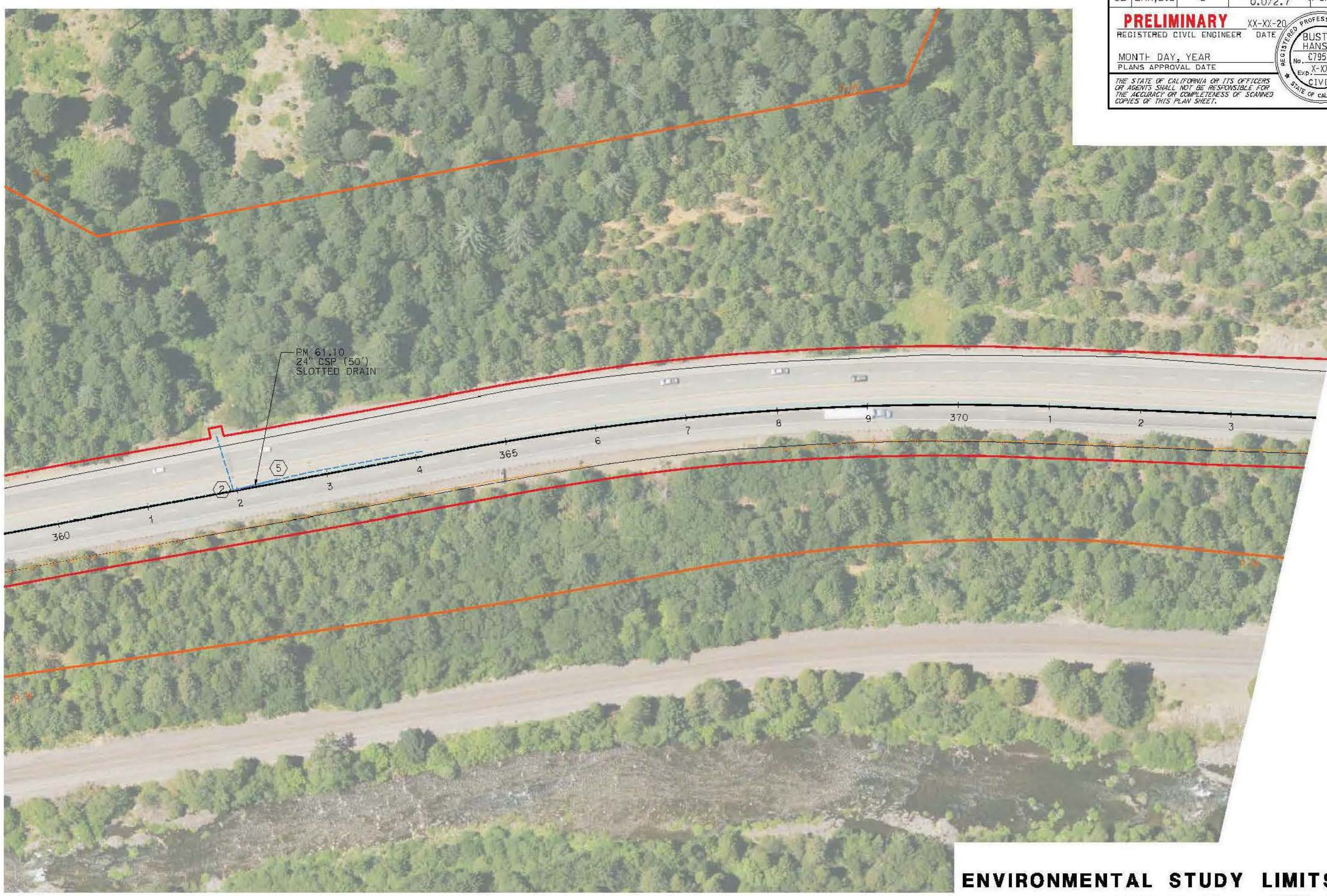
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER · BUSTER HANSEN · No. C79597 · Exp. X-XX-XX · CIVIL · STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY
Caltrans DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED

P:\proj3\02\0j810\design\Mapping\ESL\0219000164er012.dgn

DATE PLOTTED => 10/30/2024
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LAST REVISION

BORDER LAST REVISED 7/2/2010 | USERNAME => DGN FILE => ...\ESL\0219000164er012.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

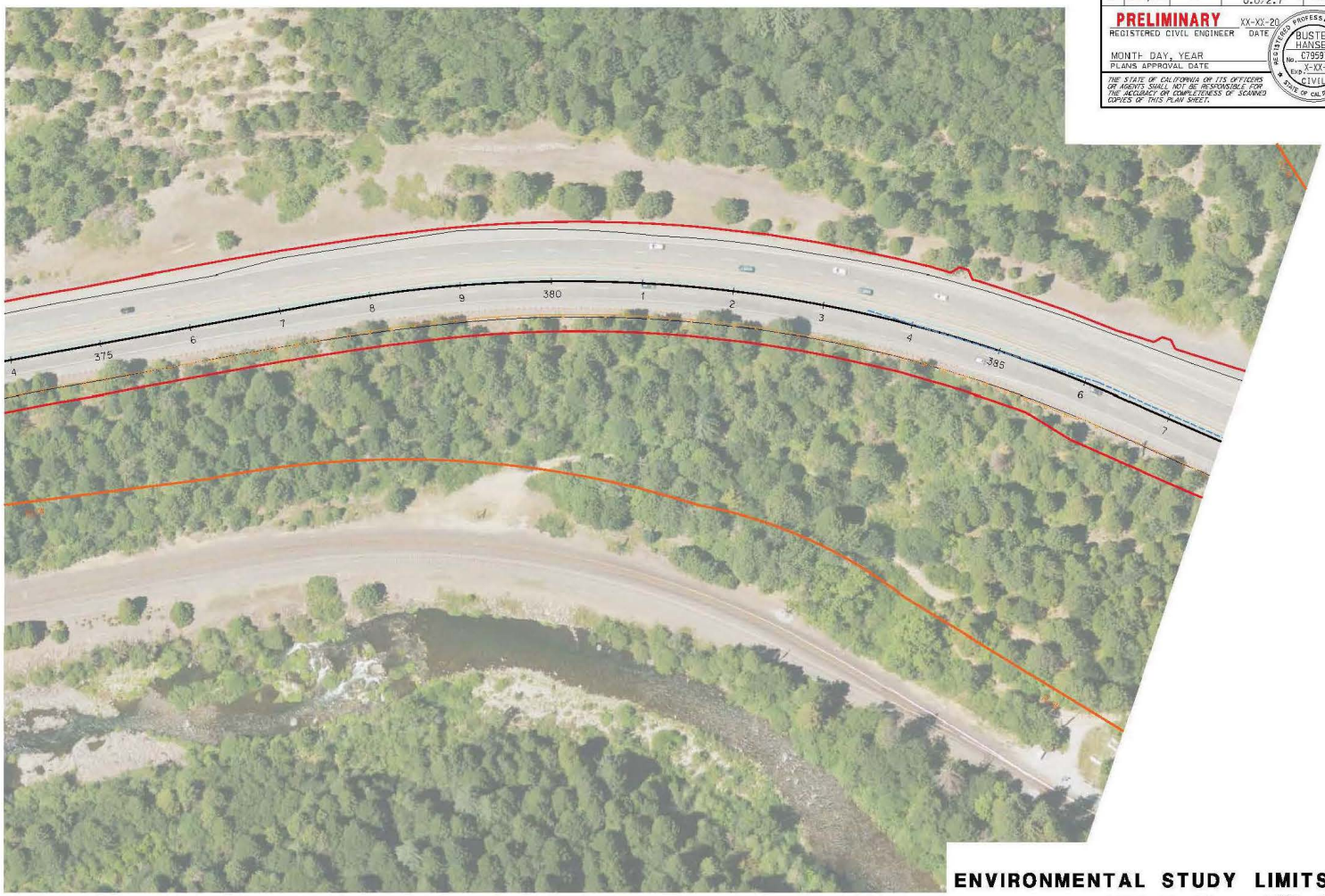
PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er013.dgn

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TIME PLOTTED => 1:24:13 PM

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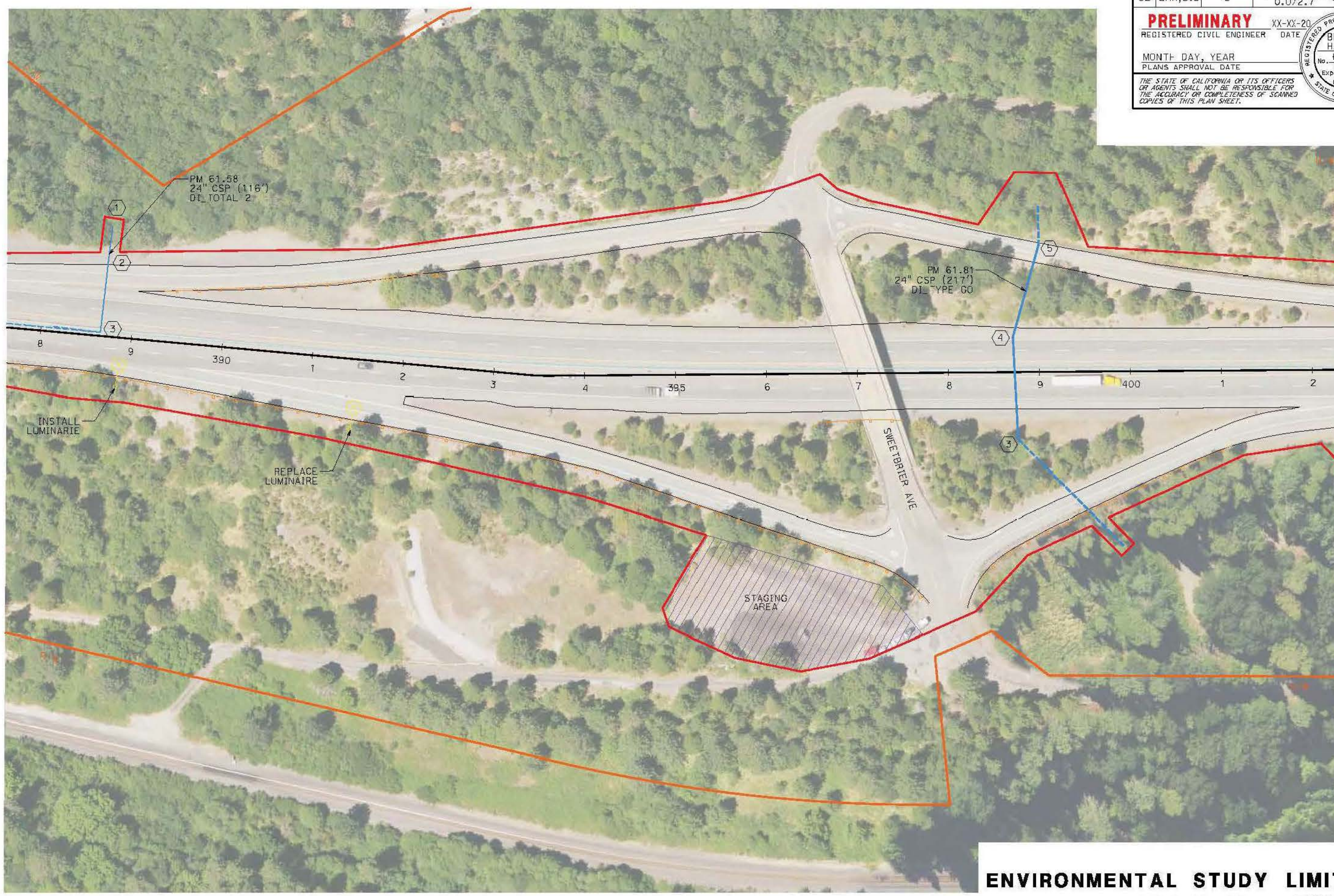
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN
REVISED BY
DATE REVISED

P:\proj3\02-0J810\design\Mapping\ESL\0219000164er014.dgn

DATE PLOTTED => 10/30/2024
TIME PLOTTED => 1:29:39 PM
LAST REVISION

BORDER LAST REVISED 7/2/2010
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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE 0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-15**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er015.dgn

DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:23:07 PM

| BORDER LAST REVISED 7/2/2010 | USERNAME =>
DGN FILE => ...\ESL\0219000164er015.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE | 0219000164 |
|---|---|---|---|---|---|

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	PGNUM	TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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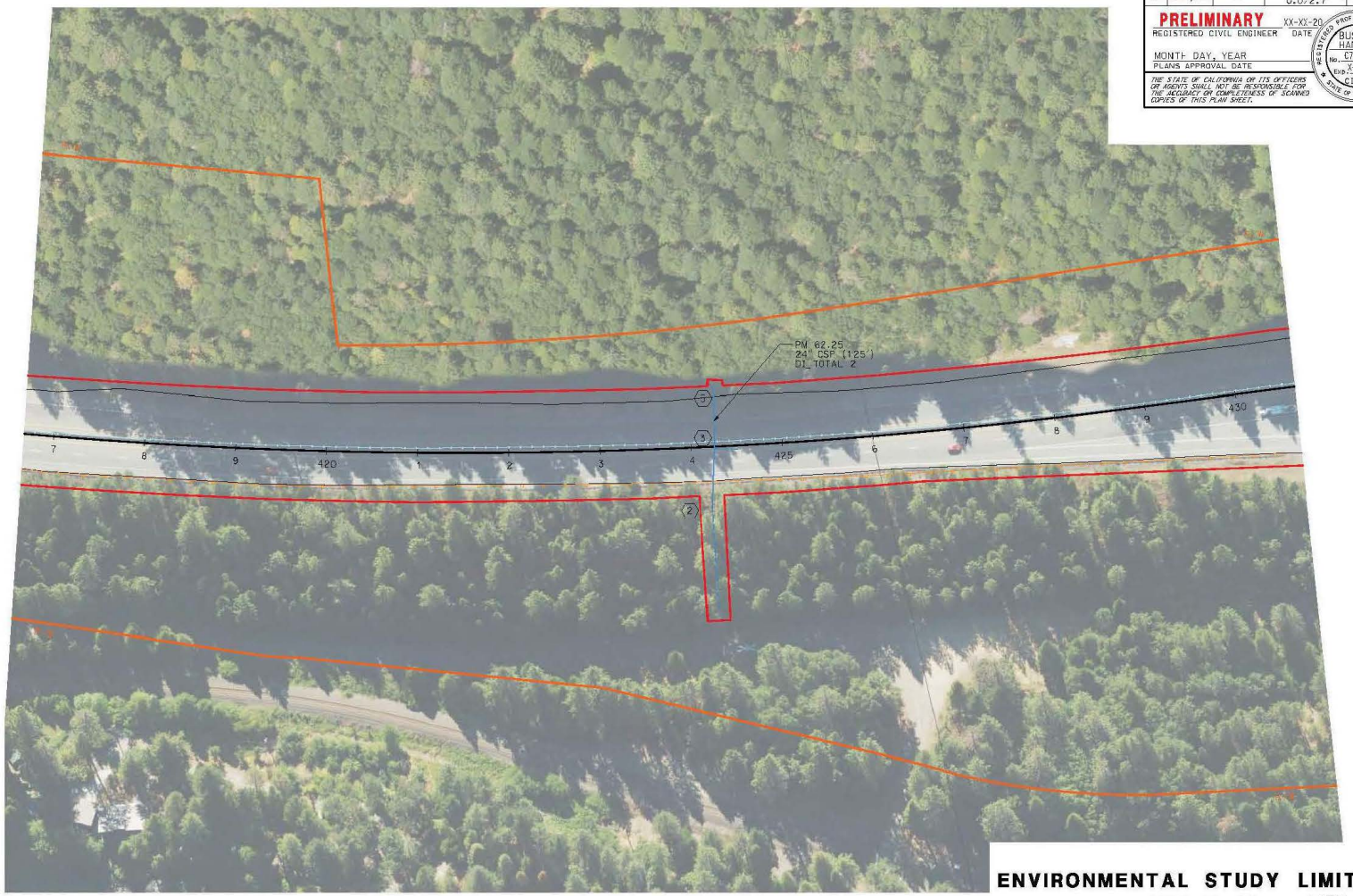
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50' **ESL-16**

CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
CHECKED BY	BUSTER HANSEN	DATE REVISED	

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

P:\proj\02\dj810\design\Mapping\ESL\0219000164er016.dgn

LAST REVISED => 11/6/2024
DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:28:15 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\ESL\0219000164er016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU	$TOTPG

PRELIMINARY
REGISTERED CIVIL ENGINEER XX-XX-20 DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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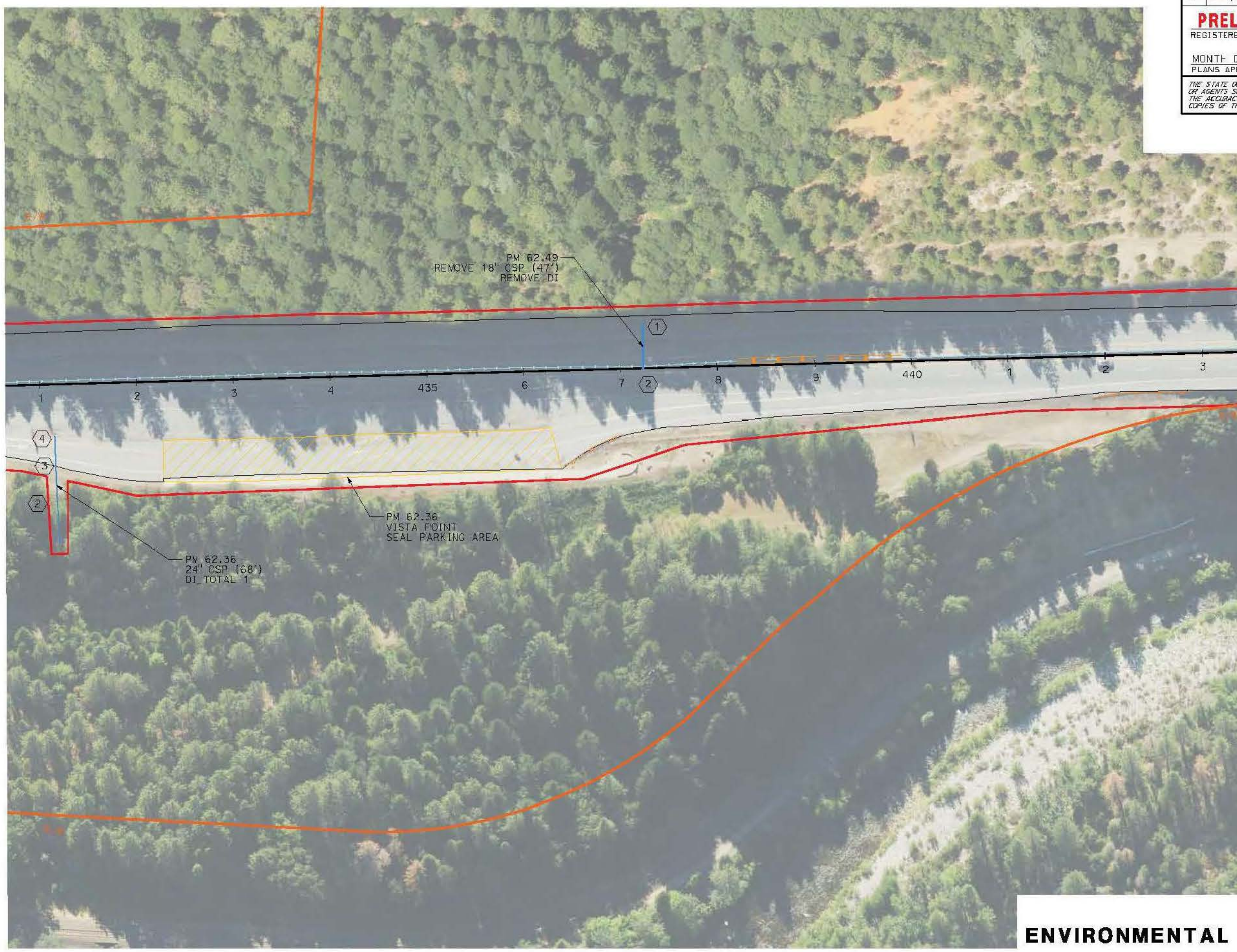
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

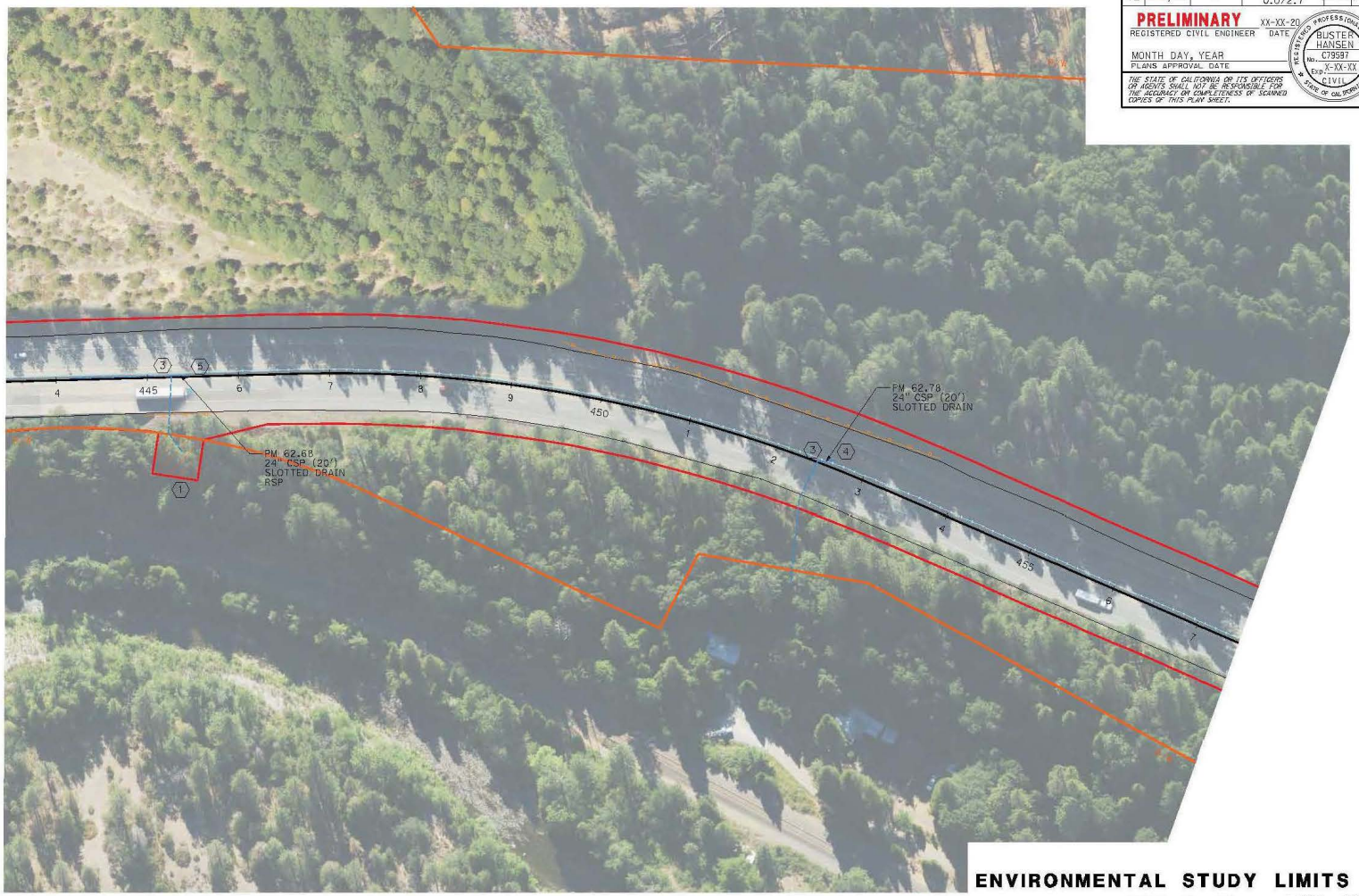
ESL-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
Caltrans® DESIGN	TRAVIS A GURNEY	FABIO ROMERO	
		CHECKED BY	DATE REVISED
		BUSTER HANSEN	

P:\proj3\02\0j810\design\Mapping\ESL\0219000164er017.dgn

DATE PLOTTED => 10/30/2024
TIME PLOTTED => 1:47:05 PM
LAST REVISION

BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE => ...\ESL\0219000164er017.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE 0219000164



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM#	#TOTPG#

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE
BUSTER HANSEN No. C79597 Exp X-XX-XX CIVIL
MONTH DAY, YEAR
PLANS APPROVAL DATE

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ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-18**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY:
CHECKED BY: BUSTER HANSEN
FABIO ROMERO
REVISED BY
DATE REVISED

P:\proj\02\0810\design\Mapping\ESL\0219000164er018.dgn

BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE => ...\ESL\0219000164er018.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE 0219000164

LAST REVISION DATE PLOTTED => 10/30/2024
TIME PLOTTED => 1:52:05 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

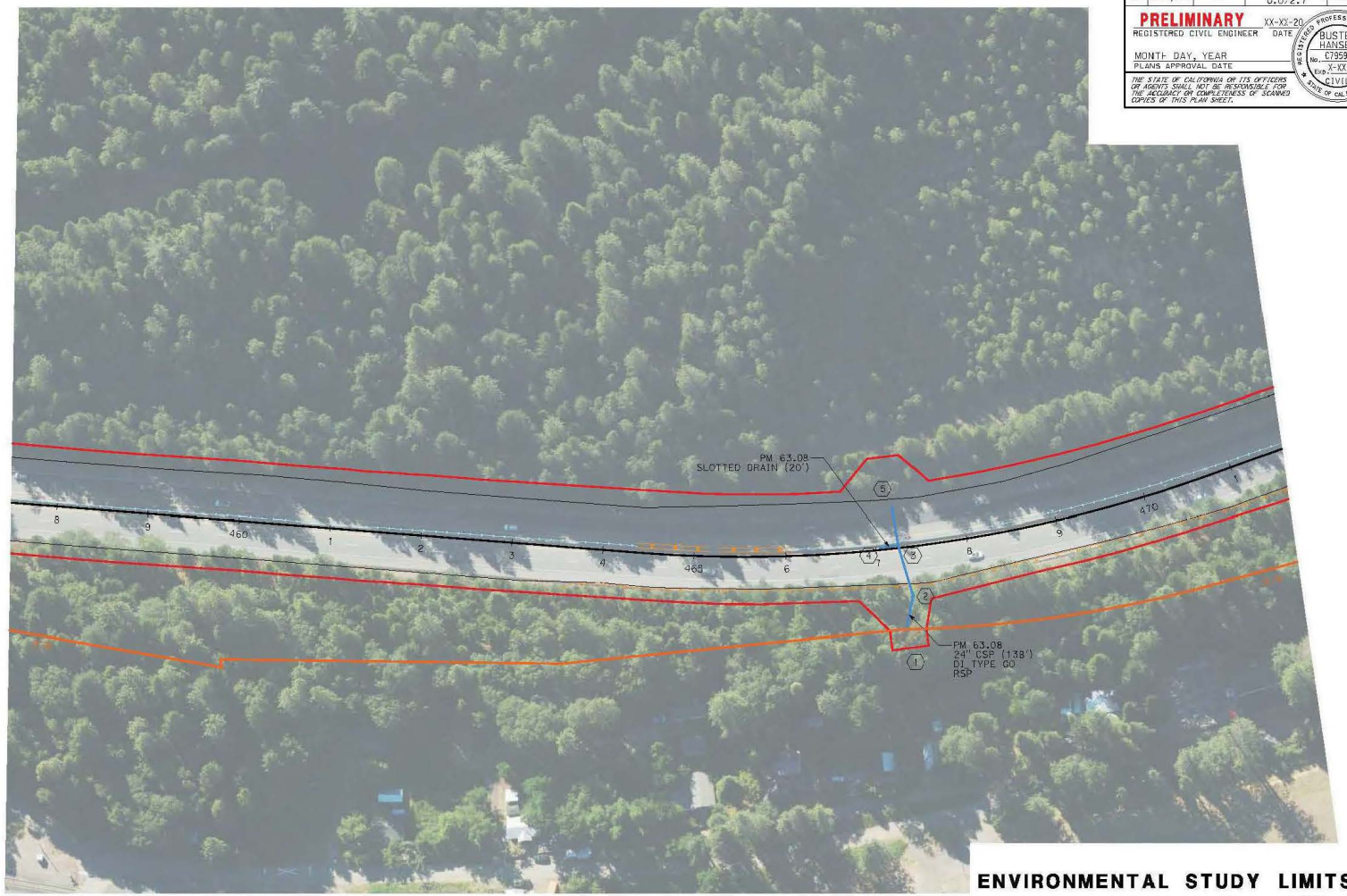
PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A GURNEY	CALCULATED-DESIGNED BY FABIO ROMERO	REVISED BY		
		CHECKED BY BUSTER HANSEN	DATE REVISED		

P:\proj*\02\dgn\Design\Mapping\ESL\0219000164er019.dgn

DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:32:29 PM

BORDER LAST REVISED 7/2/2010	USERNAME => DGN FILE = ...\ESL\0219000164er019.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 0315	PROJECT NUMBER & PHASE	0219000164

NOTE: SCOPE OF WORK AT CASTLE CREEK BRIDGE INCLUDES A 4.5" REINFORCED CONCRETE DECK-ON-DECK WITH 1" POLYESTER CONCRETE OVERLAY, TYPE 842 BRIDGE RAILING, AND A TYPE 60 MEDIAN BARRIER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU$	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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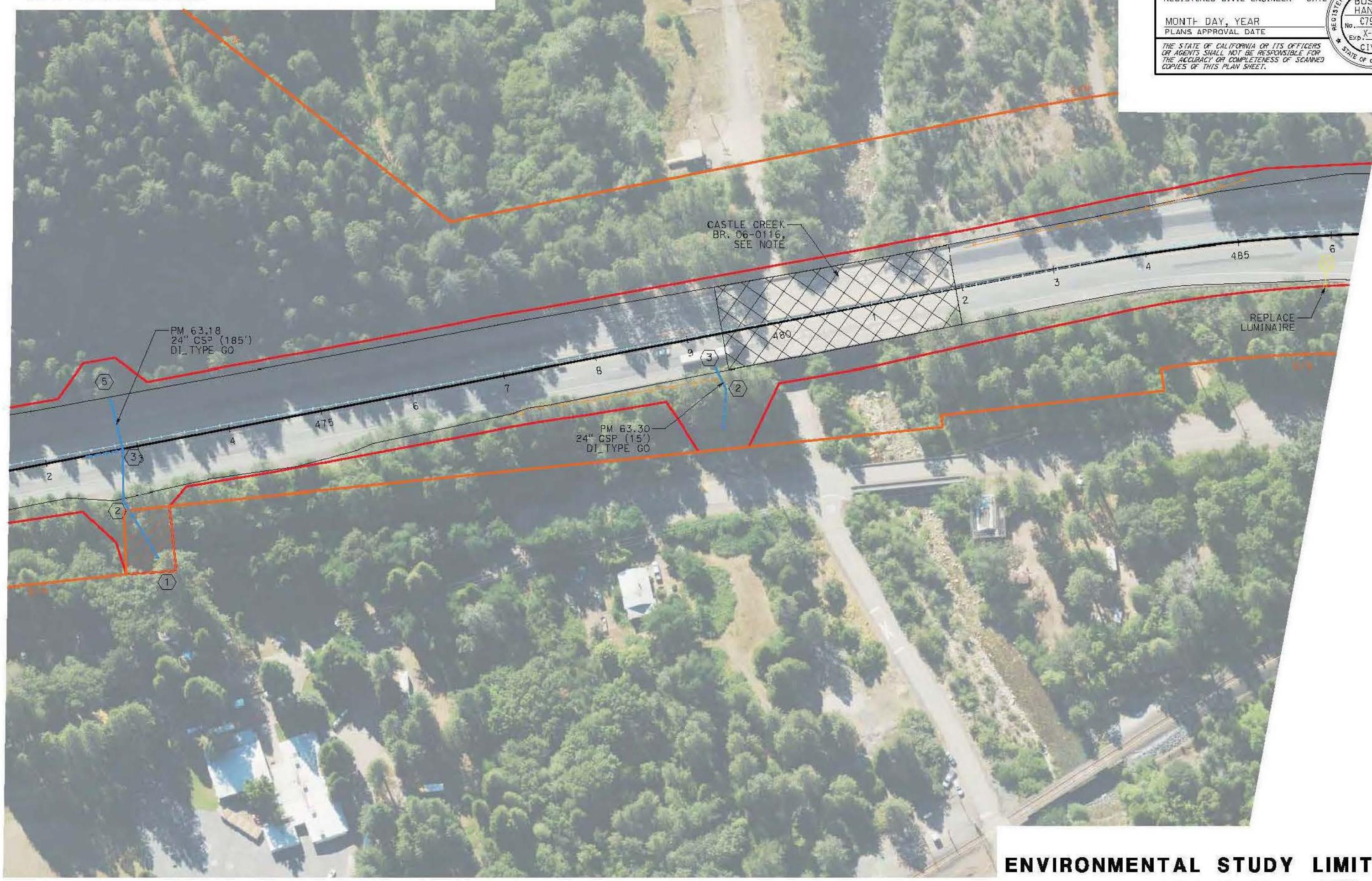
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY
TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED

P:\proj3\02\0j810\design\Mapping\ESL\0219000164er020.dgn

DATE PLOTTED => 10/31/2024
TIME PLOTTED => 10:41:56 AM
LAST REVISION

BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE => ...\ESL\0219000164er020.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE 0219000164

NOTE: SCOPE OF WORK AT CASTELLA UC INCLUDES A 4.5" REINFORCED CONCRETE DECK-ON-DECK WITH 1" POLYESTER CONCRETE OVERLAY, TYPE 842 BRIDGE RAILING, AND A TYPE 60 MEDIAN BARRIER

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN No. C79597 Exp. X-XX-XX CIVIL

MONTH DAY, YEAR

PLANS APPROVAL DATE

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REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: FABIO ROMERO

CHECKED BY: BUSTER HANSEN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

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DATE PLOTTED => 11/6/2024

TIME PLOTTED => 12:37:50 PM

BORDER LAST REVISED 7/2/2010

USERNAME =>

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0315

PROJECT NUMBER & PHASE 0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp X-XX-XX
CIVIL
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

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DATE PLOTTED => 10/30/2024
TIME PLOTTED => 2:44:22 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR

PLANS APPROVAL DATE

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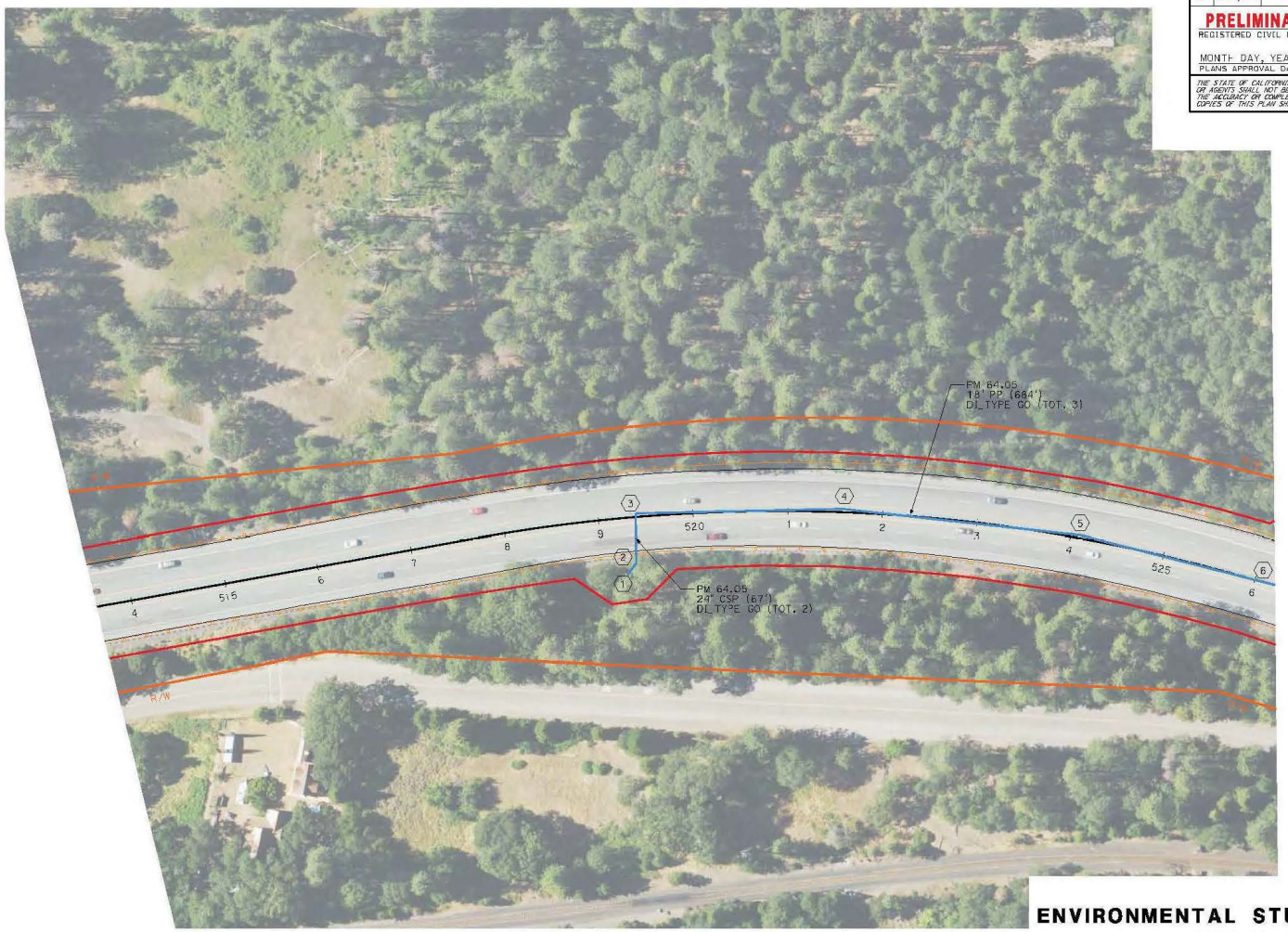
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-23**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN
REVISED BY
DATE REVISED

P:\proj\02\dj810\design\Mapping\ESL\0219000164er023.dgn

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => ...\ESL\0219000164er023.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0315

PROJECT NUMBER & PHASE 0219000164

LAST REVISED
DATE PLOTTED => 10/30/2024
TIME PLOTTED => 2:48:56 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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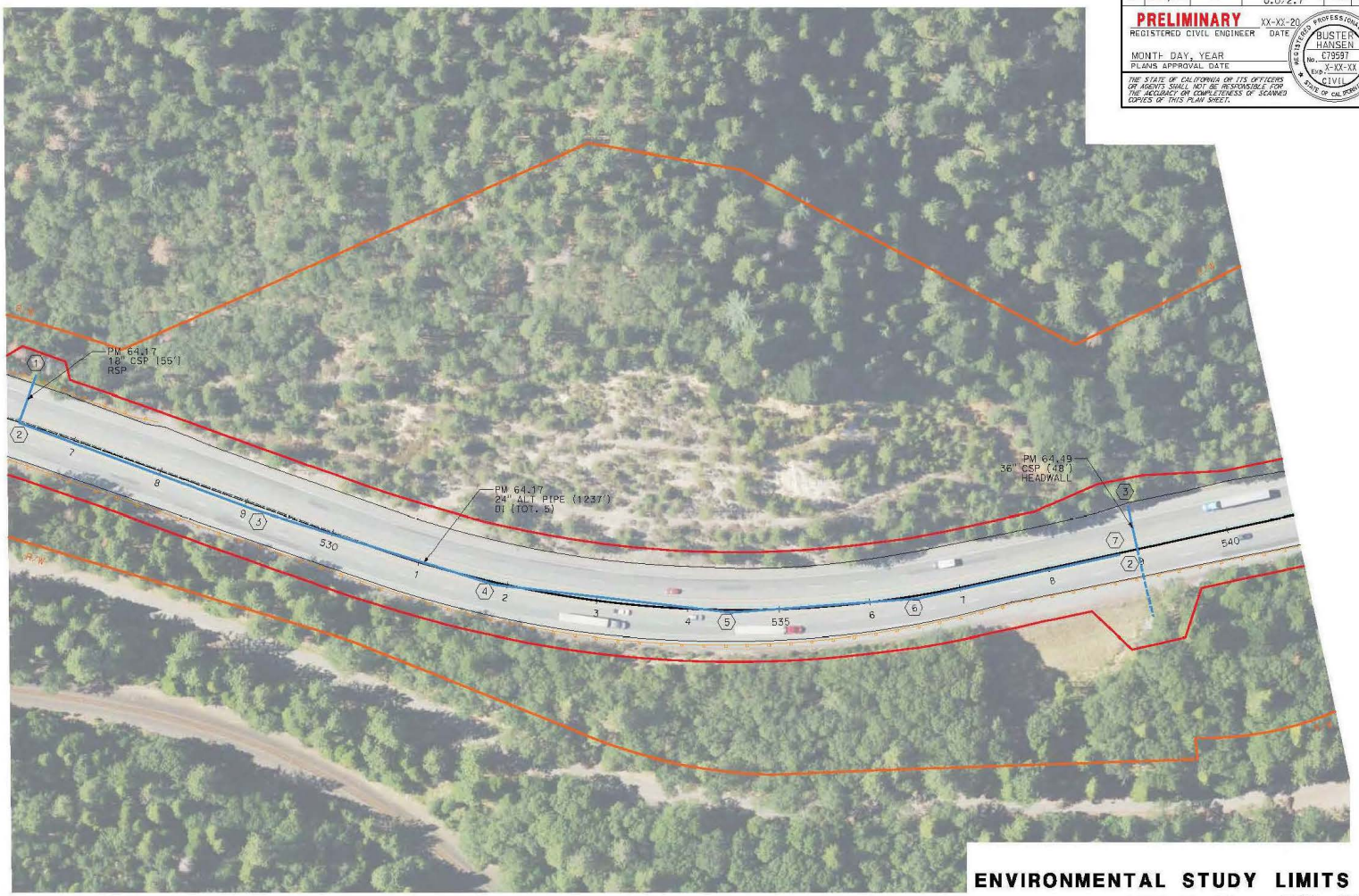

ENVIRONMENTAL STUDY LIMITS
SCALE: 1" = 50' **ESL-24**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
Caltrans DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er024.dgn

DATE PLOTTED => 10/30/2024
TIME PLOTTED => 2:53:26 PM

BORDER LAST REVISED 7/2/2010	USERNAME => DGN FILE => ...\ESL\0219000164er024.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 0315	PROJECT NUMBER & PHASE	0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN No. C79597 Exp. X-XX-XX CIVIL

REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

MONTH DAY, YEAR

PLANS APPROVAL DATE

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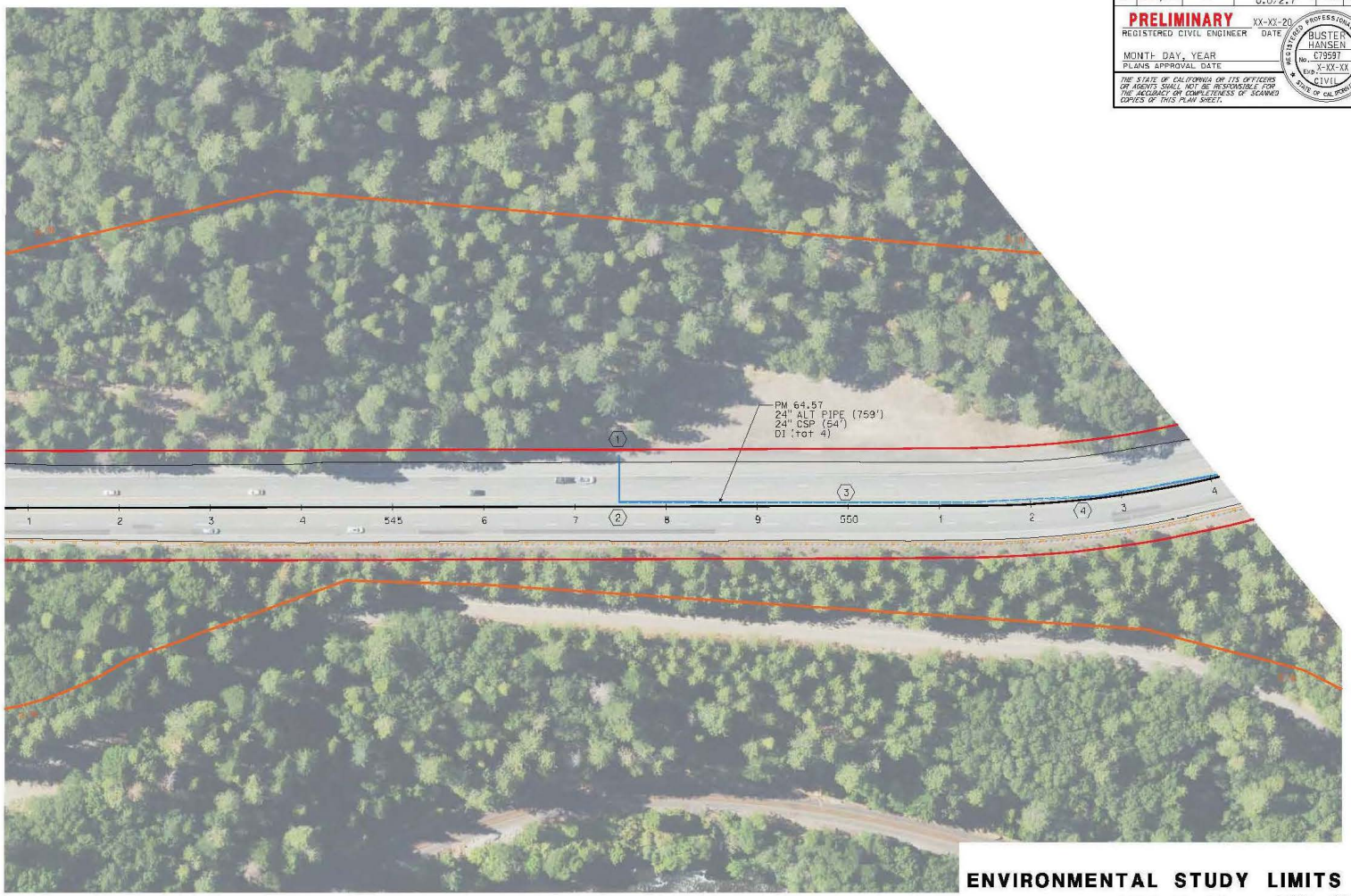

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-25**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

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TIME PLOTTED => 2:58:41 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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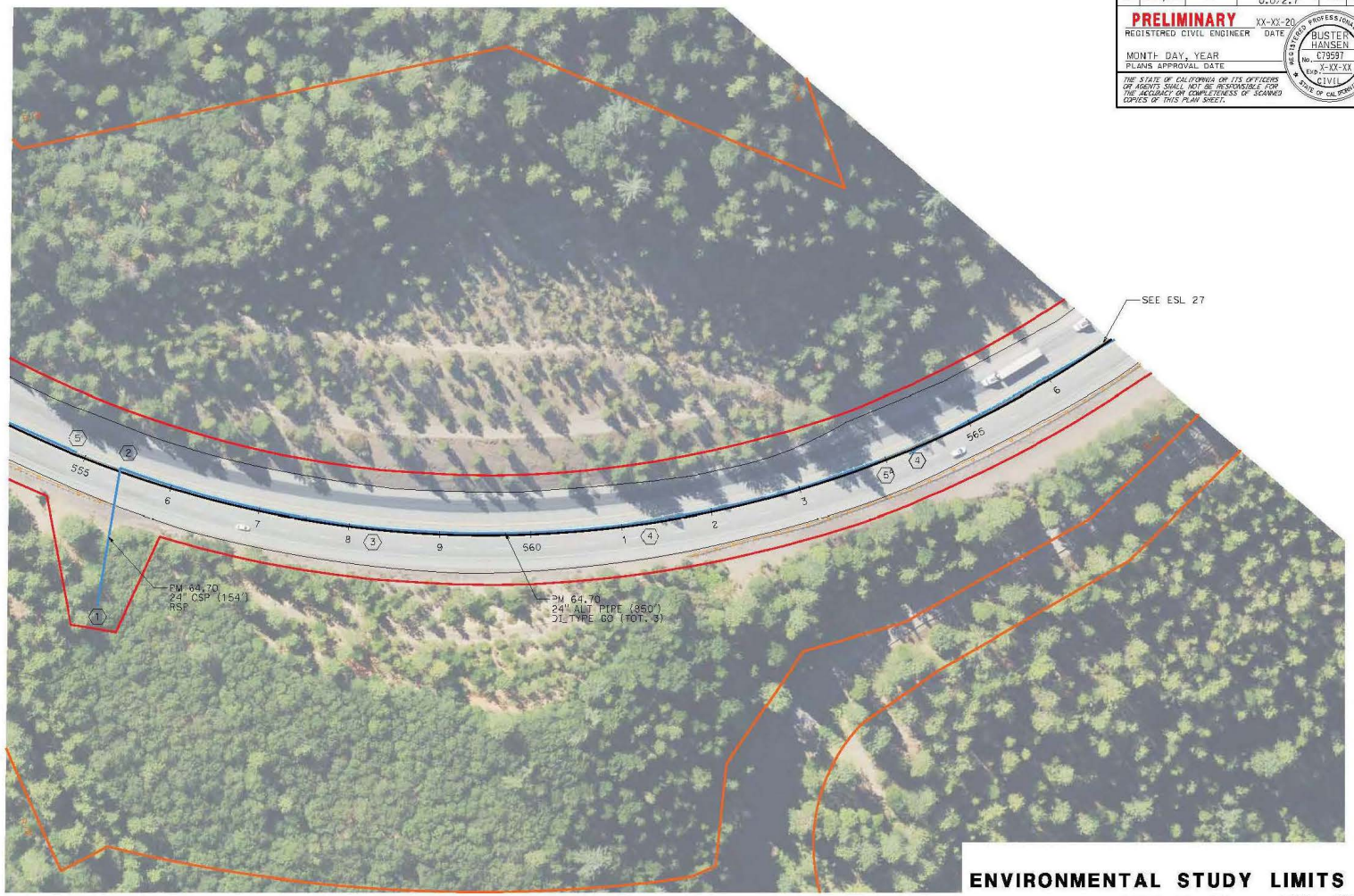

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-26**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj*\02\obj#\0\design\Mapping\ESL\0219000164er026.dgn

DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:12:54 PM

LAST REVISION

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	9PGNUM	STOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er027.dgn

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LAST REVISED | DATE PLOTTED => 11/6/2024 | TIME PLOTTED => 12:48:45 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

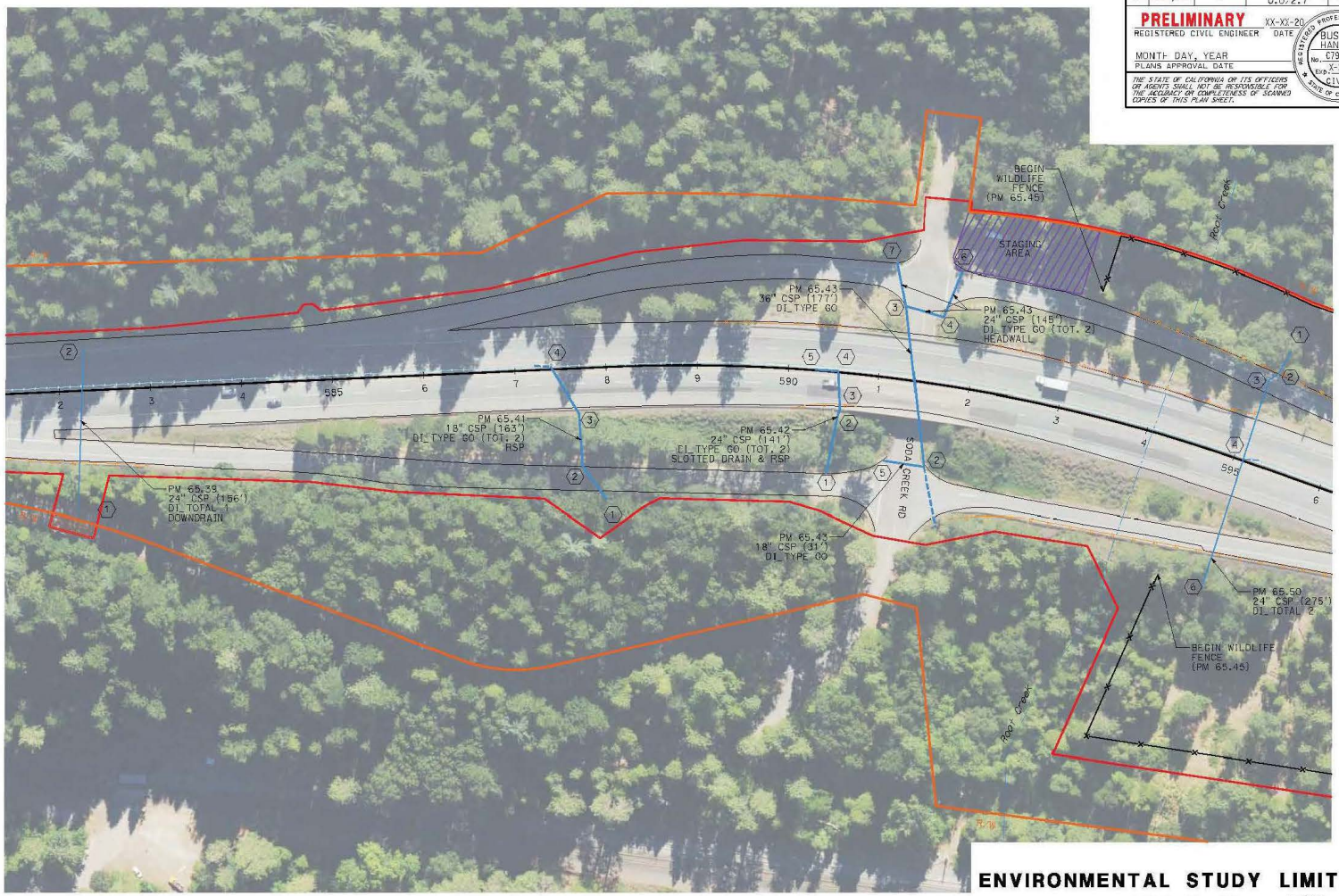
PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER — DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\3\02\0j810\design\Mapping\ESL\0219000164er028.dgn

LAST REVISION — DATE PLOTTED => 11/6/2024
TIME PLOTTED => 12:53:57 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\ESL\0219000164er028.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164

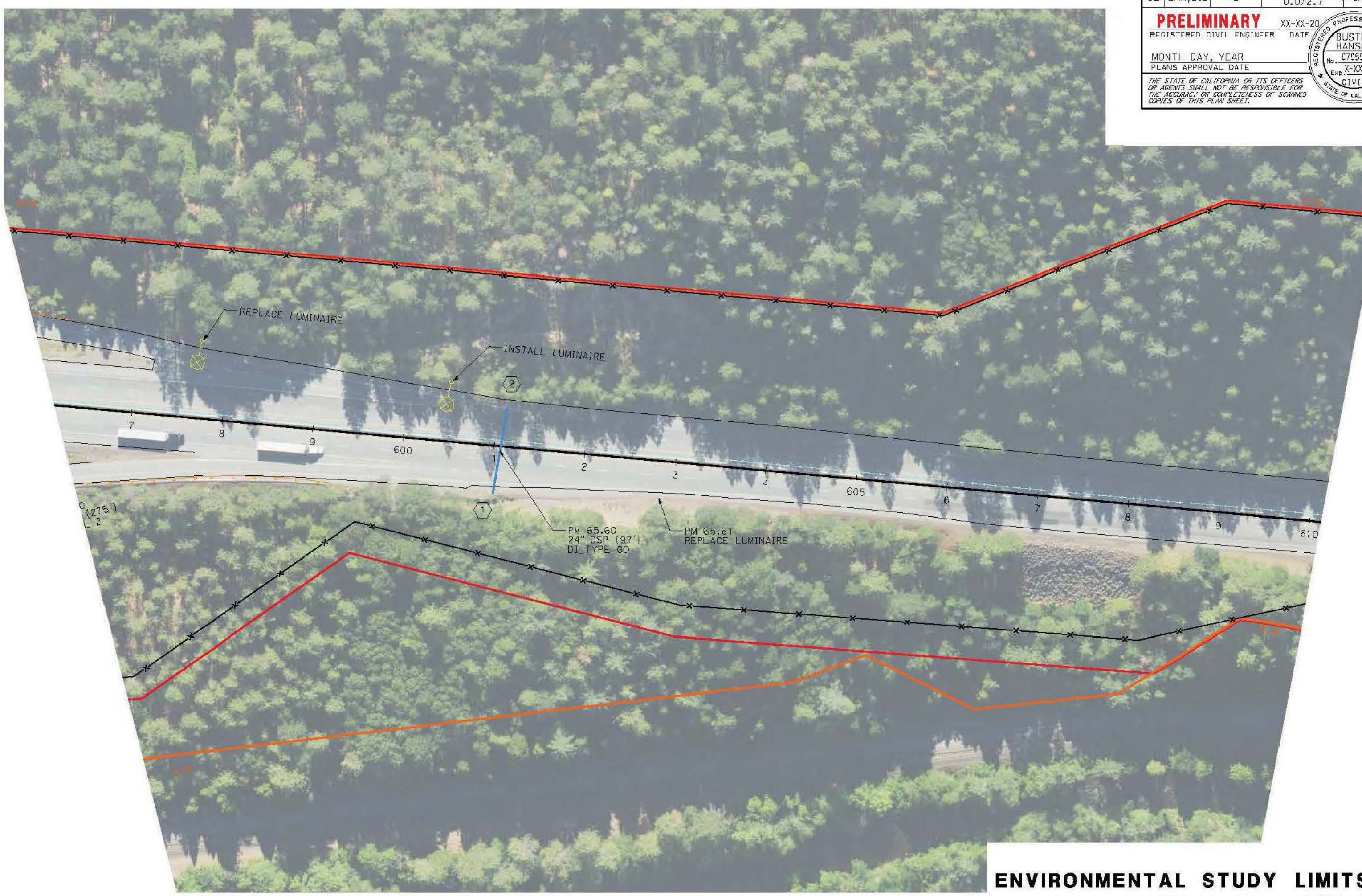
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
TRAVIS A GURNEY	FABIO ROMERO	
	CHECKED BY	DATE REVISED
	BUSTER HANSEN	

P:\proj3\02-0J810\design\Mapping\ESL\0219000164er029.dgn

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => ...\ESL\0219000164er029.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0315

PROJECT NUMBER & PHASE 0219000164

LAST REVISION
DATE PLOTTED => 10/31/2024
TIME PLOTTED => 9:18:57 AM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

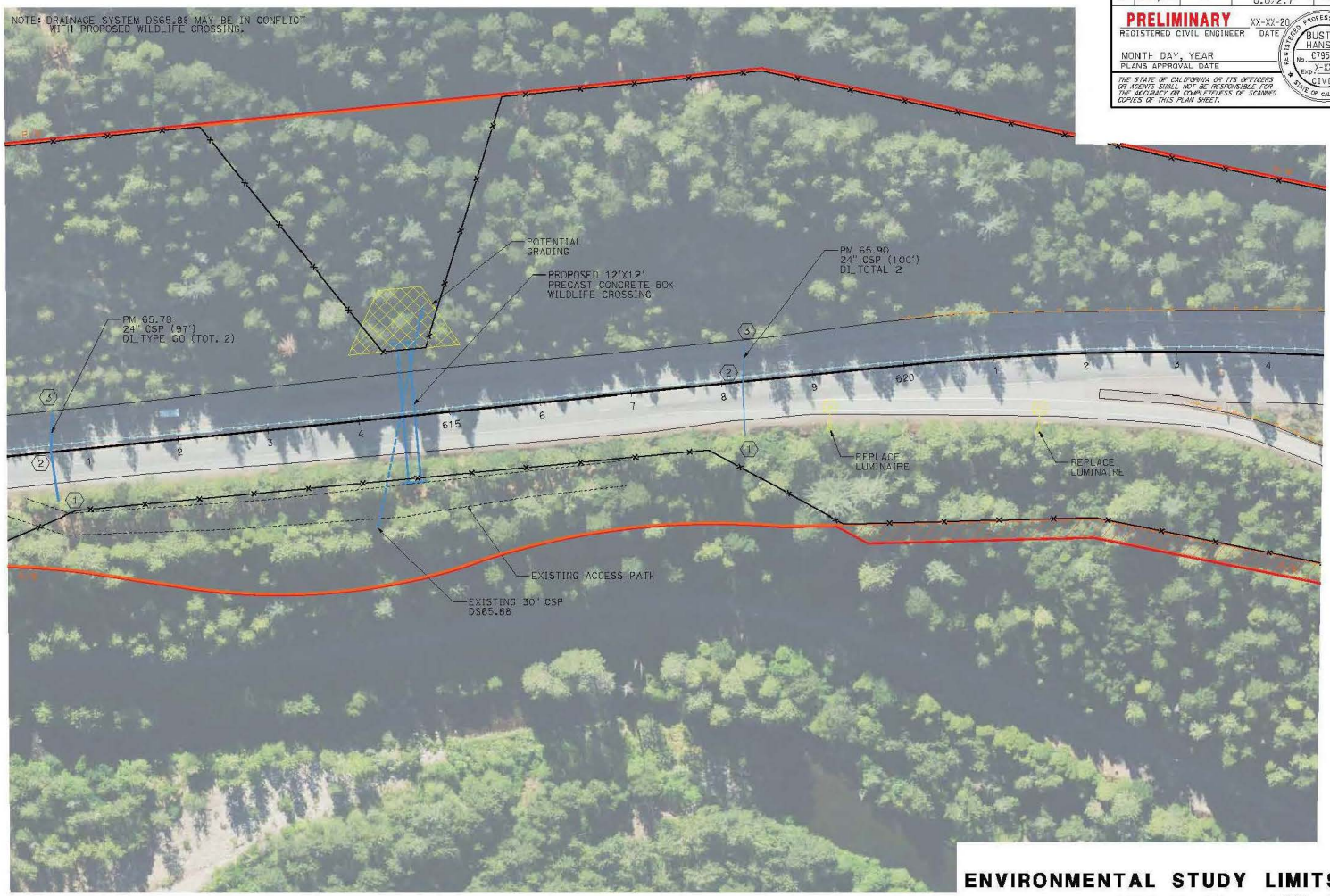
PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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

NOTE: DRAINAGE SYSTEM DS65.88 MAY BE IN CONFLICT WITH PROPOSED WILDLIFE CROSSING.



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-30**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

P:\proj\02\dj810\design\Mapping\ESL\0219000164er030.dgn

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TIME PLOTTED => 3:26:10 PM

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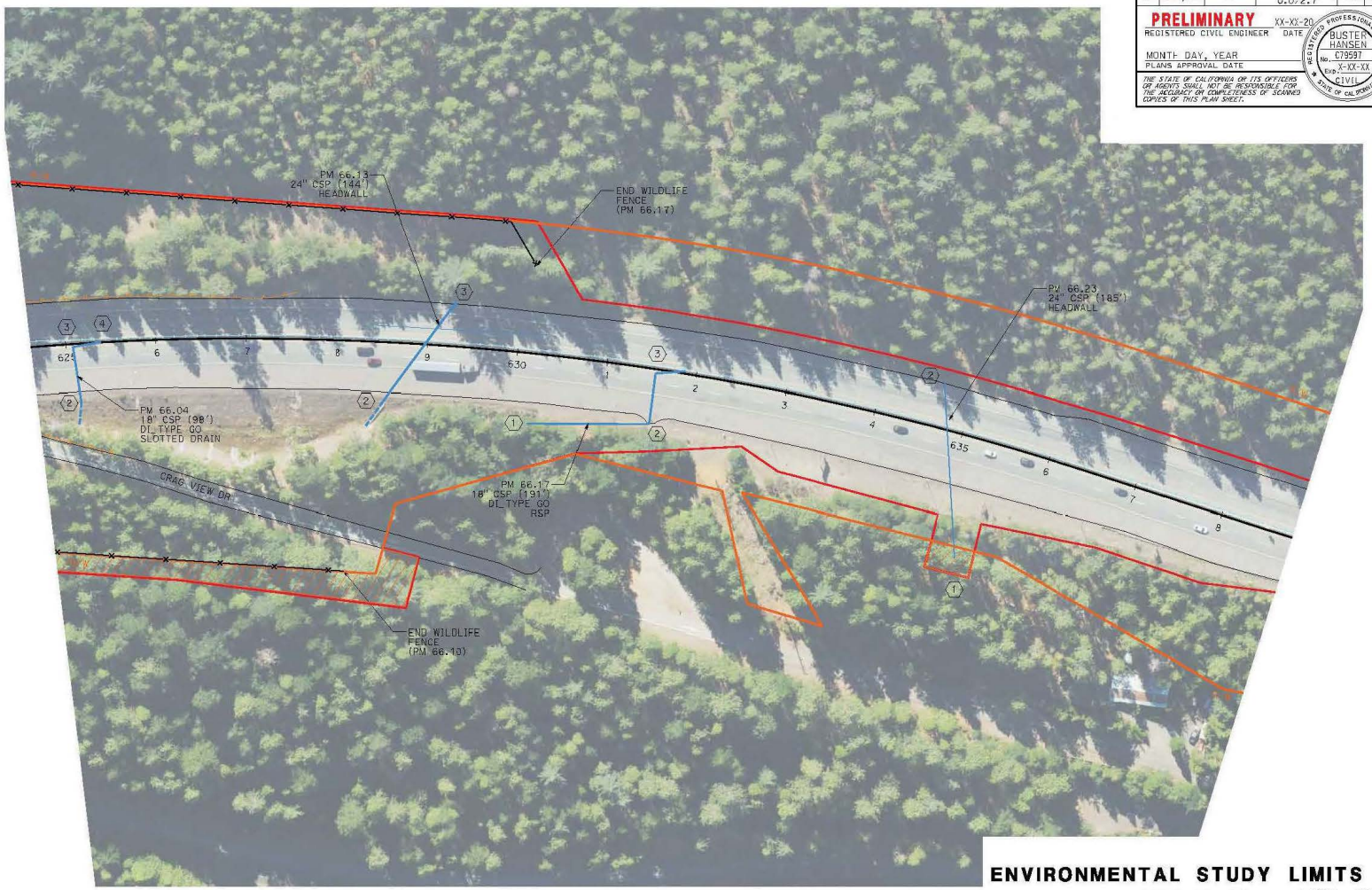
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	PGNUM	TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-31**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY
TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED

P:\proj\02\dj810\design\Mapping\ESL\0219000164er031.dgn

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TIME PLOTTED => 3:38:08 PM

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|---|---|---|---|---|

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-32**

FUNCTIONAL SUPERVISOR	TRAVIS A GURNEY	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
		CHECKED BY	BUSTER HANSEN	DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

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DATE PLOTTED => 10/30/2024
TIME PLOTTED => 3:43:26 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR

PLANS APPROVAL DATE

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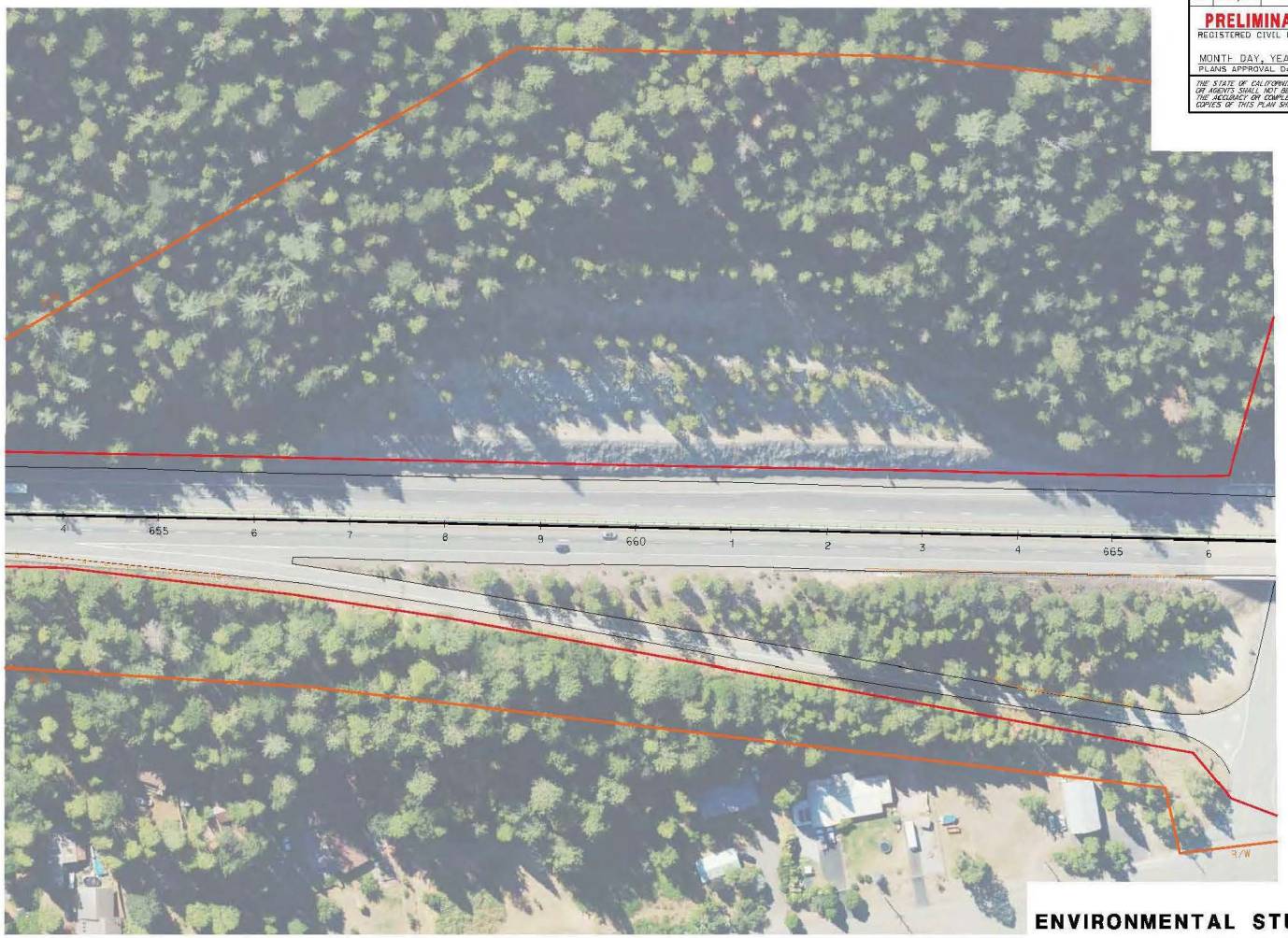
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-33

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN
REVISED BY
DATE REVISED

P:\proj\02\dj810\design\Mapping\ESL\0219000164er033.dgn

LAST REVISED
DATE PLOTTED => 10/30/2024
TIME PLOTTED => 3:49:17 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR

PLANS APPROVAL DATE

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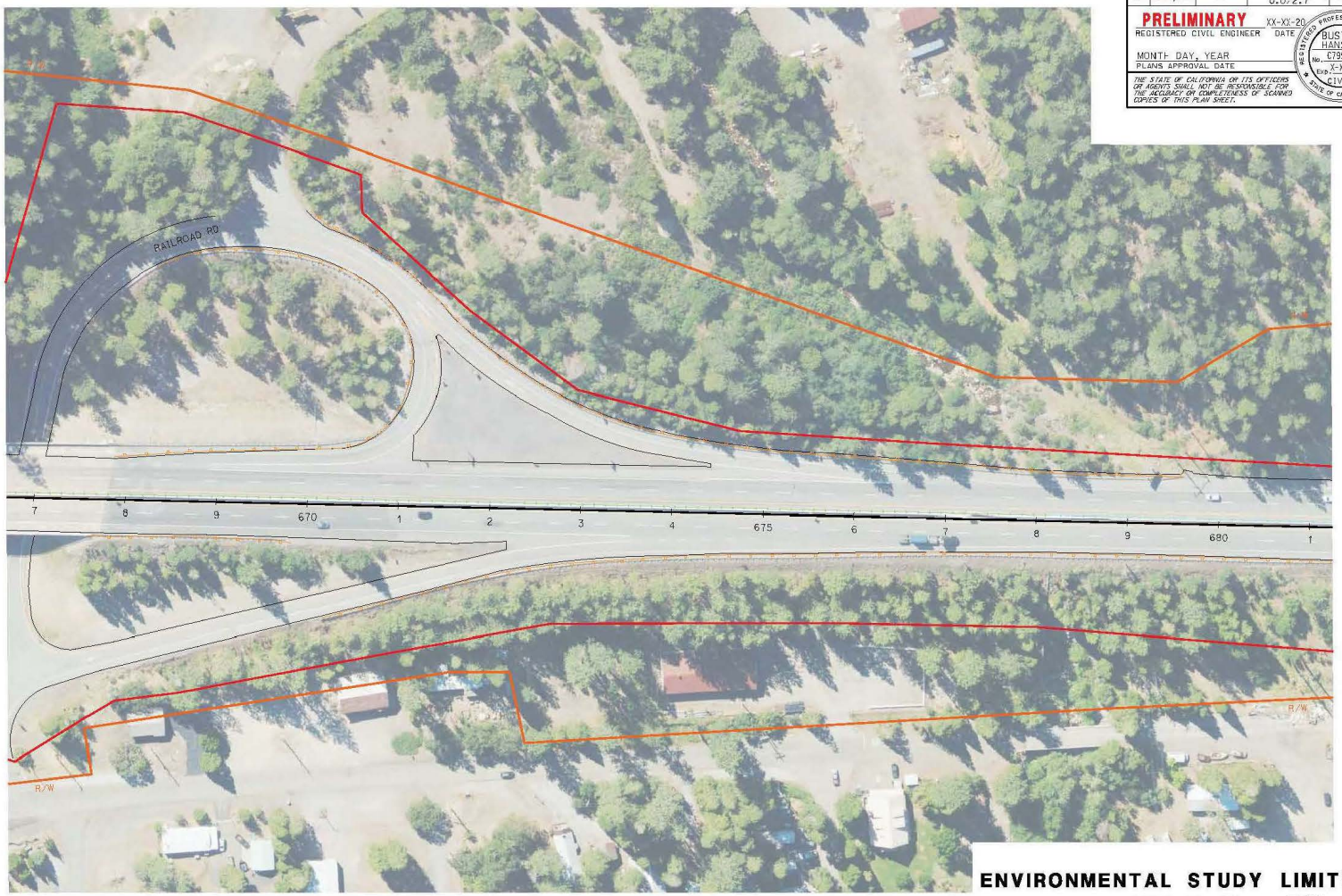
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-34**

DESIGN	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

P:\proj\02\objs\design\Mapping\ESL\0219000164er034.dgn

LAST REVISED
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TIME PLOTTED => 12:59:20 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

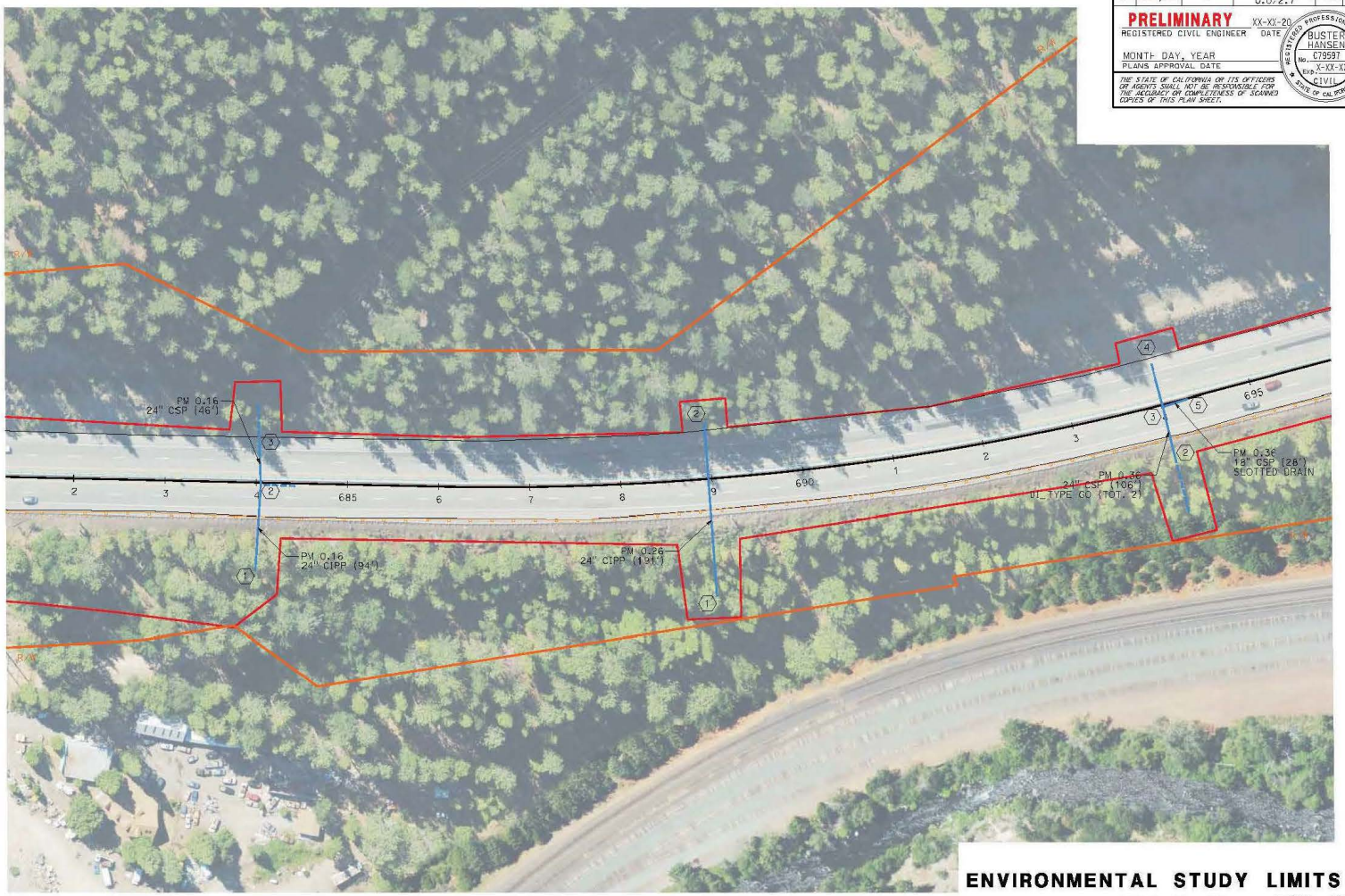
PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-35**

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
TRAVIS A GURNEY	CHECKED BY	DATE REVISED
	BUSTER HANSEN	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

P:\proj\3\02\dj810\design\Mapping\ESL\0219000164er035.dgn

DATE PLOTTED => 10/30/2024
TIME PLOTTED => 4:30:54 PM

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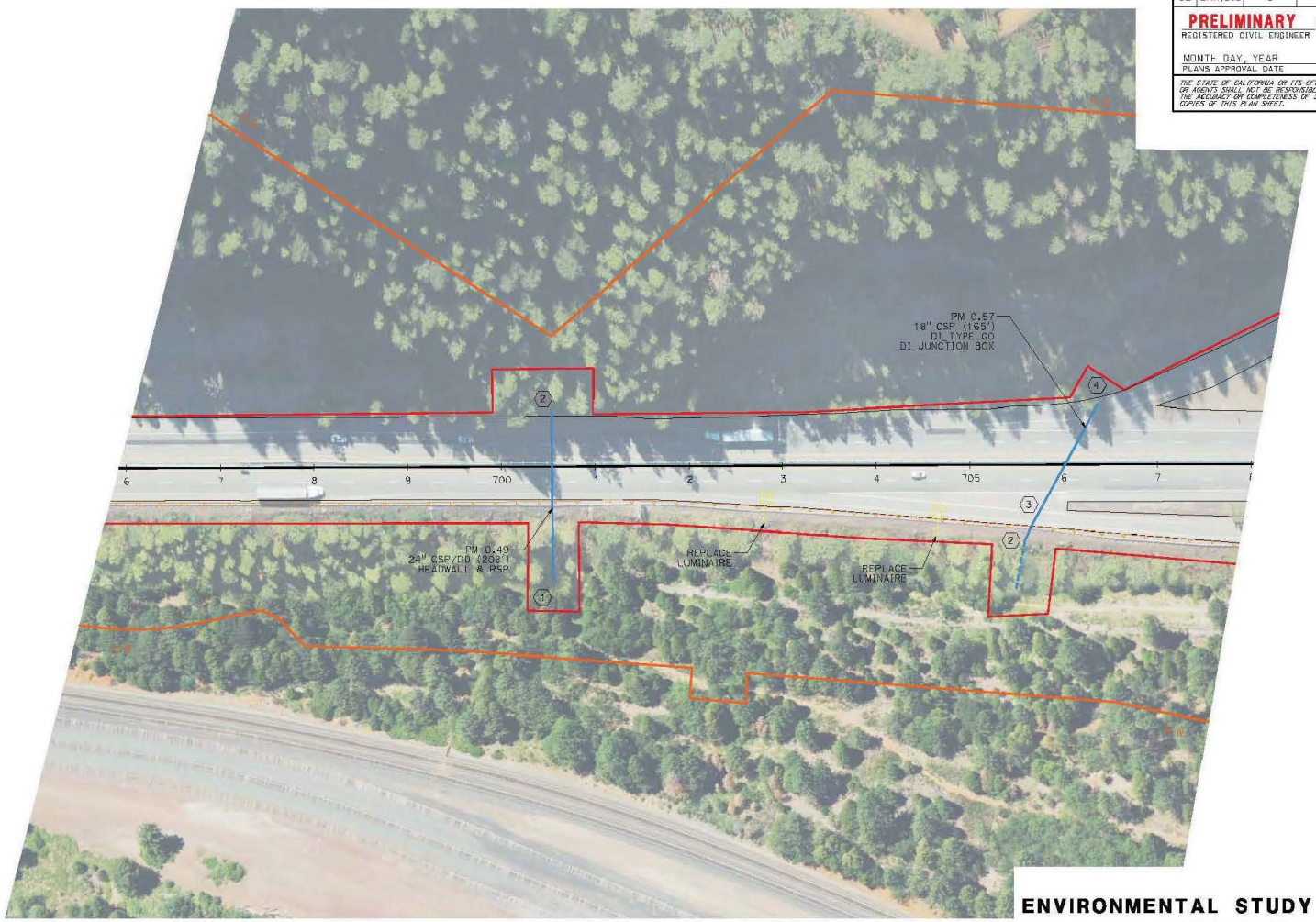
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER — DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH, DAY, YEAR
PLANS APPROVAL DATE

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



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-36

CALCULATED-DESIGNED BY	FABIO ROMERO				
CHECKED BY	BUSTER HANSEN				
FUNCTIONAL SUPERVISOR	TRAVIS A GURNEY				
REVISED BY					
DATE REVISED					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

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DATE PLOTTED => 10/30/2024
TIME PLOTTED => 4:05:26 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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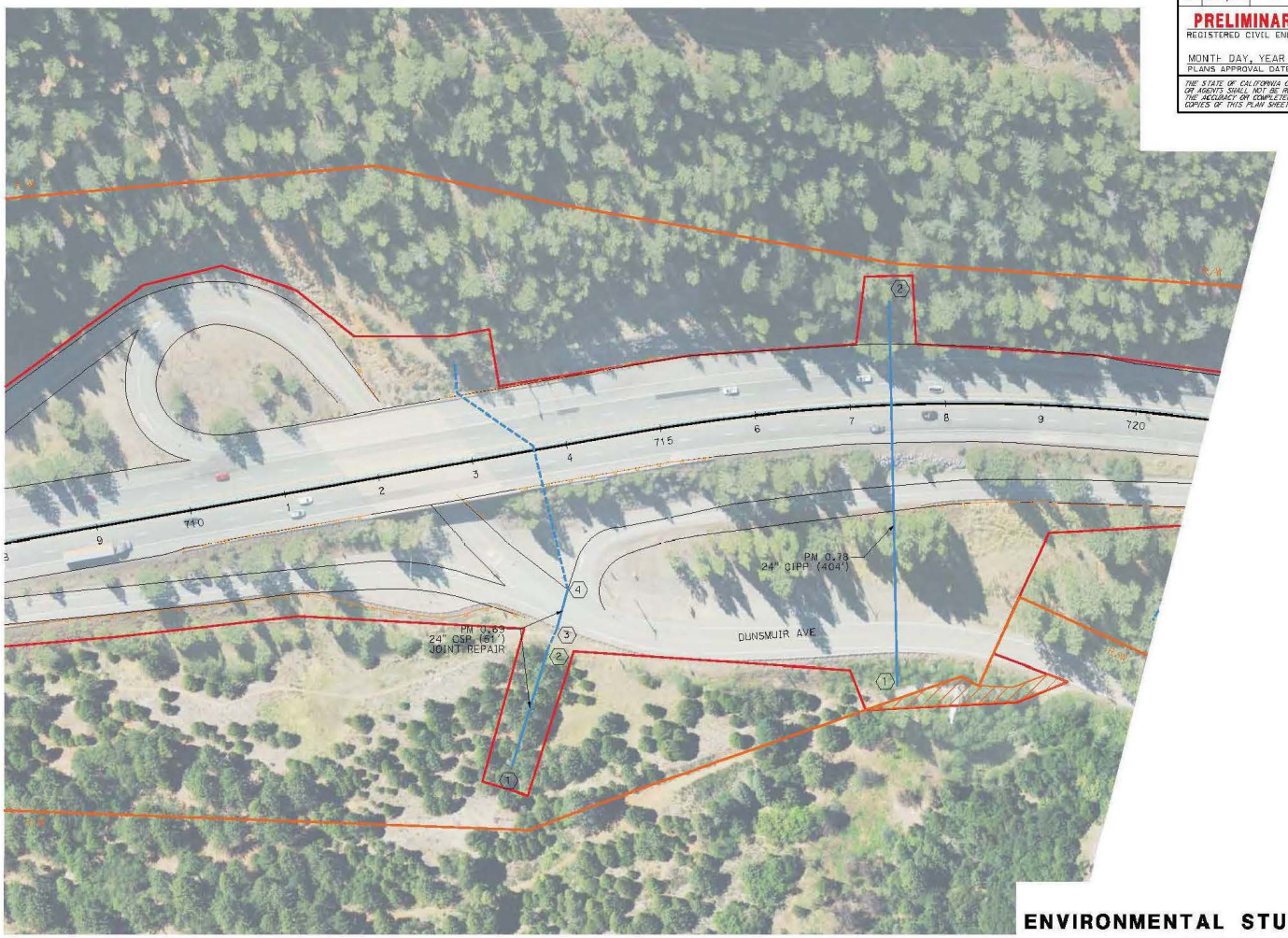
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-37**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN	FUNCTIONAL SUPERVISOR TRAVIS A GURNEY	CALCULATED-DESIGNED BY FABIO ROMERO	REVISED BY		
		CHECKED BY BUSTER HANSEN	DATE REVISED		

P:\proj\02\dj810\design\Mapping\ESL\0219000164er037.dgn

LAST REVISED => 11/6/2024
DATE PLOTTED => 11:14:49 PM
TIME PLOTTED =>

BORDER LAST REVISED 7/2/2010 | USERNAME =>
DGN FILE => ...\ESL\0219000164er037.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNU	$TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER BUSTER HANSEN No. C79597 Exp. X-XX-XX CIVIL STATE OF CALIFORNIA

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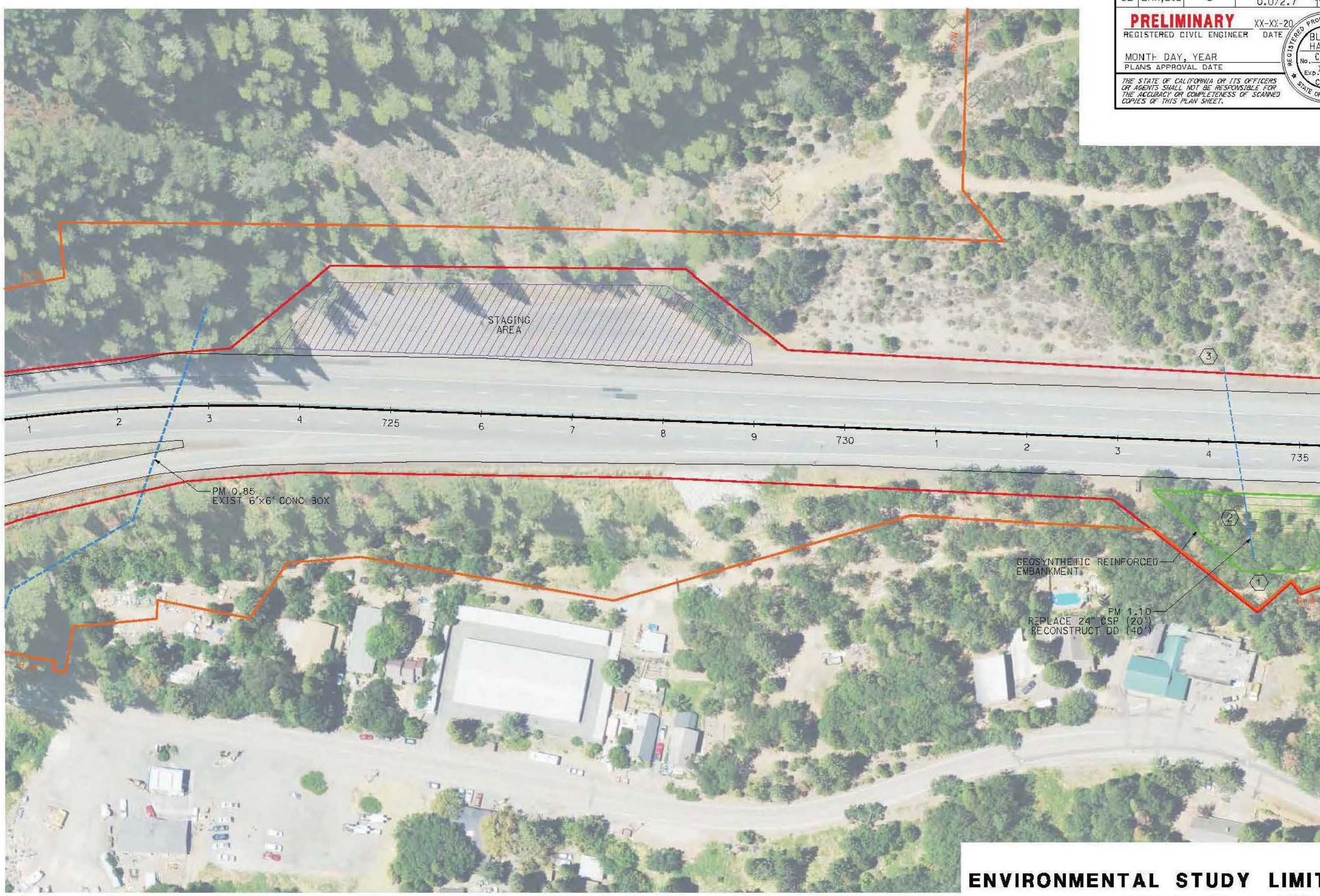

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-38

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY
TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED

P:\proj\3\02\0j810\design\Mapping\ESL\0219000164er038.dgn

DATE PLOTTED => 10/31/2024
TIME PLOTTED => 9:35:00 AM
LAST REVISION

BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE => ...\ESL\0219000164er038.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE
0219000164

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	$PGNUM	TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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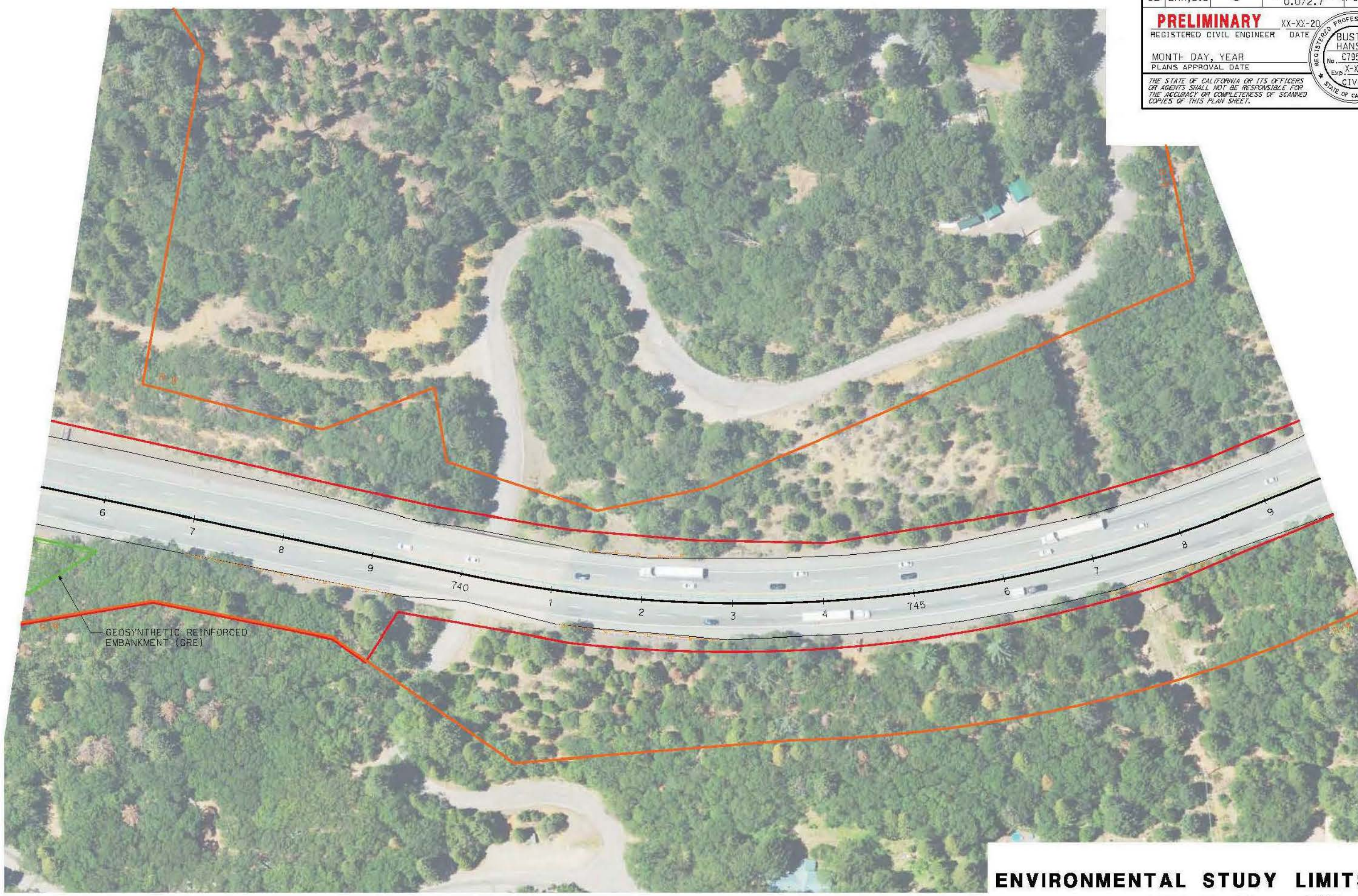
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-39

P:\proj3\02\0J810\design\Mapping\ESL\0219000164er039.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans®

DESIGN

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY
TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

MONTH DAY, YEAR
PLANS APPROVAL DATE

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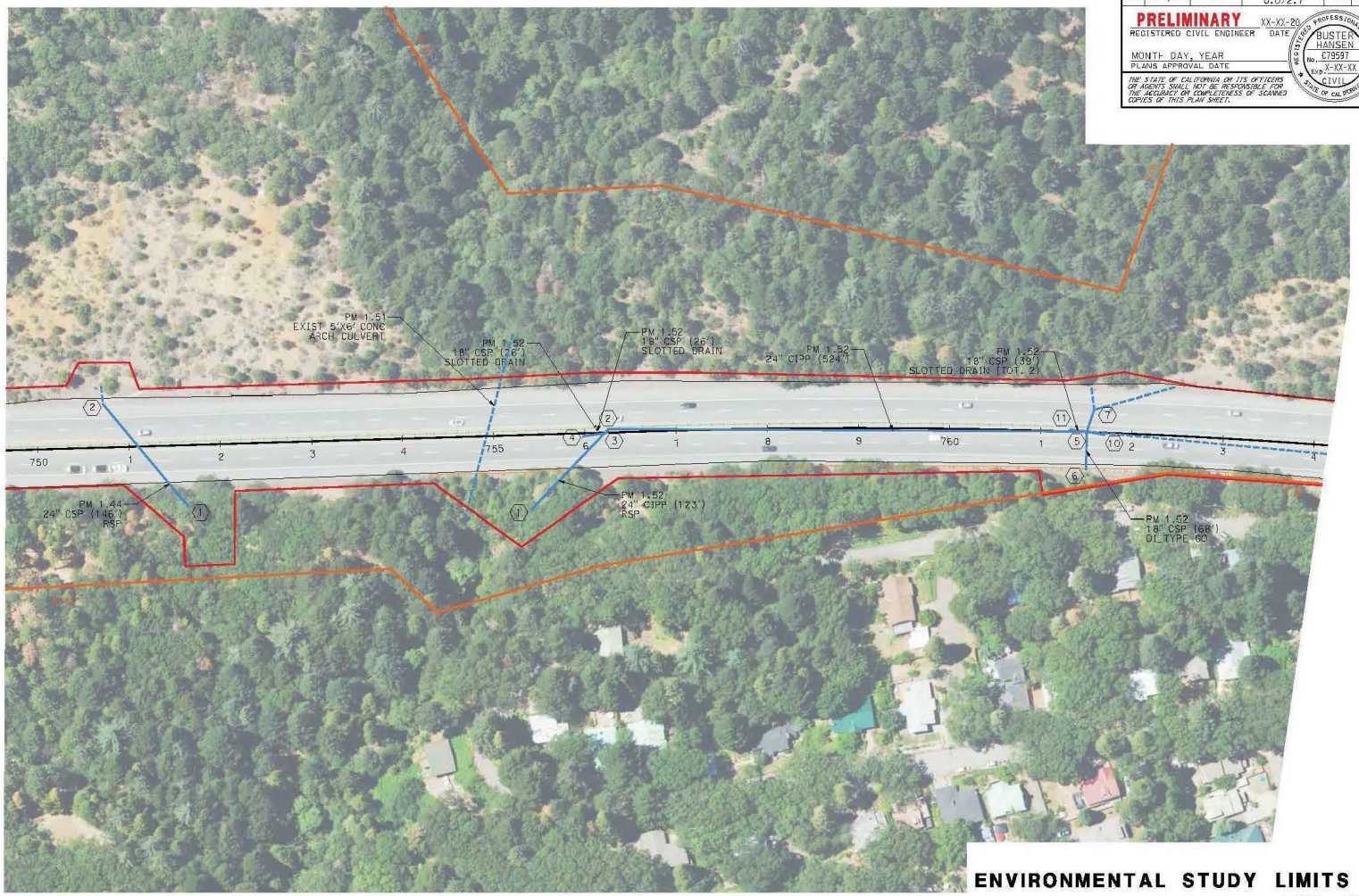

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-40**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
DESIGN	TRAVIS A GURNEY	CHECKED BY	DATE REVISED
		FABIO ROMERO	
		BUSTER HANSEN	

P:\proj*\02\dja10\design\Mapping\ESL\0219000164er040.dgn

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TIME PLOTTED => 8:01:56 AM

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DGN FILE => ...\ESL\0219000164er040.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE | 0219000164 |
|---|---|---|---|---|---|

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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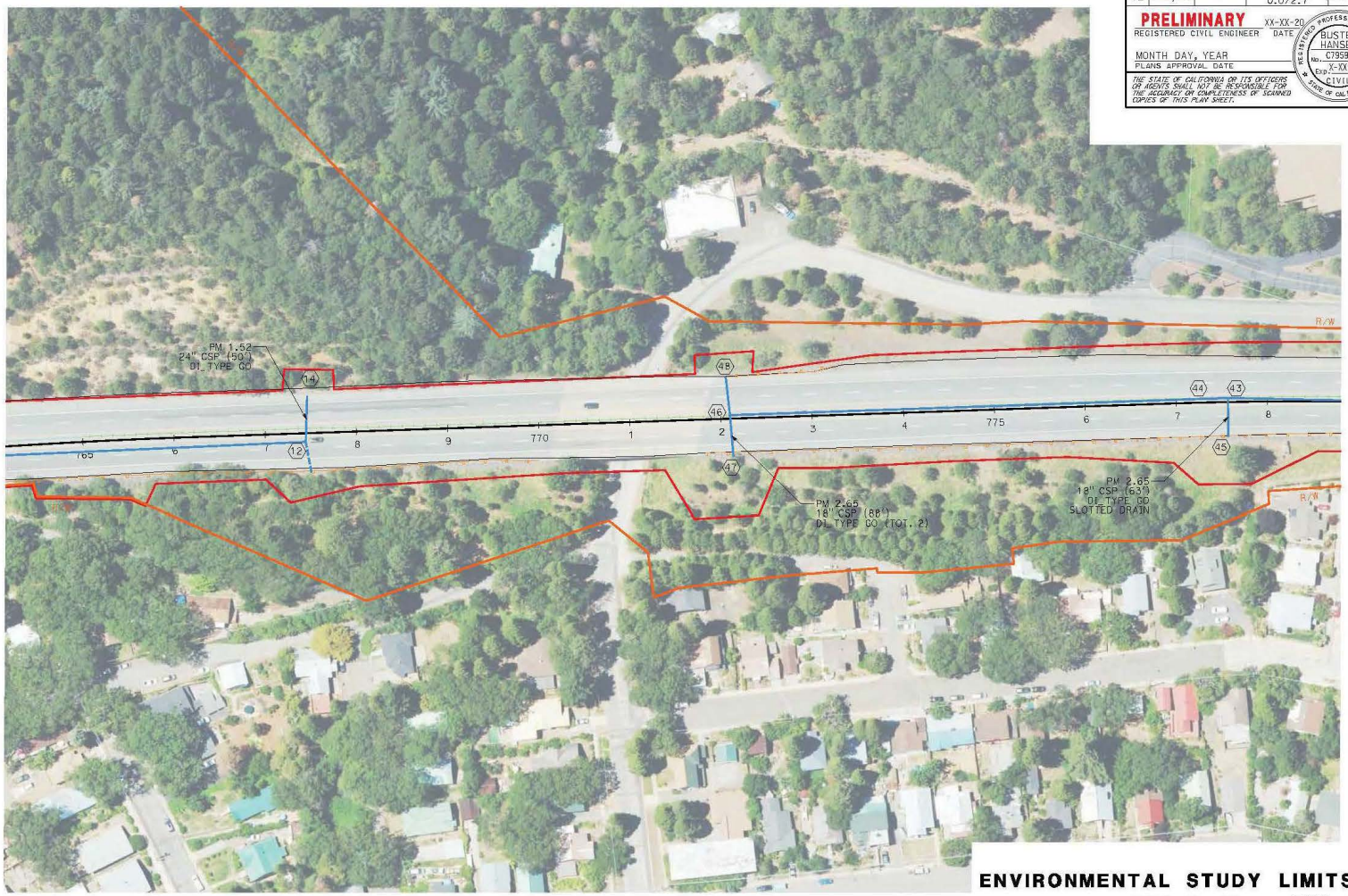
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-41**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	FABIO ROMERO	REVISED BY	
DESIGN	TRAVIS A GURNEY	CHECKED BY	BUSTER HANSEN	DATE REVISED	

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DATE PLOTTED => 10/31/2024
TIME PLOTTED => 8:05:20 AM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20

REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR

PLANS APPROVAL DATE

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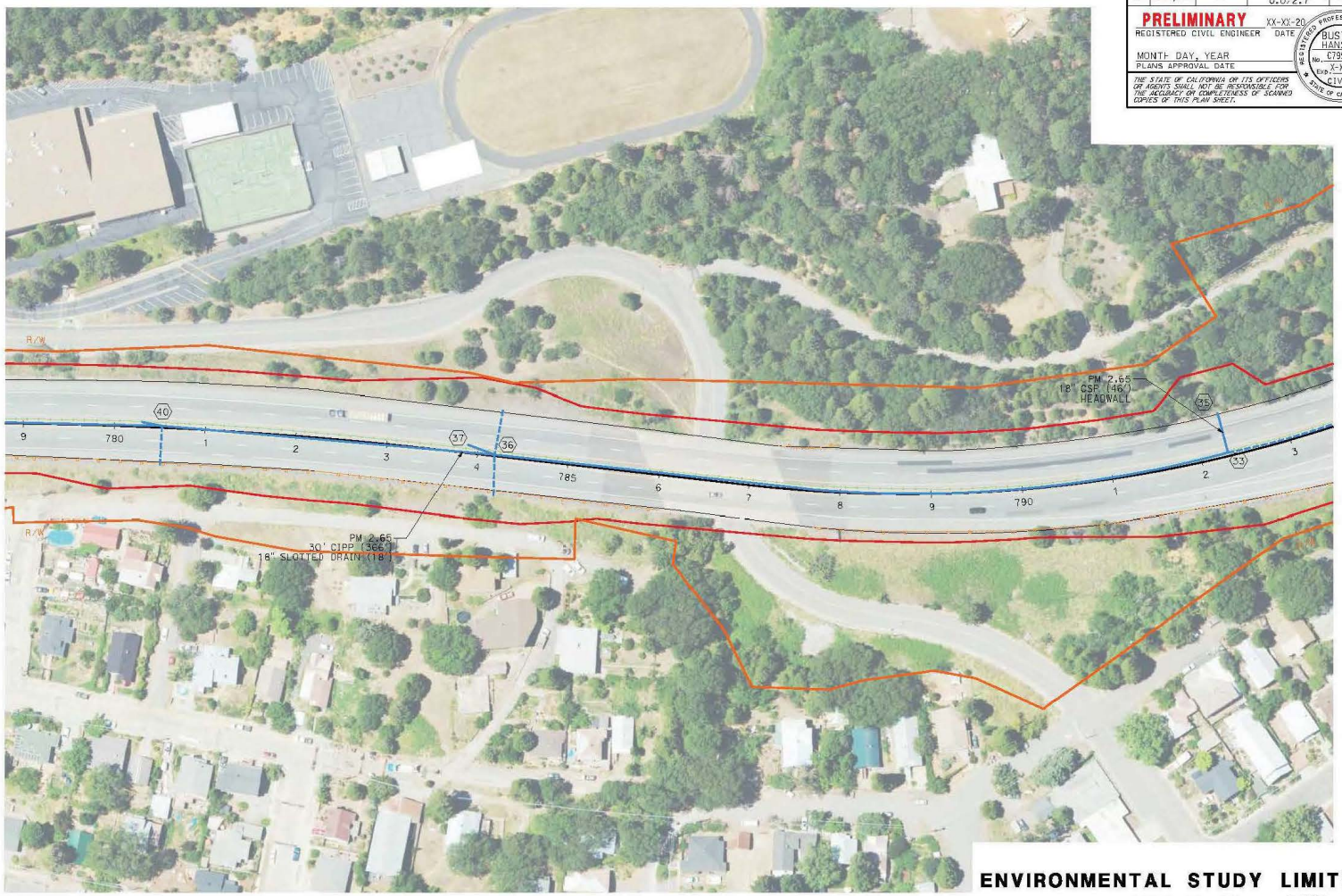
REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp. X-XX-XX
CIVIL
STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50'

ESL-42

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: FABIO ROMERO

CHECKED BY: BUSTER HANSEN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

P:\proj\02\dj810\design\Mapping\ESL\0219000164er042.dgn

LAST REVISED => 10/31/2024
DATE PLOTTED => 8:09:16 AM

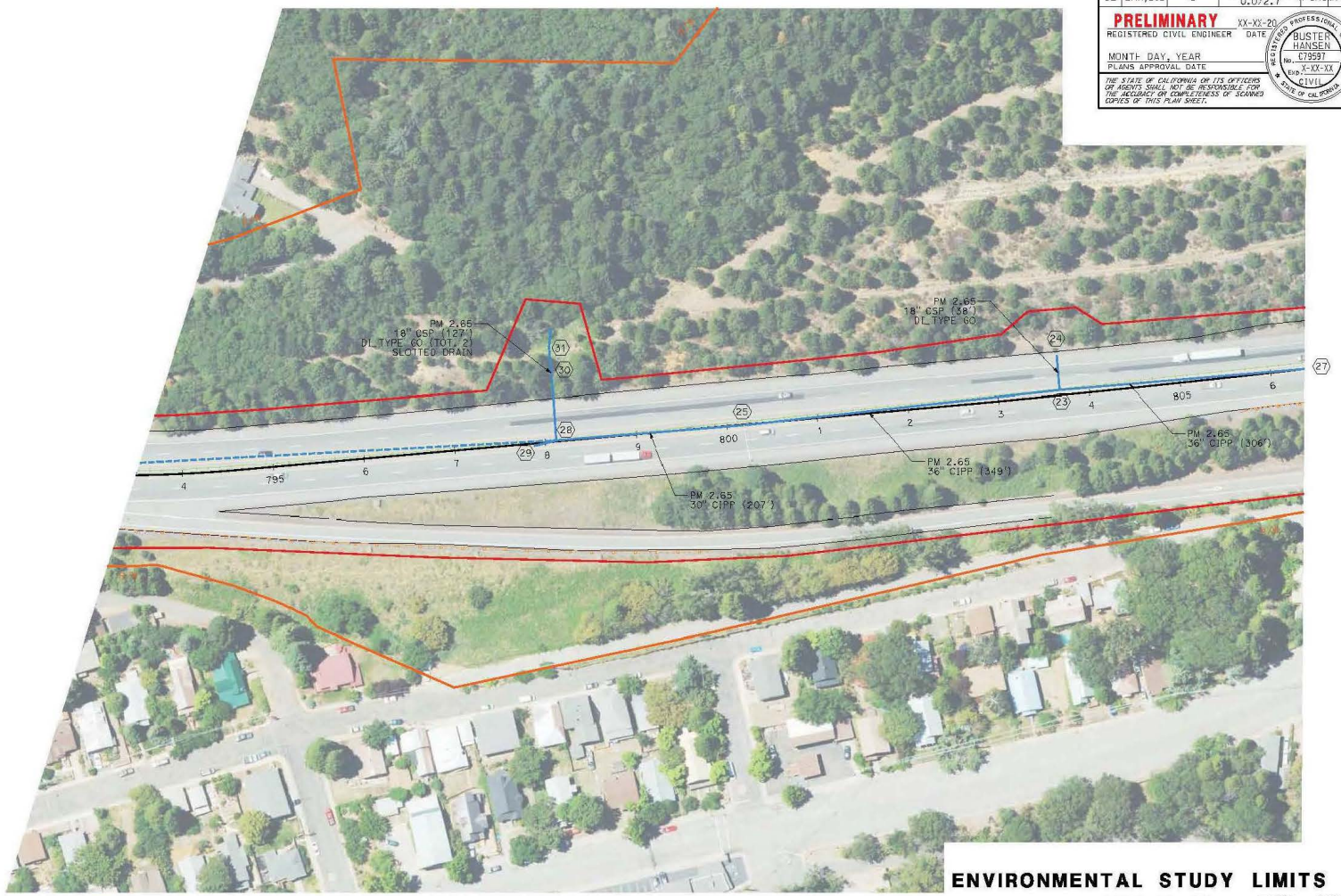
BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => ...\ESL\0219000164er042.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0315

PROJECT NUMBER & PHASE 0219000164



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	#PGNUM	#TOTPG

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
BUSTER HANSEN
No. C79597
Exp X-XX-XX
CIVIL
STATE OF CALIFORNIA

ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-43**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN
REVISED BY
DATE REVISED

P:\proj*\02\objs\design\Mapping\ESL\0219000164er043.dgn

BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE => ...\ESL\0219000164er043.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0315
PROJECT NUMBER & PHASE 0219000164

LAST REVISED
DATE PLOTTED => 11/6/2024
TIME PLOTTED => 1:20:26 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	SHA,SIS	5	58.0/67.02 0.0/2.7	1	1

PRELIMINARY XX-XX-20
REGISTERED CIVIL ENGINEER DATE

MONTH DAY, YEAR
PLANS APPROVAL DATE

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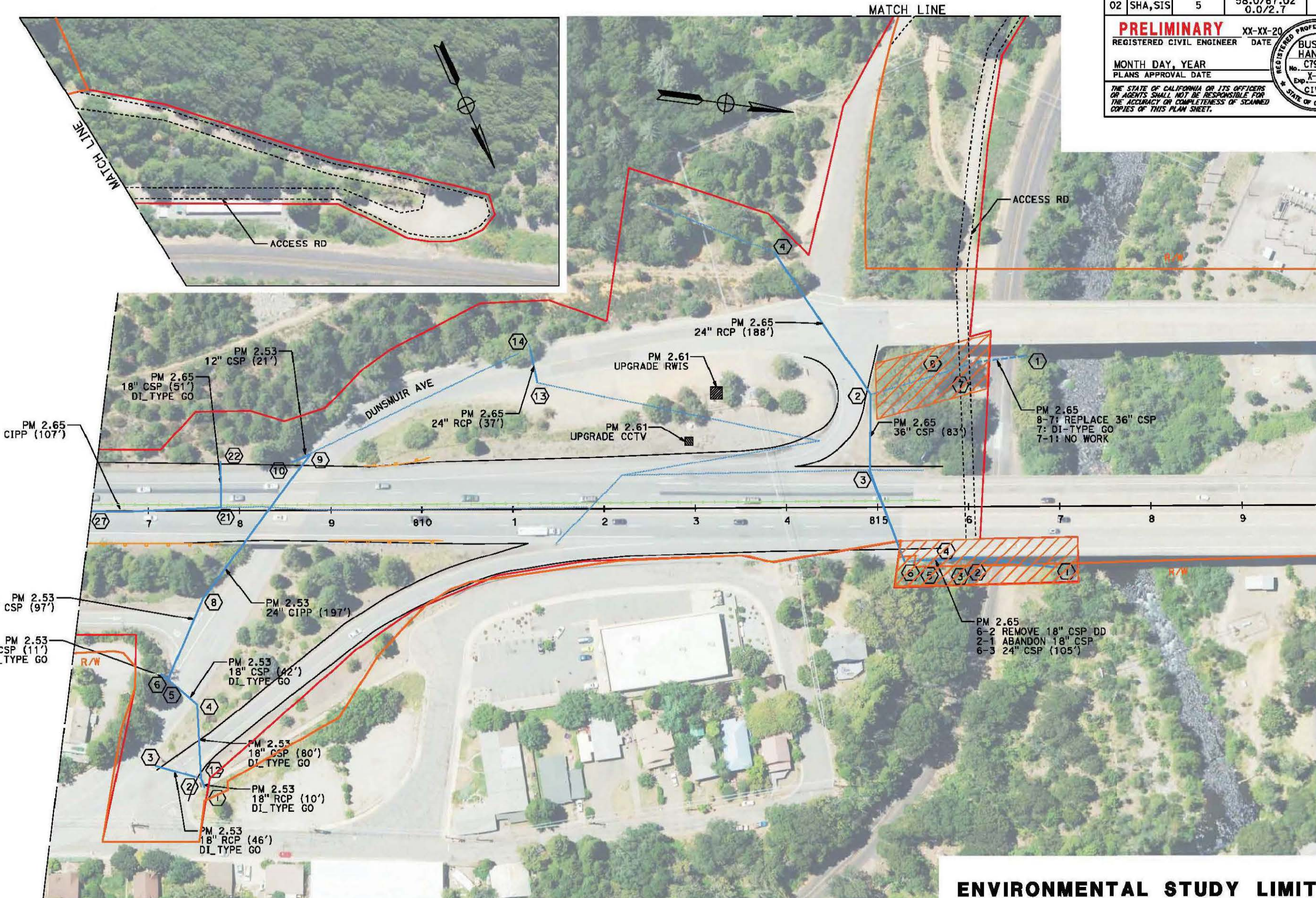
REGISTERED PROFESSIONAL ENGINEER — BUSTER HANSEN — No. C79597 — Exp. X-XX-XX — CIVIL — STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE: 1" = 50' **ESL-44**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DESIGN — Caltrans

FUNCTIONAL SUPERVISOR: TRAVIS A GURNEY
CALCULATED-DESIGNED BY: FABIO ROMERO
CHECKED BY: BUSTER HANSEN
REVISED BY / DATE REVISED

\\ct\cadd\District\d02\proj3\02\0[810\design\Mapping\ESL\0219000164er044.dgn

DATE PLOTTED => 5-NOV-2024
TIME PLOTTED => 14:57
LAST REVISION

BORDER LAST REVISED 7/2/2010 | USERNAME => s136456 DGN FILE => 0219000164er044.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0315 | PROJECT NUMBER & PHASE 0219000164

APPENDIX B. TITLE VI POLICY STATEMENT

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

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

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.

TONY TAVARES
Director

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

APPENDIX C. USFWS, NMFS, CDFW-CNDDB, AND CNPS SPECIES LISTS, WITH POTENTIAL TO OCCUR TABLE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Yreka Fish And Wildlife Office
1829 South Oregon Street
Yreka, CA 96097-3446
Phone: (530) 842-5763 Fax: (530) 842-4517

In Reply Refer To: 11/07/2024 22:49:55 UTC
Project Code: 2024-0016603
Project Name: Flume Creek CAPM (02-0J810)

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 the IPaC system 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 https://www.fws.gov/program/migratory-bird-permit/what-we-do.

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:

Yreka Fish And Wildlife Office
1829 South Oregon Street
Yreka, CA 96097-3446
(530) 842-5763

PROJECT SUMMARY

Project Code: 2024-0016603

Project Name: Flume Creek CAPM (02-0J810)

Project Type: Culvert Repair/Replacement/Maintenance

Project Description: The California Department of Transportation, using State and federal funding, proposes to rehabilitate Interstate 5 (I-5) through repaving activities, structural repairs, drainage improvements, and construction of appurtenant infrastructure. The limits of work occur between post mile (PM) 58.0 to 67.019 in Shasta County, and PM 0.0 to 2.7 in Siskiyou County.

The purpose of the project is to restore the facility to a state of good repair so that the roadway would be in a condition that requires minimal maintenance. The project is needed because the pavement within the project limits is in a fair state of repair, requiring ongoing maintenance efforts.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.15031505,-122.31224696565585,14z

Counties: Shasta and Siskiyou counties, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 10 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[1], 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.

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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
Gray Wolf *Canis lupus* Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is **final** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4488	Endangered
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Threatened

BIRDS

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

INSECTS

NAME	STATUS
Franklin's Bumble Bee *Bombus franklini* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7022	Endangered
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat.	Endangered

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/8246	
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 2
Name: Theresa Tillson
Address: 1031 Butte Steet
City: Redding
State: CA
Zip: 96001
Email theresa.tillson@dot.ca.gov
Phone: 5307593417

From: Tillson, Theresa@DOT
To: NMFS SpeciesList - NOAA Service Account
Subject: 02-0J810 Flume Creek CAPM
Date: Wednesday, September 11, 2024 9:16:00 AM

Project: 02-0J810 Flume Creek CAPM
California
Interstate 5
PM 58-67.0 Shasta County
PM 0-2.7 Siskiyou County

This project is outside of NMFS jurisdiction.

Theresa Tillson
Environmental Scientist
District 2 Fish Passage Coordinator
North Region Redding
530-759-3417

From: NMFS SpeciesList - NOAA Service Account
To: Tillson, Theresa@DOT
Subject: Federal ESA - - NOAA Fisheries Species List Re: 02-0J810 Flume Creek CAPM
Date: Wednesday, September 11, 2024 9:17:06 AM

Please retain a copy of each email request that you send to NOAA at nmfs.wcrca.specieslist@noaa.gov as proof of your official Endangered Species Act SPECIES LIST. The email you send to NOAA should include the following information: your first and last name; email address; phone number; federal agency name (or delegated state agency such as Caltrans); mailing address; project title; brief description of the project; and a copy of a list of threatened or endangered species identified within specified geographic areas derived from the NOAA Fisheries, West Coast Region, California Species List Tool. You may only receive this instruction once per week. If you have questions, contact your local NOAA Fisheries liaison.

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Tombstone Mtn. (4112213) OR Dunsmuir (4112223))

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter atricapillus	American goshawk	Birds	ABNKC12061	433	1	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Ageratina shastensis	Shasta ageratina	Dicots	PDASTBX0R0	27	1	None	None	G3	S3	1B.2	SB_UCSC-UC Santa Cruz	Chaparral, Limestone, Lower montane coniferous forest
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	4	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Aquatic, Klamath/North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian forest
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	1	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus occidentalis	western bumble bee	Insects	IIHYM24252	306	1	None	Candidate Endangered	G3	S1	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	null
Botrypus virginianus	rattlesnake fern	Ferns	PPOPH010H0	41	6	None	None	G5	S2	2B.2	null	Bog & fen, Lower montane coniferous forest, Meadow & seep, Riparian forest, Upper montane coniferous forest, Wetland
Campanula shetleri	Castle Crags harebell	Dicots	PDCAM020W0	6	5	None	None	G2	S2	1B.3	SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest
Chaenactis suffrutescens	Shasta chaenactis	Dicots	PDAST200H0	38	1	None	None	G2G3	S2S3	1B.3	BLM_S-Sensitive, SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Clarkia borealis ssp. borealis	northern clarkia	Dicots	PDONA05062	131	1	None	None	G3T4	S4	4.3	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Chaparral, Cismontane woodland, Lower montane coniferous forest
Cryptochia shasta	confusion caddisfly	Insects	IITRI11040	1	1	None	None	G1G2	S1	null	null	Aquatic
Cypseloides niger	black swift	Birds	ABNUA01010	46	1	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFWS_BCC-Birds of Conservation Concern	null
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1559	2	Proposed Threatened	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters,

											Vulnerable, USFS_S-Sensitive	Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Epilobium oreganum	Oregon fireweed	Dicots	PDONA060P0	61	1	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Bog & fen, Lower montane coniferous forest, Meadow & seep, Ultramafic, Upper montane coniferous forest, Wetland
Erigeron bloomeri var. nudatus	Waldo daisy	Dicots	PDAST3M0M2	17	1	None	None	G5T4	S3	2B.3	null	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Erythranthe taylorii	Shasta limestone monkeyflower	Dicots	PDPHR01080	31	2	None	None	G2	S2	1B.1	null	Cismontane woodland, Lower montane coniferous forest
Erythronium klamathense	Klamath fawn lily	Monocots	PMLIL0U090	14	2	None	None	G4	S2	2B.2	SB_UCSC-UC Santa Cruz	Meadow & seep, Upper montane coniferous forest
Euderma maculatum	spotted bat	Mammals	AMACC07010	68	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC- Least Concern	null
Eumops perotis californicus	western mastiff bat	Mammals	AMACD02011	296	1	None	None	G4G5T4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland
Falco peregrinus anatum	American peregrine falcon	Birds	ABNKD06071	75	1	Delisted	Delisted	G4T4	S3S4	null	CDF_S-Sensitive	null
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	158	1	None	None	G3	S2	null	IUCN_VU-Vulnerable	Aquatic
Gulo gulo	wolverine	Mammals	AMAJF03010	174	2	Threatened	Threatened	G4	S1	null	CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive	Alpine, Alpine dwarf scrub, Meadow & seep, Montane dwarf scrub, North coast coniferous forest, Riparian forest, Subalpine coniferous forest, Upper montane coniferous forest, Wetland
Hydromantes shastae	Shasta salamander	Amphibians	AAAAD09030	75	1	None	Threatened	G3	S3	null	BLM_S-Sensitive, IUCN_VU-Vulnerable, USFS_S-Sensitive	Cismontane woodland, Limestone
Iliamna bakeri	Baker's globe mallow	Dicots	PDMAL0K010	48	1	None	None	G4	S3	4.2	SB_UCSC-UC Santa Cruz	Chaparral, Pinon & juniper woodlands
Ivesia longibracteata	Castle Crags ivesia	Dicots	PDROS0X0U0	1	1	None	None	G1	S1	1B.3	SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest

Lewisia cantelovii	Cantelow's lewisia	Dicots	PDPOR04020	73	2	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic
Margaritifera falcata	western pearlshell	Mollusks	IMBIV27020	78	1	None	None	G5	S1S2	null	IUCN_NT-Near Threatened	Aquatic
Megomphix californicus	Natural Bridge megomphix	Mollusks	IMGASB2010	2	1	None	None	G3	S3	null	null	Oldgrowth, Riparian forest
Myotis evotis	long-eared myotis	Mammals	AMACC01070	139	2	None	None	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern	null
Pandion haliaetus	osprey	Birds	ABNKC01010	504	4	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Parnassia cirrata var. intermedia	Cascade grass-of-Parnassus	Dicots	PDSAX0P0E1	31	2	None	None	GNRTNR	S3	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Bog & fen, Meadow & seep, Wetland
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	6	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
Penstemon filiformis	thread-leaved beardtongue	Dicots	PDSCR1L2A0	95	4	None	None	G4	S4	4.2	SB_UCSC-UC Santa Cruz	Cismontane woodland, Lower montane coniferous forest, Ultramafic
Ptilidium californicum	Pacific fuzzwort	Bryophytes	NBHEP2U010	177	1	None	None	G4G5	S3S4	4.3	BLM_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	Amphibians	AAABH01051	1608	15	None	None	G3T4	S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Riparian forest, Riparian scrub, Riparian woodland
Rana cascadae	Cascades frog	Amphibians	AAABH01060	464	3	None	Candidate Endangered	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Lower montane coniferous forest
Rhyacophila lineata	Castle Crags rhyacophilan caddisfly	Insects	IITRI19060	1	1	None	None	G1	S1	null	null	Aquatic
Rhyacophila mosana	bilobed rhyacophilan caddisfly	Insects	IITRI19070	1	1	None	None	G1Q	S1	null	null	Aquatic, Sacramento/San Joaquin flowing waters
Vespericola shasta	Shasta hesperian	Mollusks	IMGASA4070	8	1	None	None	G3	S3	null	USFS_S-Sensitive	Riparian forest

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

23 matches found.

Search Criteria: Quad is one of [4112213:4112223], 1000 feet between Plant low elevation and high elevation, 3000 feet between Plant low elevation and high elevation.

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Fed List	State List	Global List	State Ranking	CA Rare Plant Rank	CA Endemic	Date Added
Adiantum shastense	Shasta maidenhair	Pteridaceae	Perennial herb	Apr-Aug	None	None	G3	S3	4.3	Yes	2016-11-18
Ageratina shastensis	Shasta ageratina	Asteraceae	perennial herb	Jun-Oct	None	None	G3	S3	1B.2	Yes	1974-01-01
Arnica venosa	Shasta County arnica	Asteraceae	Perennial rhizomatous herb	May-Jul (Sep)	None	None	G3	S3	4.2	Yes	1974-01-01
Botrypus virginianus	rattlesnake fern	Ophioglossaceae	Perennial herb	Jun-Sep	None	None	G5	S2	2B.2	—	2001-01-01
Chaenactis suffrutescens	Shasta chaenactis	Asteraceae	Perennial herb	May-Sep	None	None	G2G3	S2S3	1B.3	—	1974-01-01
Clarkia borealis ssp. *borealis*	northern clarkia	Onagraceae	Annual herb	Jun-Sep	None	None	G3T4	S4	4.3	Yes	1980-01-01
Cypripedium californicum	California lady's-slipper	Orchidaceae	Perennial rhizomatous herb	Apr-Aug (Sep)	None	None	G3	S4	4.2	—	1980-01-01
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	Perennial rhizomatous herb	Mar-Aug	None	None	G4	S4	4.2	—	1980-01-01
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	Perennial rhizomatous herb	Mar-Aug	None	None	G4G5	S4	4.2	—	1980-01-01
Darlingtonia californica	California pitcherplant	Sarraceniaceae	Perennial rhizomatous herb (carnivorous)	Apr-Aug	None	None	G4	S4	4.2	—	1980-01-01
Doellingeria glabrata	Siskiyou aster	Asteraceae	Perennial herb	Jun-Sep	None	None	G4	S3	4.3	—	2018-08-28
Epilobium oreganum	Oregon fireweed	Onagraceae	Perennial herb	Jun-Sep	None	None	G2	S2	1B.2	—	1980-01-01
Erigeron bloomeri var. *nudatus*	Waldo daisy	Asteraceae	Perennial herb	Jun-Jul	None	None	G5T4	S3	2B.3	—	1980-01-01
Eroiogonum congdonii	Congdon's buckwheat	Polygonaceae	Perennial deciduous shrub	(May) Jun-Aug (Sep)	None	None	G4	S4	4.3	—	1974-01-01
Eriogonum ursinum var. *erubescens*	blushing wild buckwheat	Polygonaceae	Perennial herb	Jun-Sep	None	None	G3G4T3	S3	1B.3	Yes	2006-10-24
Erythranthe taylorii	Shasta limestone monkeyflower	Phrymaceae	Annual herb	(Feb) Apr-May	None	None	G2	S2	1B.1	Yes	2013-10-16
Lewisia cantelovii	Cantelow's lewisia	Montiaceae	Perennial herb	May-Oct	None	None	G3	S3	1B.2	Yes	1974-01-01

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Fed List	State List	Global List	State Ranking	CA Rare Plant Rank	CA Endemic	Date Added
Lilium rubescens	redwood lily	Liliaceae	Perennial bulbiferous herb	(Mar) Apr-Aug (Sep)	None	None	G3	S3	4.2	Yes	1974-01-01
Parnassia cirrata var. *intermedia*	Cascade grass-of-Parnassus	Perennial herb	(Jul) Aug-Sep (Oct)	(Jul) Aug-Sep (Oct)	None	None	GNRTNR	S3	2B.2	—	2007-09-19
Penstemon filiformis	thread-leaved beardtongue	Plantaginaceae	Perennial herb	May-Aug (Sep)	None	None	G4	S4	4.2	Yes	1974-01-01
Sedum paradisum ssp. *paradisum*	Canyon Creek stonecrop	Crassulaceae	Perennial herb	May-Jun	None	None	G3G4T3	S3	1B.3	Yes	1980-01-01
Sidalcea celata	Redding checkerbloom	Malvaceae	Perennial herb	Apr-Aug	None	None	G2G3	S2S3	3	Yes	2012-07-11
Veratrum insolitum	Siskiyou false-hellebore	Melanthiaceae	Perennial herb	Jun-Aug	None	None	G3	S4	4.3	—	1974-01-01

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Plants, Mosses, and Lichen					
Baker's globe mallow	*Iliamna bakeri*	4.2	Chaparral, pinon & juniper woodlands, mountain slopes, juniper woodland, lava beds. Elevation range 3,280 to 8,200 feet. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, Baker's globe mallow would not be present.
Blushing wild buckwheat	*Eriogonum ursinum* var. *erubescens*	1B.3	Gravel between 5,240 to 6,230 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, blushing wild buckwheat would not be present.
Broad-nerve hump moss	*Meesia uliginosa*	2B.2	Bogs, fens, meadows, seeps, subalpine coniferous forest, upper montane coniferous forest, damp soil between 6,200 to 7,480 feet elevation range. Bloom period: October.	Absent	The project area is outside the known elevation range of the species; therefore, broad-nerve hump-moss would not be present.
Butte County fritillary	*Fritillaria eastwoodiae*	3.2	Yellow pine forest, foothill woodland, chaparral, lower montane coniferous forest (openings) between 1,245 to 4,005 feet elevation range. Bloom period: March – June.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Butte County fritillary are anticipated.
California globe mallow	*Iliamna latibracteata*	1B.2	Conifer forest, stream sides and recovering burned areas between 1,575 to 5,050 feet elevation range. Bloom period: June – August.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to California globe mallow are anticipated.
California lady's-slipper	*Cypripedium californicum*	4.2	Streambanks, moist slopes, fens, partial shade to full sun, mixed-evergreen, or conifer forest, between 160 to 7,220 elevation range. Bloom period: April – September.	Absent	No suitable habitat present within the project area. Thus, California lady's-slipper would not be impacted.
California pitcher plant	*Darlingtonia californica*	4.2	Seeps, boggy places with running water, generally serpentine, between 190 to 7,220 feet elevation range. Bloom period: April – August.	Absent	No suitable habitat present within the project area. Thus, California pitcher plant would not be impacted.
Cantelow's lewisia	*Lewisia cantelovii*	1B.2	Granite cliff faces, rocky outcrops, ravines, serpentine seeps, chaparral, woodland, conifer forest between 1,250 to 4,500 feet elevation range. Bloom period: May – October.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Cantelow's lewisia are anticipated.
Canyon Creek stonecrop	*Sedum paradisum ssp. paradisum*	1B.3	Dry to mesic outcrops, rocky slopes, lava flows, not on serpentine soils. Occurs between 650 and 6,880 feet in elevation. Bloom period: May – June.	Absent	No suitable habitat present in the project area. Thus, Canyon Creek stonecrop would not be impacted.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Cascade grass-of-Parnassus	*Parnassia cirrata var. intermedia*	2B.2	Bogs, fens, meadows, seeps, and wetlands between 2,290 to 9,520 feet elevation range. Bloom period: July – October.	Absent	No suitable habitat present in the project area. Thus, Cascade grass-of-Parnassus would not be impacted.
Castle Crags harebell	*Campanula shetleri*	1B.3	Lower montane coniferous forest, ultramafic upper montane coniferous forest, rock crevices, between 4,250 to 4,950 feet elevation range. Bloom period: June – September.	Absent	No suitable habitat present within the project area. Thus, Castle Crags harebell would not be impacted.
Castle Crags ivesia	*Ivesia longibracteata*	1B.3	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, ultramafic. Elevation range 3,930 to 4,600 feet. Bloom period: June.	Absent	The project area is outside the known elevation range of the species; therefore, Castle Crags ivesia would not be present.
Clustered lady's-slipper	*Cypripedium fasciculatum*	4.2	Mesic to moist, shady conifer forest, between 320 to 6,600 feet elevation range. Bloom period: March – August.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Clustered lady's-slipper are anticipated.
Columbia yellow cress	*Rorippa columbiae*	1B.2	Lower montane coniferous forest, meadows, seeps, playas, vernal pools. Elevation range 4,100 to 5,185 feet. Bloom period: May – September.	Absent	The project area is outside the known elevation range of the species; therefore, Columbia yellow cress would not be present.
Congdon's buckwheat	*Eriogonum congdonii*	4.3	Serpentine between 3,280 to 7,540 feet elevation range. Bloom period: May – September.	Absent	The project area is outside the known elevation range of the species; therefore, Congdon's buckwheat would not be present.
Cooke's phacelia	*Phacelia cookei*	1B.1	Great basin scrub, sagebrush scrub, yellow pine forest, lower montane coniferous forest, sandy, volcanic between 4,365 to 5,510 feet elevation range. Bloom period: June – July.	Absent	The project area is outside the known elevation range of the species; therefore, Cooke's phacelia would not be present.
Elongate copper moss	*Mielichhoferia elongata*	2B.2	Exposed soil or rock containing copper minerals, between 1,640 to 4,265 feet elevation range.	Absent	No suitable soils present within the project area. Thus, elongate copper moss would not be impacted.
Greene's mariposa-lily	*Calochortus greenei*	1B.2	Affinity to serpentine soil, volcanic, red fir forest, northern juniper woodland, cismontane woodland, meadows and seeps, pinyon and juniper woodland, upper montane coniferous forest between 2,360 to 3,675 feet elevation range. Bloom period: June – August.	Absent	No suitable habitat present within the project area. Thus, Greene's mariposa-lily would not be impacted.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Howell's draba	*Draba howellii*	4.3	Rocky crevices between 6,390 to 8,700 feet elevation. Bloom period: June – July.	Absent	The project area is outside the known elevation range of the species; therefore, Howell's draba would not be present.
Hutchison's lewisia	*Lewisia kelloggii ssp. hutchisonii*	3.2	Decomposed granite, slate, or volcanic rubble in conifer forests between 5,185 to 7,285 feet elevation range. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Hutchinson's lewisia would not be present.
Klamath fawn lily	*Erythronium klamathense*	2B.2	Meadows and seeps, upper montane coniferous forest, montane meadows, forest openings between 3,930 to 6,100 feet elevation range. Bloom period: April – July.	Absent	The project area is outside the known elevation range of the species; therefore, Klamath fawn lily would not be present.
Klamath mountain catchfly	*Silene salmonacea*	1B.2	Affinity to serpentine soil. Openings in lower montane coniferous forest, patchy shrub understory. Elevation range 2,500 to 3,800 feet. Bloom period: June – July.	Absent	No suitable soils present within the project area. Thus, Klamath mountain catchfly would not be impacted.
Klamath rock daisy	*Erigeron petrophilus* var. *viscidulus*	4.3	Rocky foothills to montane forest, sometimes on serpentine between 4,920 to 8,850 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, Klamath rock daisy would not be present.
Lassics lupine	*Lupinus constancei*	FE, SE, 1B.1	Serpentine barrens, openings in lower montane coniferous forest between 4,930 and 6,562 feet in elevation. Bloom period: July.	Absent	The project area is outside the known elevation range of the species; therefore, Lassics lupine would not be present.
Long-haired star-tulip	*Calochortus longebarbatus* var. *longebarbatus*	1B.2	Yellow pine forest, wetland-riparian, meadows and seeps, vernal pools, lower montane coniferous forest, Great Basin scrub, clay, mesic between 490 to 4,560 feet elevation range. Bloom period: June – August.	Absent	No suitable soils present within the project area. Thus, long-haired star-tulip would not be impacted.
Marsh claytonia	*Claytonia palustris*	4.3	Marshy meadows, springs, streambanks, between 3,280 to 8,200 feet elevation range. Bloom period: May – October.	Absent	The project area is outside the known elevation range of the species; therefore, marsh claytonia would not be present.
Mingan moonwort	*Botrychium minganense*	2B.2	Yellow pine forest/bogs, fens, upper and lower montane coniferous forest, meadows, and seeps, between 5,185 to 10,105 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, Mingan moonwort would not be present.
Mason's sky pilot	*Polemonium chartaceum*	1B.3	Subalpine coniferous forest, alpine fell-fields, alpine boulder, and rock fields/rocky, serpentine, granitic, volcanic rock. Elevation range 8,170 to 14,270 feet. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Mason's sky pilot would not be present.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Mountain lady's-slipper	*Cypripedium montanum*	4.2	Moist areas. Dry slopes, mixed-evergreen, or conifer forest, between 650 to 7,220 feet elevation range. Bloom period: March – August.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Mountain lady's-slipper are anticipated.
Mt. Eddy draba	*Draba carnosula*	1B.3	High elevation ridges and summits on rocky serpentine soils between 6,000 to 8,000 feet elevation range. Bloom period: July – August.	Absent	The project area is outside the known elevation range of the species; therefore, Mt. Eddy draba would not be present.
Mt. Tedoc leptosiphon	*Leptosiphon nuttallii* ssp. *howellii*	1B.3	Yellow pine forest, lower montane coniferous forest. Affinity to serpentine soil between 3,740 to 5,150 feet elevation range. Bloom period: May – August.	Absent	The project area is outside the known elevation range of the species; therefore, Mt. Tedoc leptosiphon would not be present.
Niles' harmonia	*Harmonia doris-nilesiae*	1B.1	Rock ultramafic ridgetops and slopes with Jefferey pine, gray pine, and shrubs between 2,100 to 5,500 feet elevation range. Bloom period: May – July.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Niles' harmonia are anticipated.
Northern adder's tongue	*Ophioglossum pusillum*	2B.2	Valley grassland, freshwater wetlands, wetland-riparian, freshwater marshes, swamps, meadows and seeps, edges. Elevation range 3,740 to 6,265 feet. Bloom period: July.	Absent	The project area is outside the known elevation range of the species; therefore, northern adder's tongue would not be present.
Northern clarkia	*Clarkia borealis ssp. borealis*	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, foothill woodland, forest margin, between 1,300 to 2,650 feet elevation range. Bloom period: June – September.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to northern clarkia are anticipated.
Northwestern moonwort	*Botrychium pinnatum*	2B.2	Lodgepole forest, red fir forest, yellow pine forest/ meadows, seeps, lower and upper montane coniferous forest between 6,233 to 9,186 feet elevation range. Bloom period: July – October.	Absent	The project area is outside the known elevation range of the species; therefore, northwestern moonwort would not be present..
Oregon fireweed	*Epilobium oreganum*	1B.2	Bogs, small streams between 1,800 to 5,900 feet elevation. Bloom period: June – September.	Present	Suitable habitat present within the project area. However, the species was not observed during surveys. Thus, no impacts to Oregon fireweed are anticipated.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Pacific fuzzwort	*Ptilidium californicum*	4.3	Lower montane coniferous forest, Upper montane coniferous forest. Found on small conifers in old growth forests. Bloom period: May – August.	Absent	No old growth forests present within the project area. Thus, Pacific fuzzwort would not be impacted.
Pallid bird's-beak	*Cordylanthus tenuis* ssp. *pallescens*	1B.2	Yellow pine forest, lower montane coniferous forest between 3,180 to 4,460 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, pallid bird's beak would not be present.
Peanut sandwort	*Minuartia rosei*	4.2	Gravelly, serpentine barrens and openings in Jeffery pine/mixed conifer forest between 2,495 to 5,350 feet elevation range. Bloom period: May – July.	Absent	No serpentine barrens or openings are present within the project area. Thus, peanut sandwort would not be present.
Pickering's ivesia	*Ivesia pickeringii*	1B.2	Yellow pine forest, wetland-riparian, seeps, meadows. Affinity to serpentine soil between 2,820 to 4,725 feet elevation range. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Pickering's ivesia would not be present.
Pumice moonwort	*Botrychium pumicola*	2B.2	Volcanic/ alpine boulder and rock field, subalpine coniferous forest between 8,858 to 9,186 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, pumice moonwort would not be present.
Rattlesnake fern	*Botrypus virginianus*	2B.2	Bog & fen, lower montane coniferous forest, meadow & seep, Riparian Forest, Upper montane coniferous forest, Wetland, moist shaded valleys along small streams between elevation range 2,300 to 3940 feet. Bloom period: June – September	Absent	The project area is outside the known elevation range of the species; therefore, rattlesnake fern would not be present.
Redding checkerbloom	*Sidalcea celata*	3	Open oak woodland, serpentine or not between 490 to 1,220 feet elevation range. Bloom period: April – August.	Absent	The project area is outside the known elevation range of the species; therefore, Redding checkerbloom would not be present.
Redwood lily	*Lilium rubescens*	4.2	Dry soils in chaparral, gaps in conifer forest between 90 to 5,900 feet elevation range. Bloom period: March – September.	Present	Suitable habitat is present within the project area. However, the species was not observed during surveys. Thus, no impacts to redwood lily are anticipated.
Scabrid alpine tarplant	*Anisocarpus scabridus*	1B.3	Red fir forest, upper montane coniferous forest. Rocky, open subalpine slopes. Elevation range 4,825 to 7,775 feet. Bloom period: July - August.	Absent	The project area is outside the known elevation range of the species; therefore, scabrid alpine tarplant would not be present.
Scalloped moonwort	*Botrychium crenulatum*	2B.2	Yellow pine forest, freshwater wetlands, wetland-riparian/meadows, freshwater-marsh, bogs, and fens between 6,005 to 10,140 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, scalloped moonwort would not be present.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Scott Mountain sandwort	*Minuartia stolonifera*	1B.3	Rocky slopes with serpentine soils, montane mixed conifer forest between 4,200 to 5,120 feet elevation range. Bloom period: May – August.	Absent	The project area is outside the known elevation range of the species; therefore, Scott Mountain sandwort would not be present.
Scott Valley phacelia	*Phacelia greenei*	1B.2	Gravelly serpentine slopes and forest openings. Elevation range 3,020 to 12,715 feet. Bloom period: April – June.	Absent	The project area is outside the known elevation range of the species; therefore, Scott Valley phacelia would not be present.
Shasta ageratina	*Ageratina shastensis*	1B.2	Chaparral, limestone, metavolcanic, lower montane coniferous forest, between 1,300 to 5,900 feet elevation range. Carbonate and rocky microhabitats. Bloom period: June – October.	Absent	No rocky or carbonate microhabitats present in the project area. Thus, Shasta ageratina would not be impacted.
Shasta chaenactis	*Chaenactis suffrutescens*	1B.3	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest, unstable sandy to rocky, generally serpentine soils, scree, and drainages, between 2,290 to 7,550 feet elevation range. Bloom period: May – September.	Absent	The project area is outside the known elevation range of the species; therefore, Shasta chaenactis would not be present.
Shasta County arnica	*Arnica venosa*	4.2	Open, often disturbed oak/ pine woodland, between 1,300 to 4,600 feet elevation range. Bloom period: May – September.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Shasta County arnica are anticipated.
Shasta limestone monkeyflower	*Erythranthe taylorii*	1B.1	Meadow & seep, Upper montane coniferous forest, crevices in limestone cliffs and outcrops between 2,950 to 3,600 feet elevation range. Bloom period: February – May.	Absent	The project area is outside the known elevation range of the species; therefore, Shasta limestone monkeyflower would not be present.
Shasta maidenhair fern	*Adiantum shastense*	4.3	Shaded forest, rocky or moist banks, northern or eastern exposures, <5,250 ft elevation. Bloom period: April – August.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Shasta maidenhair fern are anticipated.
Shasta snow-wreath	*Neviusia cliftonii*	1B.2	Yellow pine forest, riparian between 1,085 to 1,805 feet elevation range. Bloom period: April – June.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Shasta snow-wreath are anticipated.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Showy raillardella	*Raillardella pringlei*	1B.2	Wet serpentine meadows, seeps, and stream banks. Elevation range 4,920 to 6,695 feet. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, showy raillardella would not be present.
Siskiyou aster	*Doellingeria glabrata*	4.2	Dry oak or conifer forest, rocky places between 2,290 to 7,900 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, Siskiyou aster would not be present.
Siskiyou false-hellebore	*Veratrum insolitum*	4.3	Openings in thickets, mixed-evergreen forest on red clay, > 3,000 feet in elevation. Bloom period: June – August.	Absent	No red clay soils present within the project area. Thus, Siskiyou false-hellebore would not be impacted.
Siskiyou fritillaria	*Fritillaria glauca*	4.2	Talus slopes, serpentine between 1,960 to 6,880 feet elevation range. Bloom period: April – July.	Absent	No talus slopes present within the project area. Thus, Siskiyou fritillaria would not be impacted.
Stebbins' harmonia	*Harmonia stebbinsii*	1B.2	Yellow pine forest, chaparral, lower montane coniferous forest, affinity to serpentine soil between 2,000 to 6,000 feet elevation range. Bloom period: May – June.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Stebbins' harmonia are anticipated.
Talus collomia	*Collomia larsenii*	2B.2	Closed-cone pine forest, red fir forest, lodgepole forest, alpine fell-fields between 5,085 to 10,400 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, talus collomia would not be present.
Thread-leaved beardtongue	*Penstemon filiformis*	4.2	Cismontane woodland, Lower montane coniferous forest, Ultramafic, open rocky places among shrubs, yellow-pine forest between 1,300 to 5,600 feet elevation range. Bloom period: May – September.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to thread-leaved beardtongue are anticipated.
Tracy's beardtongue	*Penstemon tracyi*	1B.3	Red fir forest, upper montane coniferous forest, rocky outcrops between 6,495 to 7,250 feet elevation range. Bloom period: June – August.	Absent	The project area is outside the known elevation range of the species; therefore, Tracy's beardtongue would not be present.
Tracy's eriastrum	*Eriastrum tracyi*	3.2	Chaparral, cismontane woodland, valley and foothill grassland between 2,495 to 6,560 feet elevation range. Bloom period: June – July.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Tracy's eriastrum are anticipated.
Trinity buckwheat	*Eriogonum alpinum*	1B.2	Subalpine forest, alpine fell-fields, red fir forest, affinity to serpentine soil between 6,070 to 8,660 feet elevation range. Bloom period: June – September.	Absent	The project area is outside the known elevation range of the species; therefore, Trinity buckwheat would not be present.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Trinity River jewel-flower	*Streptanthus oblanceolatus*	1B.2	Cismontane woodland, steep meta-volcanic bluffs. Elevation range 70 to 1,600 feet. Bloom period: April – June.	Absent	The project area is outside the known elevation range of the species; therefore, Trinity River jewel-flower would not be present.
Umpqua green-gentian	*Frasera umpquaensis*	2B.2	Cool, moist Douglas-fir/ white fir forest margins or openings between 5,250 to 6,070 feet elevation range. Bloom period: June – July.	Absent	The project area is outside the known elevation range of the species; therefore, Umpqua green-gentian would not be present.
Veined water lichen	*Peltigera gowardii*	4.2	Rocks in cool water, perennial mountain streams, riparian forest between 2,750 to 8,100 feet elevation range.	Absent	The project area is outside the known elevation range of the species; therefore, Veined water lichen -gentian would not be present.
Wayside aster	*Euchephalis vialis*	1B.2	Lower and upper montane coniferous forest. Gravelly/ grassy areas between 2,990 to 5,070 feet elevation range. Bloom period: June to September.	Absent	The project area is outside the known elevation range of the species; therefore, wayside aster would not be present.
Waldo daisy	*Erigeron bloomer* var. *nudatus*	2B.3	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest, serpentine slopes, rocky ridges between 1,960 to 7,540 feet elevation range. Bloom period: June – July.	Present	Suitable habitat occurs within the project area. However, the species was not observed during surveys. Thus, no impacts to Waldo daisy are anticipated.
Whitebark pine	*Pinus albicaulis*	FT	Dry, rocky mountainsides, subalpine and alpine forest. Elevation range 6,005 to 13,715 feet. Bloom period: July - August.	Absent	The project area is outside the known elevation range of the species; therefore, whitebark pine would not be present.
Wilkin's harebell	*Campanula wilkinsiana*	1B.2	Streambanks and springs in red fir and subalpine forests. Affinity to serpentine soil between 5,500 to 8,600 feet elevation range. Bloom period: July – September.	Absent	The project area is outside the known elevation range of the species; therefore, Wilkin's harebell would not be present.
Amphibians					
Cascades frog	*Rana cascadae*	SCE	Clean aquatic resources: lower montane coniferous forest, wet meadows, damp forest bogs, lakes, ponds, and small streams above 2,400 feet in elevation.	Absent	The site does not support clean aquatic resources; therefore, Cascades frog would not be present.
Foothill yellow-legged frog- north coast DPS	*Rana boylii pop. 1*	SSC	Aquatic, Klamath/ North coast flowing waters, Riparian Forest, riparian scrub, riparian woodland.	Present	Some small streams are present within the project area. No impacts are anticipated.
Northern red-legged frog	*Rana aurora*	FT, SSC	Breeding habitat is in permanent water sources, lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Found in forests, woodlands, grasslands, and stream sides with plant cover.	Absent	The project area is outside the known elevation range of the species; therefore, northern red-legged frog would not be present.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Pacific tailed frog	*Ascaphus truei*	SSC	Aquatic, Klamath/ North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian Forest. Occupies cool, clear, fast-flowing mountain streams and adjacent older forest.	Absent	No fast-flowing waters or older forests are present within the project area. Thus, Pacific tailed frog would not be present.
Shasta salamander	*Hydromantes shastae*	ST	Cismontane woodland, limestone, vertical cavern walls, level ground in mixed forests of Douglas fir, pines, and oaks. Elevation range 800-2000 feet. Found in Kennett Formation, McCloud Limestone, and Hosselkus Limestone.	Absent	No limestone formations occur the project area. Thus, Shasta salamander would not be present.
Birds					
American peregrine falcon	*Falco peregrinus anatum*	FD	Nests typically on ledges of large cliff faces, bridges, and city bridges.	Absent	No nesting habitat present within project area. Thus, American peregrine falcon would not be impacted.
Bald eagle	*Haliaeetus leucocephalus*	FD, SE, SFP	Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Adults tend to use the same breeding areas year after year and often use the same nest, though a breeding area may include one or more alternate nests. Bald eagles usually do not begin nesting if human disturbance is evident. In California, the bald eagle nesting season is from February through July.	Present	The Sacramento River, which flows along the eastern portion of the project site, provides foraging habitat for bald eagle, while the site provides suitable nesting habitat. However, no stick nests were observed during the survey. Impacts to bald eagle are not anticipated.
Black swift	*Cypseloides niger*	SSC	Aquatic, artificial flowing waters, Klamath/ North coast flowing and standing waters, marsh & swamp, Sacramento/ San Joaquin flowing and standing waters, South coast flowing and standing waters, wetlands. Nesting habitat on cliffs near waterfalls.	Absent	No nesting habitat present within project area. Thus, black swift would not be impacted.
Marbled murrelet	*Brachyramphus marmoratus*	FT	Nest in old growth trees within in 37 miles inland from ocean.	Absent	The project area is outside the known elevation range of the species; therefore, marbled murrelet would not be present.
Northern goshawk	*Accipiter gentilis*	SSC	North coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Prefer mature or old growth conifer, mixed hardwood forest for nesting.	Absent	No nesting habitat occurs within project area. Thus, northern goshawk would not be present.
Northern spotted owl	*Strix occidentalis caurina*	FT	Coniferous and coniferous hardwood forests. Closed-canopy, uneven-aged, late-successional, and old growth forests.	Absent	No suitable habitat within the project area. Thus, northern spotted owl would not be present.
Yellow-billed cuckoo	*Coccyzus americanus*	FT, SE	Riparian habitat with dense cover, woodlands with low, scrubby vegetation.	Absent	No dense cover riparian habitat within the project area. Thus, yellow-billed cuckoo would not be present.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Invertebrates					
Conservancy fairy shrimp	*Branchinecta conservatio*	FE	Turbid, slightly alkaline vernal pools	Absent	No vernal pools present within action area. Thus, Conservancy fairy shrimp would not be present.
Franklin's bumble bee	*Bombus franklini*	FE	Grassy coastal prairies and coast range mountain meadows, near seeps and other wet meadow environments. Select food plant genera: *Ceanothus, Centaurea, Eriogonum, Lupinus, Trifolium,* and *Veratrum*. Only found in Siskiyou and Trinity counties in California.	Absent	No suitable habitat present within the project area. Thus, Franklin's bumble bee would not be present.
Monarch butterfly	*Danaus plexippus*	FC	Monarchs leave overwintering sites in February and March and typically reach the northern limit of their North American range in early to mid-June. Adult females lay eggs singly on milkweed species which the caterpillars rely upon for energy and protective toxins. Milkweeds are critical for successful development of the caterpillar into an adult butterfly. Once an egg is laid, the full cycle to adulthood may last 20 to 35 days (sometimes longer) depending on temperature. The caterpillars develop and eventually form a chrysalis and pupating into an adult butterfly. During the spring and summer, an adult monarch spends its 2–5-week lifespan mating and nectaring on flowers, with females searching for milkweed upon which to lay their eggs. Multiple generations are produced during this time, with the final fall generation migrating to overwintering sites and living for 6–9 months. In September and early October monarchs migrate to wintering areas. During the winter, western monarchs aggregate in clusters at forested groves scattered along 620 miles of the Pacific coast from California's Mendocino County to Baja California, Mexico. Small aggregations inland from the coast have also been reported in Inyo and Kern Counties in California. Monarchs seek out very specific microclimate conditions, including dappled sunlight, high humidity, access to fresh water, and an absence of freezing temperatures or high winds.	Present	The project site contains suitable foraging habitat for Monarch because there are nectar producing plants. However, the quantity is low, and most bloom in the spring and early summer. Moreover, removal of flowering plants that provide food would be limited, as most work would occur on the pavement or roadway prism. There were no observed milkweed plants. Thus, no impacts to Monarch butterfly are anticipated.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Vernal pool fairy shrimp are endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains. They inhabit astatic rain-filled pools; small, clear-water sandstone-depression pools; or grassed swale, earth slump, or basalt flow depression pools.	Absent	No vernal pools occur within the project area. Thus, vernal pool fairy shrimp would not be present.
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	Ephemeral freshwater habitats including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands.	Absent	No vernal pools occur within project area. Thus, vernal pool tadpole shrimp would not be present.
Western bumble bee	*Bombus occidentalis*	SCE	Assorted abundant floral resources. Largely confined to high-elevation sites. Select food plant genera: *Melilotus, Cirsium, Centaurea, Eriogonum, Trifolium,* and *Chrysothamnus*.	Absent	No suitable habitat occurs within the project area. Thus, western bumble bee would not be present.
Mammals					
Fisher	*Pekania pennanti*	SSC	Fishers inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy cover. Fishers den in cavities in large trees, snags, logs, rocky areas, or shelters provided by slash or brush piles. Fishers are very sensitive to human activities. Den sites are most often found in areas with no human disturbance.	Present	Suitable habitat occurs within the project area. Fisher could traverse the project area; however, based on their sensitivity to human disturbance, fisher is not expected to den within the project area.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Gray wolf	*Canis lupus*	FE	Gray wolves are habitat generalists and populations can be found in any type of habitat in the Northern Hemisphere from about 20° latitude to the polar ice pack. Key components of preferred wolf habitat include a year-round abundance of natural prey, secluded denning and rendezvous sites, and sufficient space with minimal human disturbance. Dens may be a hollow log or a tunnel excavated in loose soil. A den may have two or more entrances, which are usually indicated by a large pile of dirt. Den sites are often near water, and are usually elevated to detect approaching enemies. Wolf packs establish and defend territories that may range from 20 to 400 square miles. Wolves travel over large areas to hunt, and may cover as much as 30 miles in a day. Young wolves may disperse several hundred miles to seek out a mate or to establish their own pack.	Absent	A gray wolf pack, known as the "Shasta Pack" became established in southeastern Siskiyou County in the spring of 2015. Continued dispersal of wolves into California is expected. Although gray wolves can travel approximately 30 miles each day, and could potentially stray near the project site, gray wolves would not be expected to den on the project site given the extent of human activity.
Pallid bat	*Antrozous pallidus*	SSC	Forages in oak woodlands and roosts in caves and within rock crevices in cliffs. This species is also associated with riparian habitat.	Absent	No oak woodlands or suitable roosting habitat occur within the project area. Thus, pallid bat would not be present.
Spotted bat	*Euderma maculatum*	SSC	Chaparral, Cismontane woodland, coastal scrub, valley and foothill grassland. Roost on cliffs, in caves, and trees.	Present	No roosting habitat is present within the project area. Foraging habitat is present adjacent to the project area. Given the lack of roosting habitat, no impacts to spotted bat are anticipated.
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC	Roosts in caves, bridges, and old buildings in a variety of habitats that include deserts, grasslands, scrubland, conifer forest and oak woodlands.	Present	Suitable habitat occurs within the project area. Bats are present at Castella and Castle Creek bridges. With bridge work limited to the top of the bridge deck (i.e., no work under the bridge), no impacts are anticipated.
Western mastiff bat	*Eumops perotis californicus*	SSC	Chaparral, cismontane woodland, Coastal scrub, valley and foothill grassland. Prefers more open habitats for foraging. Roosts in cliff faces, high buildings, trees, and tunnels.	Present	No roosting habitat occurs within the project area. Foraging habitat is present adjacent to the project area. Given the lack of roosting habitat, no impacts to western mastiff bat are anticipated.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent	Rationale
Wolverine	*Gulo gulo luscus*	FPT, ST, SFP	Wolverines are dependent on areas in high mountains, near the treeline, where conditions are cold year-round and snow cover persists well into the month of May. Female wolverines use birthing dens that are excavated in snow. Persistent, stable snow greater than 1.5 meters deep appears to be a requirement for birthing dens. Birthing dens consist of tunnels that contain well-used runways and bed sites and may naturally incorporate shrubs, rocks, and downed logs as part of their structure. Birthing dens may occur on rocky sites, such as north-facing boulder talus or subalpine cirques. Wolverines are very sensitive to human activities and often abandon den sites in response to human disturbance.	Absent	No suitable habitat occurs in the project site for the wolverine. The wolverine would thus not be present.
Reptiles					
Western pond turtle	*Actinemys marmorata*	FPT, SSC	Aquatic, artificial flowing waters, Klamath/ North coast flowing and standing waters, marsh and swamp, Sacramento/San Joaquin flowing and standing waters, south coast flowing and standing waters, and wetland.	Absent	No suitable habitat occurs within the project area. Thus, western pond turtle would not be present.

[1] **Status Codes**

Federal:

FE	Federally Listed – Endangered
FT	Federally Listed – Threatened
FC	Federal Candidate Species
FP	Federal Proposed Species
FPT	Federal Proposed – Threatened
FD	Federal Delisted
USFS-S	U.S. Forest Service-Sensitive

State:

SFP	State Fully Protected
SR	State Rare
SE	State Listed - Endangered
ST	State Listed - Threatened
SC	State Candidate Species
SCE	State Candidate Endangered
SSSC	State Species of Special Concern
SD	State Delisted
WL	CDFW Watchlist

Rare Plant Rank

1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened or Endangered in California and Elsewhere

Rare Plant Threat Rank

0.1	Seriously Threatened in California
0.2	Fairly Threatened in California

2A	Presumed Extirpated in California, but More Common Elsewhere
2B	Rare or Endangered in California, but More Common Elsewhere
3	Plants about which More Information is Needed
4	Plants of Limited Distribution

0.3	Not Very Threatened in California

APPENDIX D. MITIGATION AND MONITORING PLAN

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to Public Resources Code (PRC) Section 21081.6 and CEQA Guidelines Section 15097, which requires a Lead Agency to adopt a program for monitoring or reporting on the revisions it has required for a project and the measures it has imposed to mitigate or avoid significant environmental effects. The public agency may choose whether its program will monitor mitigation, report on mitigation, or both. "Reporting" generally consists of a written compliance review that is presented to the decision-making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. "Monitoring" is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both.

During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure the commitments contained in this MMRP are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following MMRP is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. Some measures may apply to more than one resource area, and these duplicative or redundant measures have not been included in the MMRP.

Environmental Commitments Record (ECR)

DIST-CO-RTE: 02 - VAR - 005 **PM/PM:** 0.000/0.000 **EA/Project ID:** 02-0J810 / 0219000164

Project Description: CAPM

Date (Last modification): 1/22/25

Environmental Planner: John Luper **Phone:** 530-720-5928

Construction Liaison: Not yet identified **Phone:** Not yet identified

Resident Engineer: Not yet identified **Phone:** Not yet identified

PERMITS

Permits	Agency	Application Submitted	Permit Received	Permit Expiration	Permit Requirements Completed by	Permit Requirements Completed on	Comments
1600	California Department of Fish & Wildlife	Not Yet Applied	N/A	N/A	N/A	N/A	N/A
401	Regional Water Quality Control Board	Not Yet Applied	N/A	N/A	N/A	N/A	N/A
404 Non-reporting	U.S. Army Corps of Engineers	Not Yet Applied	N/A	N/A	N/A	N/A	N/A

ENVIRONMENTAL COMMITMENTS

PRE-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	Complete floristic surveys for sensitive plant species	NES	N/A	RE / ECL	Complete surveys prior to any ground disturbance activities	N/A	N/A	N/A	N/A	N/A

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	Comply with SSP 14-1.02 Environmentally Sensitive Areas	NES	N/A	RE / ECL	Complete surveys prior to any ground disturbance activities	N/A	N/A	N/A	N/A	N/A
Biology	Complete foothill yellow-legged frog surveys	NES	N/A	RE / ECL	Install ESA fencing prior to start of construction. Have CSB present to help with delineation.	N/A	N/A	N/A	N/A	N/A
Biology	Comply with SSP 14-1.02 Environmentally Sensitive Areas	NES	N/A	RE / ECL	Submit resumes to ECL for review and acceptance.	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 7-1.02K(6)(j)(iii)	ISA	N/A	RE	Submit LCP to safety officer for review and acceptance.	N/A	N/A	N/A	N/A	N/A

CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Air Quality	Comply with Caltrans Standard Specifications in Section 14-9.02.	Env Doc	Std. Spec.	RE	N/A	N/A	N/A	N/A	N/A	N/A
Biology	Comply with 14-6.05 Invasive Species Control	NES	NSSP	RE	Comply with Invasive Species Control Plan	N/A	N/A	N/A	N/A	N/A

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	Comply with NSSP 14-6.03B Bird Protection	NES	NSSP	RE / ECL	N/A	N/A	N/A	N/A	N/A	N/A
Biology	Comply with SSP 14-1.02 Environmentally Sensitive Area	NES	SSP	RE / ECL	Maintain ESA fencing throughout construction.	N/A	N/A	N/A	N/A	N/A
Biology	Comply with SSP 14-6.03D(1) Contractor Supplied Biologist	NES	SSP	RE	Survey before trees are removed.	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 14-11.14 Treated Wood Waste	ISA	SSP	RE	Submit as an informational submittal a copy of each completed shipping record and weight receipt.	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 36-4 – Residue containing lead from paint and thermoplastic	ISA	SSP	RE	N/A	N/A	N/A	N/A	N/A	N/A
Hazardous Waste	Comply with SSP 7-1.02K(6)(j)(iii) Unregulated Earth Material Containing Lead	ISA	SSP	RE	Comply with plan	N/A	N/A	N/A	N/A	N/A
Noise	Comply with Standard Specification 14-8.02. Noise Standards	Env Doc	Std. Spec	RE	N/A	N/A	N/A	N/A	N/A	N/A

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Tasks Completed on	Remarks	Mitigation for significant impacts under CEQA
Construction	Mitigation for Significant Impacts under CEQA	Env Doc	N/A	RE	N/A	N/A	N/A	N/A	N/A	Assuming project is constructed per IS/MND, CEQA mitigation has been met.

APPENDIX E. RESPONSE TO COMMENTS

DEPARTMENT OF TRANSPORTATION
NORTH REGION ENVIRONMENTAL
1031 BUTTE STREET
REDDING, CA 96001
(530) 945-1932
www.dot.ca.gov
TTY 711

Making Conservation a California Way of Life.

January 10, 2025

Jerred Ferguson
Environmental Scientist
Storm Water & Water Quality Certification Unit

Dear Jerrod:

The California Department of Transportation (Caltrans) would like to thank you for participating in the project delivery process for the Flume Creek CAPM Project by providing written comments. Your comments are important to us because they help inform the project team, refine the project scope, and reveal and highlight aspects of special concern. All submitted comments and the responses provided have been incorporated into the final Initial Study being prepared for this project. Your comment and Caltrans' response are below.

Comment:

Clean Water Act (CWA) Section 401, Water Quality Certification

The Central Valley Water Board has regulatory authority over wetlands and waterways under the Federal Clean Water Act (CWA) and the California Water Code, Division 7 (CWC). Discharge of dredged or fill material to waters of the United States requires a CWA Section 401 Water Quality Certification from the Central Valley Water Board. Typical activities include any modifications to these waters, such as stream crossings, stream bank modifications, filling of wetlands, etc. 401 Certifications are issued in combination with CWA Section 404 Permits issued by the Army Corps of Engineers. The proposed project must be evaluated for the presence of jurisdictional waters, including wetlands and other waters of the State. Steps must be taken to first avoid and minimize impacts to these waters, and then mitigate for unavoidable impacts. Both the Section 404 Permit and Section 401 Water Quality

Certification must be obtained prior to site disturbance. Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the California Water Code. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at Water Boards 401 Water Quality Certification and/or WDRs Application(https://www.waterboards.ca.gov/water_issues/programs/cwa401/#resources).

Isolated wetlands and other waters not covered by the Federal Clean Water Act

Some wetlands and other waters are considered "geographically isolated" from navigable waters and are not within the jurisdiction of the Clean Water Act. (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high-water mark). Discharge of dredged or fill material to these waters may require either individual or general waste discharge requirements from the Central Valley Water Board. If the U.S. Army Corps of Engineers determine that isolated wetlands or other waters exist at the project site, and the project impacts or has potential to impact these non-jurisdictional waters, a Report of Waste Discharge and filing fee must be submitted to the Central Valley Water Board. The Central Valley Water Board will consider the information provided and either issue or waive Waste Discharge Requirements. Failure to obtain waste discharge requirements or a waiver may result in enforcement action.

Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the CWC. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at Water Boards 401 Water Quality Certification and/or WDRs Application (https://www.waterboards.ca.gov/water_issues/programs/cwa401/#resources).

General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)

Construction activity, including demolition, resulting in a land disturbance of one acre or more must obtain coverage under the CGP. The Project must be conditioned to implement storm water pollution controls during construction and post-construction as required by the CGP. To apply for coverage under the CGP the property owner must submit Permit Registration Documents electronically prior to construction. Detailed information on the CGP can be found on the State Water Board website NPDES 2022 Construction Stormwater General Permit | California State Water Resources Control Board (https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html).

Response to Comment:

Comments noted.

If you have questions or need additional information, please contact me at your convenience.

Sincerely,

Kelly Timmons, P.E.
Project Manager
District 2
Kelly.Timmons@dot.ca.gov
(530) 945-0226

DEPARTMENT OF TRANSPORTATION
NORTH REGION ENVIRONMENTAL
1031 BUTTE STREET
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TTY 711

Making Conservation a California Way of Life.

January 10, 2025

Lee Ann Lyons

Dear Lee Ann:

The California Department of Transportation (Caltrans) would like to thank you for participating in the project delivery process for the Flume Creek CAPM Project by providing written comments. Your comments are important to us because they help inform the project team, refine the project scope, and reveal and highlight aspects of special concern. All submitted comments and the responses provided have been incorporated into the final Initial Study being prepared for this project. Your comment and Caltrans' response are below.

Comment:

I attended the virtual meeting yesterday regarding the flume Creek rehab pavement project that is scheduled to begin in 2026. I might have missed it in the first few minutes of the meeting but my question is what is the length of this project as far as distance I understand It includes the bridge at Castella and Castle Creek but what is the complete mileage distance of paving that will be taking place? Is it 1 mile or 2 miles or 6 miles? Where does the paving start and end?

Response to Comment:

Hello, Lee Ann ... thank you for attending Thursday's meeting, and thank you again for reaching out. I've attached the map that was used in the presentation showing the project limits. It runs from Post Mile SHA-58.00 to Post Mile SIS-2.70. I realize those numbers don't mean much to most folks, so I've also attached a close up for each location of where they lie on the map. All in all, it's a little more

than 11 miles. I hope I was able to answer all of your questions. Feel free to reach out if you have any additional inquiries or comments.

Mario Montalvo
Public Information Officer
Caltrans District 2

If you have questions or need additional information, please contact me at your convenience.

Sincerely,

Kelly Timmons, P.E.
Project Manager
District 2
Kelly.Timmons@dot.ca.gov
(530) 945-0226