

# McBrindle Creek Culvert Replacement

HUMBOLDT COUNTY, CALIFORNIA  
DISTRICT 1-HUM-101, PM 114.6/114.8 (KP 184.4/184.7)  
44080

## Initial Study with Proposed Negative Declaration



Prepared by the  
State of California Department of Transportation



## GENERAL INFORMATION ABOUT THIS DOCUMENT

### What's in this document:

The Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of the proposed project located in Humboldt County, California. This document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, and the proposed avoidance and minimization measures.

### What you should do:

- Please read this Initial Study. Additional copies of this document are available at the Humboldt County Trinidad Library at the Trinidad Elementary School, 300 Trinity Street, Room 10, Trinidad, CA. The Trinidad Library is open Tuesday from 3:30 pm to 8:00 pm, and Saturday from 10:00 am to 4:30 pm. Copies of the technical studies used to prepare this document are available for review at 2389 Gateway Oaks Drive, Sacramento, CA 95833.
- This document has also been placed on the Internet at:  
<http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm>
- We welcome your comments. If you have any comments regarding the proposed project please send your written comments to Caltrans by the deadline.
- Submit comments via postal mail to:  
Jeremy Ketchum, Branch Chief, Environmental Management S1  
Attention: Denise Gibson, Environmental Coordinator  
2389 Gateway Oaks Drive  
Sacramento, CA 95833
- Submit comments via email to: Denise\_Gibson@dot.ca.gov.
- Submit comments by the deadline: November 20, 2006.

### What happens next:

After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to: Caltrans North Region, Attn: Denise Gibson, 2389 Gateway Oaks Drive, Sacramento, CA 95833; (916) 274-0624 Voice or use the California Relay Service TTY number, (530) 741-4509.

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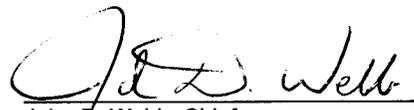
Construct culvert on State Route 101 from PM 114.6 (KP 184.4) to PM 114.8 (KP 184.7),  
just north of the town of Trinidad in Humboldt County

**INITIAL STUDY with Proposed Negative Declaration**

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA  
Department of Transportation

10 October 2006  
Date of Approval

  
John D. Webb, Chief  
North Region Environmental Services  
California Department of Transportation

## **PROPOSED NEGATIVE DECLARATION**

Pursuant to: Division 13, Public Resources Code

### ***Project Description***

The Department of Transportation (Caltrans) proposes to construct a culvert on State Route (SR) 101 just north of the town of Trinidad in Humboldt County from post mile (PM) 114.6 to 114.8, kilometer post (KP) 184.4 to 184.7. The purpose of this project is to alleviate flooding and maintenance.

### ***Determination***

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The project would have no effect on land use, wild and scenic rivers, growth, farmlands, timberlands, community character and cohesion, pedestrian and bicycle facilities, cultural resources, geology, seismology, topography, paleontology, and hazardous waste/materials.

In addition, the proposed project would have a less than significant effect on coastal zones, parks and recreation, community resources, utilities/emergency services, traffic and transportation, visual resources, hydrology and floodplains, water quality and storm water run-off, soils, air quality or noise. The proposed project as designed would have less than significant impacts to biological resources. Avoidance and minimization measures such as using Environmentally Sensitive Area (ESA) fencing and work windows will reduce impacts to wetlands and sensitive biological species. The proposed project will have less than significant cumulative impacts.

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John D. Webb, Chief  
North Region Environmental Services  
California Department of Transportation

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Date

## **SUMMARY**

The proposed project would construct a 12 ft wide x 6 ft high (3.6 m x 1.8 m) reinforced concrete box culvert (RCBC) south of an existing culvert at McBrindle Creek. In order to construct this project, right of way acquisition will be required. Temporary construction easements will be needed to construct the culvert and realign the creek. Constructing the new culvert and realigning the creek will affect waters of the U.S. and could impact sensitive species.

Permits and consultation will be required for this project. Permits include a Regional Water Quality Control Board Section 401 Certification, a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE), a section 1602 Streambed Alteration Agreement from the California Department of Fish and Game (CDFG) and a Coastal Development Permit from Humboldt County. In addition, consultation with National Oceanic & Atmospheric Administration (NOAA) Fisheries is required for potential impacts to Northern California Coastal (NCC) DPS steelhead, Southern Oregon/Northern California Coasts (SONCC) ESU coho, and California Coastal (CC) ESU Chinook. A CDFG 2080.1 Consistency Determination will also be needed for potential impacts to Southern Oregon/Northern California Coasts (SONCC) ESU coho.

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## LIST OF ABBREVIATED TERMS

ac	acres
ADI	Area of Direct Impact
ADL	Aerially deposited lead
APE	Area of Potential Effects
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CCC	California Coastal Commission
CDC	California Department of Conservation
CDFG/DFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CRLF	California red-legged frog
CRZ	Clear Recovery Zone
CZMA	Coastal Zone Management Act
Dbh	Diameter at breast height
DWR	California Department of Water Resources
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESL	Environmental Study Limit
FAE	Finding of Adverse Effect
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FOE	Finding of Effect
FPPA	Farmland Protection Policy Act
ft	foot/feet
FYLF	Foothill yellow-legged frog
GIS	Graphic Information Services
GPS	Global Positioning System
ha	Hectares
HDM	Highway Design Manual
HPSR	Historic Property Survey Report
in	inch(es)
km	kilometer(s)
KP	kilometer post
LOS	Level of service
m	meter(s)
MBGR	Metal beam guard rail
mi	mile(s)
MOA	Memorandum of Agreement

NAAQS	National Ambient Air Quality Standards
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Naturally occurring asbestos
NOAA	National Oceanic & Atmospheric Administration
NO <sub>2</sub>	Nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
PA	Programmatic Agreement
PM	post mile
PM <sub>10</sub>	Particulate matter
PQS	Professionally Qualified Staff
RAP	Relocation Assistance Program
RCBC	Reinforced concrete box culvert
RWQCB	Regional Water Quality Control Board
RRR	Resurfacing, Restoration, and Rehabilitation
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
R/W	Right of Way
SHPO	State Historic Preservation Officer
SHOPP	State Highway Operation and Protection Program
SR	State Route
SSP	Standard Specification Plans
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TRC	Transportation Concept Report
WPCP	Water Pollution Control Plan
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service

# CHAPTER 1. PROPOSED PROJECT

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## 1.1. PURPOSE AND NEED

The purpose of this project is to alleviate flooding and maintenance. The existing 6 ft wide x 3 ft high (1.8 m x 0.9 m) reinforced concrete box culvert (RCBC) was built in 1923 and is approximately 46 ft (14 m) long and placed on a skew. The culvert has a history of aggradation due to sediment flowing downstream. Although there is no history of the highway flooding at the culvert's location, sediment deposition and flooding of upstream properties has been documented. The existing culvert has accumulated about 2 ft (0.6 m) of sediment on the invert and can accommodate a 1.5-year flow event in its present condition. It was determined that a larger culvert would alleviate flooding and maintenance due to sediment build-up.

## 1.2. PROJECT DESCRIPTION

The Department of Transportation (Caltrans) proposes to construct a culvert on State Route (SR) 101 just north of the town of Trinidad in Humboldt County from post mile (PM) 114.6 to 114.8, kilometer post (KP) 184.4 to 184.7. See Figures 1 and 2 for Project Vicinity and Location Maps and Appendix D for Environmental Study Limit Mapping (ESL).

The new RCBC will be built approximately 113 ft (34.4 m) south of the existing RCBC. It will be sized at 12 ft wide x 6 ft high (3.6 m x 1.8 m) and will be approximately 72 ft (21.9 m) long to accommodate a temporary detour road and to allow for potential future widening of standard width paved shoulders and lanes. Constructing the culvert at this location will allow for approximately 3-4 ft (0.9-1.2 m) of flow area between the creek bed and culvert ceiling. The culvert will be set below grade to allow for a natural bottom. The culvert will be filled with washed, select gravel. A new section of stream channel will be constructed to re-route McBrindle Creek (North Fork McDonald Creek) through the new structure.

While it is highly desirable when designing new culverts and bridges to accommodate the anticipated 100-year flow, designing to such a level at this location would be cost prohibitive as the entire roadway would need to be elevated to provide passage. The proposed new RCBC is sized to accommodate an approximate 28-year flow event versus the existing RCBC, which handles a 1.5-year event.

### NEW CHANNEL DESIGN

Appendix E shows the plan view and typical section of the proposed new stream channel. A new meandering channel will be designed to contain the ordinary high water in an active flow channel and will allow for flooding on all or parts of the terrace on a yearly basis in an associated flood channel.

The active flow channel will vary in width (5-8 ft [1.5-2.4 m]) and will be lined with select, clean gravel. Woody debris will be placed in the channel on the east side of the

highway, to provide diverse flow patterns and allow for the development of habitat complexity. Placement of these materials will be directed on-site, during construction, as directed by the Resident Engineer in consultation with Caltrans Environmental staff and the California Department of Fish and Game.

The proposed channel alignment is approximately 40 ft (12.1 m) shorter than the existing section of creek that will be abandoned. However, no net loss of channel is anticipated, as the abandoned section of channel west of the highway will remain in place to allow for backflow of water during high flow events. Grading may be utilized if necessary during construction to maintain a hydrologic connection along the abandoned section of channel west of the highway. If grading is necessary, impacts to vegetation and stream channel will be minimized to the greatest extent possible. The abandoned stream channel east of the highway will be back-filled with appropriate native materials. The existing RCBC will be left in place and filled with slurry seal cement.

### **STORAGE AND STAGING**

The contractor's equipment will stage from the roadway and the designated Contractors Equipment Storage Pad shown on the ESL mapping (Appendix D). Contractor access to the equipment storage and staging pad will be from a private drive south of the project area and will cross over dry meadow habitat.

The temporary contractor storage/staging pad will be constructed to safeguard stream resources and wetlands. The pad is likely to be constructed of approximately 6 inches (0.15 m) of crushed rock placed upon an impermeable membrane. All equipment will be stored within the designated contractor's equipment storage area. Upon project completion all pad materials will be removed from the site.

### **ACCESS**

The work area on the west side of the highway will be restricted in an effort to avoid impacts to adjacent riparian habitat (coastal wetland) and stream resources. On the west side of the highway from the toe of fill, the contractor will be required to utilize equipment that will allow him/her to perform construction work within a 20 ft (6.1 m) wide corridor along the new channel alignment. Further, any work found to be necessary to maintain a hydrologic connection along the abandoned section of channel on the west side of highway will be restricted to within the existing meandering channel banks.

Construction on the east side of the highway is less restrictive (although coastal wetlands will be protected in place with exclusionary fencing). The contractor will utilize the east side for site access, and storage of equipment and materials.

### **GENERAL ORDER OF WORK**

Work will be performed under one-way traffic control. Deviations to the general order of work may occur to accommodate public safety, public convenience, weather and traffic conditions, contractor schedules and efficiency. It is anticipated that work will occur in the following order.

- Close northbound lane and reroute all traffic to southbound lane. Begin construction of new culvert and channel.
- Build temporary detour road over the new culvert section.
- Close southbound lane and reroute all traffic through temporary detour road. Complete construction of culvert.

- Resume traffic on northbound and southbound lanes. Remove asphalt/concrete from the temporary detour road.
- Complete construction of new channel.
- Divert water from existing channel into new channel.
- Backfill the abandoned channel east of the highway and abandoned culvert.
- Revegetate riparian corridor of new channel.

Construction is anticipated to occur in 2008, during the period May 1 through November 15. However, it is likely that work will take place post-Labor Day weekend to minimize potential traffic delays to the traveling public. All in-stream work will take place during the period July 1 to October 14.

### **1.3. ALTERNATIVES**

#### **Build**

This project has one build alternative (preferred alternative) as described in the “Project Description” section above. New right of way (R/W) will be required for this alternative.

#### **Alternatives Considered But Withdrawn**

During project development, different options were considered for culvert size and location. A culvert that could accommodate a 100-year flow event was most desirable but this would require elevating the entire roadway. This choice would have greatly increased cost and made the project infeasible. Replacing the culvert at its existing location was also considered. However, at its current location, there is only one foot of clearance between the creek bed and culvert ceiling. By moving the culvert south, the change in topography allowed for a 3-4 ft (0.9-1.2 m) clearance between the creek bed and culvert ceiling which will allow for greater flow capacity and improved fish passage.

Also considered were three options for the contractor’s access road. The first option provided access directly from highway 101 north of the existing culvert but required a temporary culvert to cross the existing channel. The second option provided access directly from highway 101 south of the existing culvert. This option however required crossing coastal wetlands. The third option as described in the project description above will provide access from the private drive south of the project area. This was chosen as the preferred access road as it will not require a temporary culvert and will not affect coastal wetlands.

Based on discussions with NOAA Fisheries and the California Department of Fish and Game and Caltrans staff, the build alternative is considered the most effective alternative at reducing environmental impacts and decreasing flooding and maintenance.

#### **No-Build**

The No-Build alternative would do nothing to alleviate flooding and maintenance problems.

## **1.4. PERMITS AND APPROVALS NEEDED**

Areas within the jurisdiction of Clean Water Act section 404 were delineated within the project study area and consultation with the United States Army Corps of Engineers (USACE) will be necessary in accordance with legal requirements set forth under section 404 of the Clean Water Act. A section 404 Permit is required for this project. As a result, this project will also require a section 401 certification from the California Regional Water Quality Control Board.

Areas within the jurisdiction of California Fish and Game Code (CDFG) section 1600-1616 were observed within the project study area and consultation with state resource agencies will be necessary in accordance with legal requirements set forth under sections 1600-1616 of the CDFG Code. A section 1602 Streambed Alteration Agreement from the CDFG is required for this project.

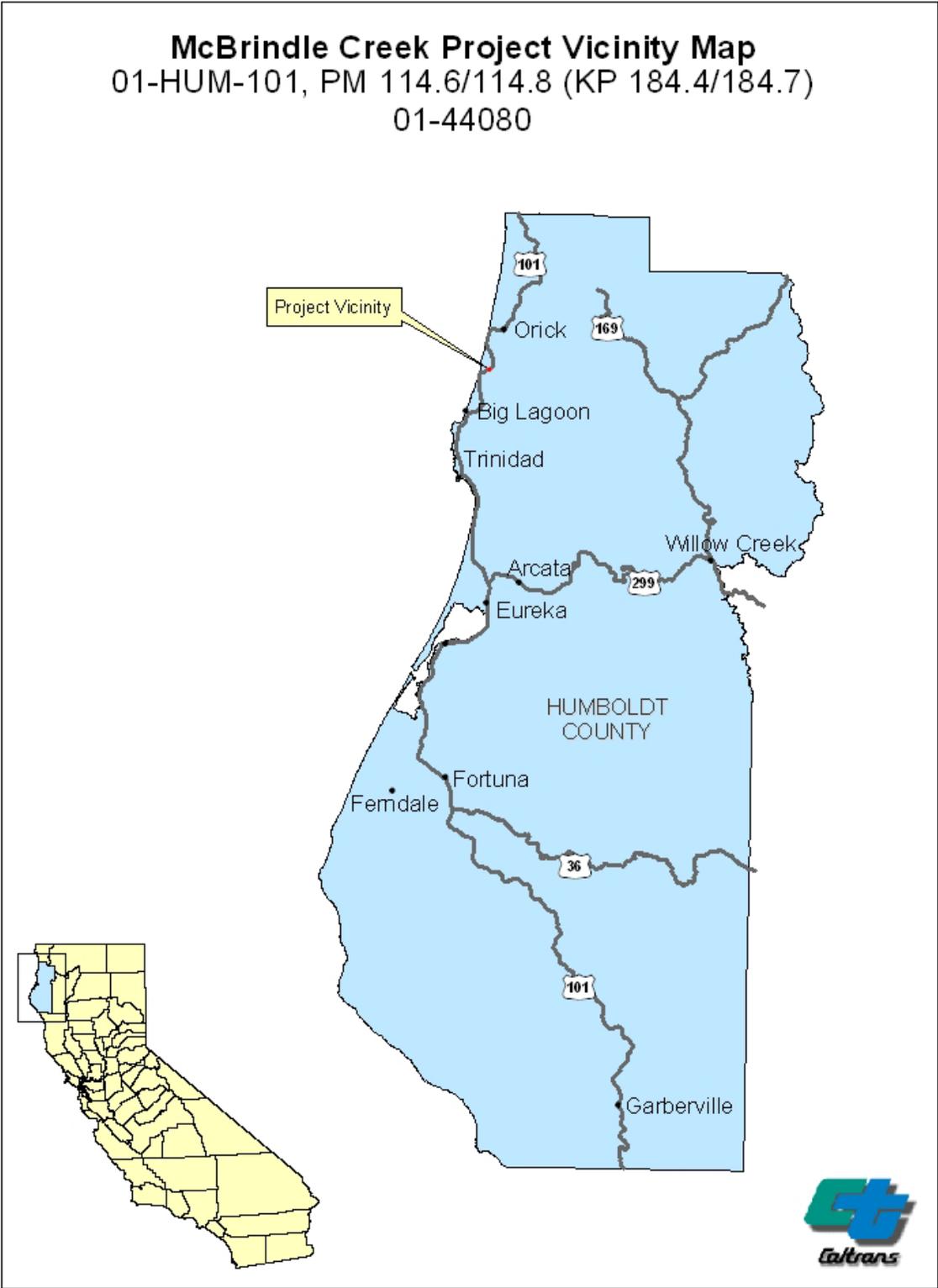
Because federally listed species may be affected by the proposed project, consultation with federal resource agencies (NOAA Fisheries) is necessary in accordance with legal requirements set forth under section 7 of the Endangered Species Act (19 U.S.C. 1536c).

A CDFG 2080.1 Consistency Determination will also be needed because state listed species may be affected by the proposed project.

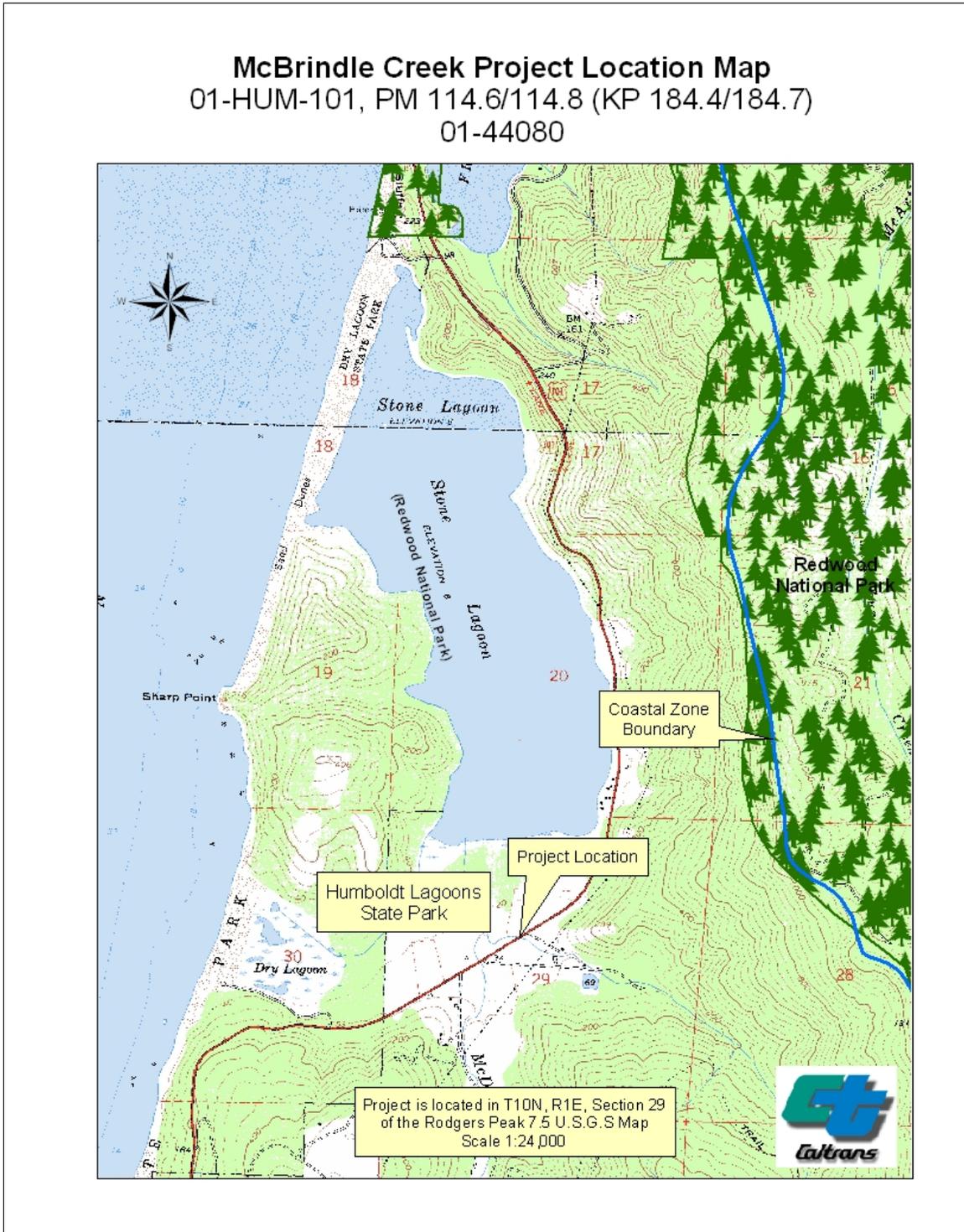
This project will be covered by the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit (CAS # 000003, Order # 99-06-DWQ), issued by the State Water Resources Control Board.

A Coastal Development Permit will be needed from Humboldt County.

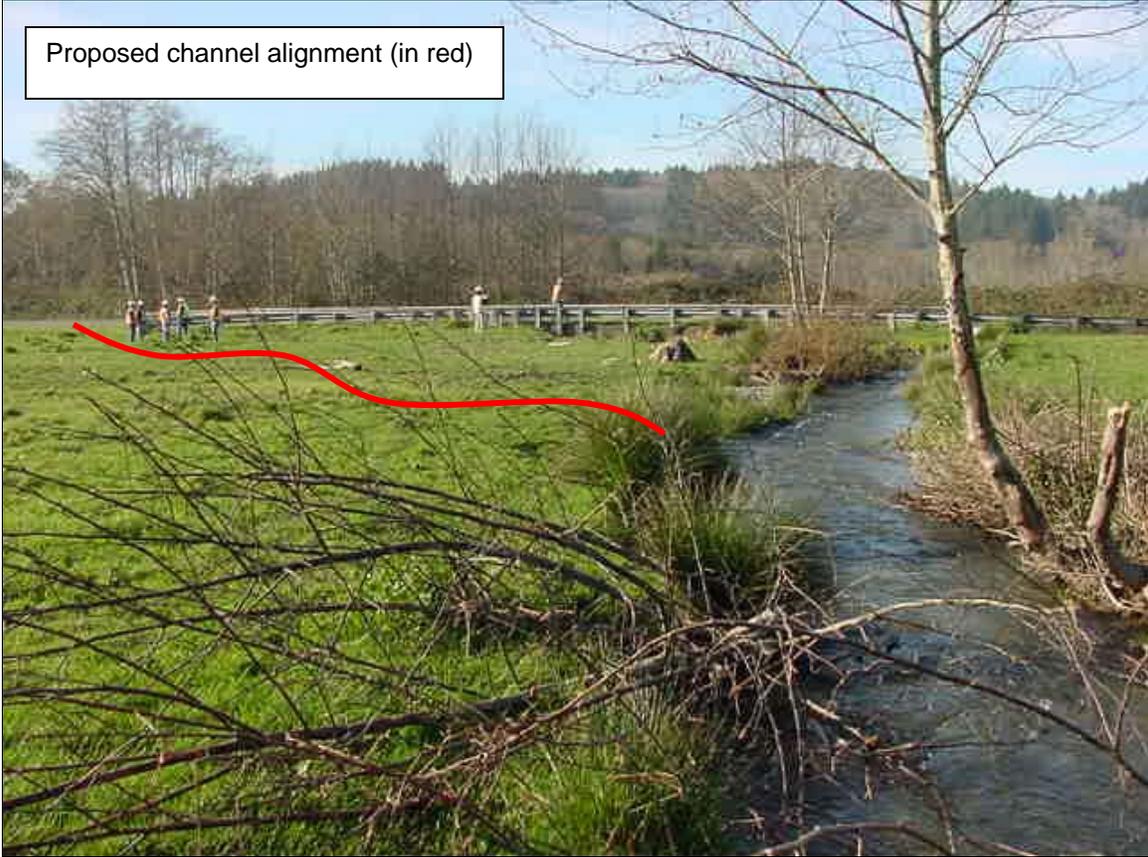
**FIGURE 1: PROJECT VICINITY MAP**



**FIGURE 2: PROJECT LOCATION MAP**



**FIGURE 3: PROJECT PHOTOS**



# CHAPTER 2. AFFECTED ENVIRONMENT, ENVIRONMENTAL IMPACTS, AND AVOIDANCE AND MINIMIZATION MEASURES

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## 2.1. HUMAN ENVIRONMENT

As part of the environmental analysis conducted for the project, the following environmental resources were considered:

**Wild and Scenic Rivers**  
**Timberlands**  
**Paleontology**

These resources are not present within project limits and will not be affected by the project. No potential for adverse impacts to these resources was identified. Consequently, there is no further discussion regarding these resources in this document.

### 2.1.1. Land Use

#### **Existing and Future Land Use**

The project will affect two parcels. Both parcels are zoned Agriculture Exclusive/Commercial Recreation. Small portions of the parcels adjacent to the highway will need to be acquired to construct this project. The acquisition of this land is not expected to substantially affect existing or future land use.

#### **Consistency with State, Regional and Local Plans**

This project is part of the State Highway Operation and Protection Program (SHOPP) and is consistent with the Humboldt County Association of Governments (HCAG) Regional Transportation Plan (RTP).

#### **Coastal Zone**

##### ***Regulatory Setting***

The Coastal Zone Management Act of 1972 (CZMA) is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA; they include the protection and expansion of public access and recreation, the protection, enhancement and restoration of environmentally sensitive areas, protection of agricultural lands, the protection of scenic beauty, and the protection of property and life from coastal hazards.

The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own local coastal programs (LCPs). LCPs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals.

### ***Affected Environment***

This project is located within a coastal zone and is under Humboldt County jurisdiction.

### ***Impacts***

Impacts to the coastal zone will be temporary. Visual resources and biological resources may be temporarily affected but will be protected with the implementation of avoidance and minimization measures as outlined in the corresponding discussion areas in this Initial Study. The proposed project is not expected to substantially affect the coastal zone.

### ***CEQA Considerations***

Less than significant impacts to the coastal zone pursuant to CEQA are anticipated.

## **Parks and Recreational Facilities**

### ***Regulatory Setting***

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) resources are defined as a publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of a historic site of national, State, or local significance.

### ***Affected Environment***

There are parks and recreational facilities within the project's limits. Humboldt Lagoons State Park lies on the west side of the highway and the Redwood Trails Campground lies to the east side of the highway. For the purposes of this Initial Study, the Humboldt Lagoons State Park is not considered a 4(f) resource. This project is not federally funded (not a US Department of Transportation (USDOT) action) and therefore Section 4(f) does not apply.

### ***Impacts***

This project will require small amounts of R/W acquisition from the state park and campground. Temporary easements will be needed to construct the culvert and to realign the creek, however, no permanent or lasting impacts to the state park or the campground are expected from use of the easement. The realignment of the creek is near to its current location and is also not expected to affect the campground and its operations. Construction of the project may result in temporary impacts to the Redwood Trails Campground as campers will be able to view the construction and may experience slight delays entering the campground due to the contractor's use of the proposed

access road. This project is not expected to permanently affect access or use to either recreational facility.

### **CEQA Considerations**

Less than significant impacts to parks and recreation facilities pursuant to CEQA are anticipated.

## **2.1.2. Growth**

The project would not alter zoning or alter conditions in the area in such a way as to make a change in zoning more likely. The project would not add capacity to the roadway. No impacts on the local growth rate would occur.

## **2.1.3. Farmlands**

### **Regulatory Setting**

The Farmland Protection Policy Act (FPPA, USC 4201-4209; and its regulations, 7 CFR Ch. VI Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. The land does not currently have to be used for cropland. It can be forestland, pastureland, cropland, or other land, but not water or urban developed land.

The California Land Conservation Act of 1965 [Cal. Govt. Code S.51200-51295], commonly known as the Williamson Act, provides incentives, through reduced property taxes, to deter the early conversion of agricultural and open space lands. Farmland need not be considered "prime" in order to be placed under provisions of the Williamson Act. CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses.

### **Affected Environment**

The project will require the acquisition of approximately 0.037 acres of right of way (R/W) from the Humboldt Lagoons State Park and approximately 0.048 acres from the Redwood Trails Campground. Both parcels are zoned Agriculture Exclusive/ Commercial Recreation. However, neither parcel is used for farming nor are they under a Williamson Act contract. No impacts to farmlands are anticipated.

## **2.1.4. Community Impacts**

Portions of parcels adjacent to the highway within the project limits will need to be acquired to construct this project. No businesses or residences would be acquired because of this project and no relocations will be required. Caltrans Right of Way will coordinate with affected property owners concerning compensation for loss of property.

**CEQA Considerations**

Less than significant community impacts pursuant to CEQA are anticipated.

**2.1.5. Utilities/Emergency Services**

**Affected Environment**

There are utility lines within the project limits and construction of the project will require a temporary traffic detour.

**Impacts**

During construction, traffic will be delayed, causing potential for minor increases in emergency response times.

**CEQA Considerations**

Less than significant impacts to utilities and emergency services pursuant to CEQA are anticipated.

**Avoidance and Minimization Measures**

Caltrans will coordinate with affected utility companies regarding any needed relocations. A detailed Traffic Management Plan will be included as part of the Contractor's specification package in order to manage temporary construction delays.

**2.1.6. Traffic and Transportation/Pedestrian and Bicycle Facilities**

**Affected Environment**

Within the project limits there are no pedestrian facilities. All routes in Humboldt County are open to bicycle use, however, there are no formal bicycle facilities within the project limits.

**Impacts**

This project will not decrease, nor increase the function of the roadway for bicycle use. Bicyclists and motorists will experience temporary delays during construction.

**CEQA Considerations**

Less than significant impacts to traffic and transportation and bicycle facilities pursuant to CEQA are anticipated.

**Avoidance and Minimization Measures**

A detailed Traffic Management Plan will be included as part of the Contractor's specification package in order to manage temporary construction delays.

### 2.1.7. Visual/Aesthetics

#### **Regulatory Setting**

CEQA establishes that 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." [CA Public Resources Code Section 21001(b)]

#### **Affected Environment**

The project area is located at the base of the Coast Range along the Northwestern Humboldt County coast. Redwood National Park and Humboldt Lagoons State Park surround the site. Travelers along this section of SR 101 enjoy spectacular scenery as they wind their way through redwood forests, riparian woodlands and coastal bluffs.

The project is located on the coastal plain near Dry and Stone Lagoons. To the west, riparian woodlands and wetlands dominate the viewshed. Vegetation blocks the view of the Pacific Ocean, which is approximately one mile to the west. The dominant visual feature to the east is the Redwood Trails Campground.

Although SR 101 in Humboldt County has not been officially designated as a state scenic highway, it is "eligible" for scenic highway status.

#### **Impacts**

The project will create low to moderate impacts to the existing visual character of the project area. The proposed culvert will be located under the highway; therefore it will not be visible to passing vehicles. The realignment of McBrindle Creek will be slightly visible to passing vehicles and from the Redwood Trails Campground. Implementation of the avoidance and minimization measures below will reduce the impacts of this project on visual resources.

#### **CEQA Considerations**

Less than significant impacts to visual resources pursuant to CEQA are anticipated.

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

- McBrindle Creek should be contoured to appear like a natural stream with a wide channel.
- Revegetation should be performed along McBrindle Creek where possible. The revegetation plan shall consider local wildlife habitats and should include species not preferred by elk.

### 2.1.8. Cultural Resources

#### **Regulatory Setting**

The National Historic Preservation Act (NHPA), as amended, sets forth national policy and procedures regarding "historic properties" -- that is, districts, sites, buildings, structures and objects included in or eligible for the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on such properties, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800).

Under California law, cultural resources are protected by CEQA as well as Public Resources Code (PRC) Section 5024.1, which established the California Register of Historic Places. PRC Section 5024.5 requires state agencies to provide notice to, and to confer with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historic resources.

This project is state funded only. However, the project is also subject to review under Section 106 of the NHPA, because it includes the discharge of dredged or fill material within the existing stream channel, and also specifically within delineated wetlands. Consequently, Caltrans must apply for a Section 404 permit from the United States Army Corps of Engineers (USACE). The need for a federal permit triggers Section 106 and places the USACE in the role of federal lead agency for this project.

### **Affected Environment**

An Area of Potential Effects (APE) map was established for this project in consultation with the USACE in order to outline the potential project effects on cultural resources. The APE delineates the limits of any construction impacts and includes both the existing and proposed right of way and all staging and disposal areas. The APE was approved by Richard Olson, Professionally Qualified Staff (PQS) Co-Principal Investigator-Prehistoric and Historical Archaeology, and Kim Floyd, Project Manager.

Native American consultation was conducted for this project and included a request to the Native American Heritage Commission (NAHC) regarding any sacred Native American sites that may be located within the project area, as well as a request for Native American contacts. Letters, phone calls and emails were sent or made to the contacts provided by the NAHC. Additional literature searches were performed and a record search was conducted by the North Coastal Information Center (NCIC) in August 2005. None of these sources indicated the presence of any cultural resources within or adjacent to the project area. Caltrans staff performed pedestrian surveys in March 2005 and August 2006.

One historic-era, cultural resource exists within the APE for the proposed project: a concrete box culvert constructed in 1923 located at PM 114.6. The culvert has a standard design, is a common feature of most roadways, and is one of many such culverts extant throughout the state.

### **Impacts**

No archaeological or Native American cultural resources were identified within or immediately adjacent to the APE for the proposed project.

Caltrans staff consulted with Kathleen Ungvarsky, the Cultural Resources Manager for the San Francisco District of the USACE, regarding the potential for this project to affect cultural resources. Ms. Ungvarsky, after conferring with the Regulatory Branch in her office, agreed that the culvert has no potential for historical significance and does not require formal evaluation. The culvert does not have a demonstrable potential for historic significance and does not possess any distinguishing characteristics or important associations, thus it does not warrant formal evaluation for National Register eligibility.

Caltrans also examined the property in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in PRC Section 5024.1. It is Caltrans policy to take guidance from the January 2004 *Programmatic Agreement among the Federal*

*Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 Programmatic Agreement [PA]) and its attachments for compliance with CEQA. The Section 106 PA, which includes instructions for defining properties exempt from evaluation, documents the California State Historic Preservation Officer's agreement on Section 106 compliance for transportation related projects. According to Attachment 4 of the Section 106 PA, culverts are exempt from evaluation as minor and ubiquitous highway features; therefore, the concrete box culvert in the APE is not a historical resource for the purposes of CEQA.

No impacts to cultural resources are expected to occur as a result of this project. However, should previously unidentified cultural resources be encountered during construction, the following avoidance and minimization measures will protect those resources.

***Avoidance and Minimization Measures***

In the remote event that archaeological materials (e.g., artifacts, including, arrowheads, bottles, foundations, etc.) are discovered during construction, it is Caltrans' policy that work temporarily cease in the area of the find until the Caltrans District Archeologist can evaluate the nature and significance of the materials and consult with the State Historic Preservation Office about the disposition of the materials (Environmental Handbook, Vol. 2, Chapter 1). In the event that human remains are discovered or recognized during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the appropriate county coroner has determined that the remains are not subject to provisions of Section 27491 of the Government Code. If the coroner determines the remains to be Native American, he shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will appoint a Most Likely Descendent for disposition of the remains (Health and Safety Code Sect. 7050.5, Public Resources Code Sect. 5097.24).

## **2.2. PHYSICAL ENVIRONMENT**

### **2.2.1. Hydrology and Floodplain**

#### ***Regulatory Setting***

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The 100-year floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the 100-year floodplain.”

#### ***Affected Environment***

A review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map #060060 0300 B shows the project location is within Zone A, defined as “...the 1-percent annual chance floodplains...that are determined by approximate methods. No Base Flood Elevations or depths are shown within this zone.” Consequently, there are no FEMA Base Flood Elevation constraints for this project.

#### ***Impacts***

This project will install a new culvert sized for a 28-year event. The existing culvert currently has a 1.5-year flood event capacity. Caltrans Highway Design Manual requires that culverts be sized to handle a 100-year event. However, installing a culvert sized for a 100-year event would require substantially raising the vertical profile of the roadway and would not be feasible. The new culvert is expected to move water and sediment under the highway more effectively and reduce flooding upstream.

#### ***CEQA Considerations***

Less than significant impacts to floodplains pursuant to CEQA are anticipated.

### **2.2.2. Water Quality and Storm Water Runoff**

#### ***Regulatory Setting***

In 1987 the Clean Water Act was amended and added section 402(p), which defined storm water discharges as point source discharges and established a framework for regulating municipal and industrial storm water discharges under the National Pollution Discharge Elimination System (NPDES) permitting program. Under this framework,

storm water permits are required for urban areas with populations of 100,000 or more (Phase I) – defined as municipal separate storm sewer systems (MS4s). The U.S. EPA defined MS4s to include roads and highways that traverse and serve urban population centers.

The State Water Resources Control Board (SWRCB) adopted a statewide Construction General Permit (NPDES General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity) to address construction projects which result in greater than 5 acres of disturbed soil area. In order to develop a consistent statewide approach to these new regulations and permit requirements, the Department requested the SWRCB consider adopting a statewide permit that would cover both storm water discharges for MS4 requirements as well as requirements established under the statewide Construction General Permit for construction activities. As a result, all storm water discharges and non-storm water discharges from all Department properties, facilities, and activities are regulated under Order No. 99-06-DWQ, NPDES NO. CAS000003, NPDES Permit, Statewide Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation (Statewide General NPDES Permit).

In December 2002, the SWRCB adopted a Modification to the statewide Construction General Permit to incorporate the Phase II Rule requirements enacted by the U.S. EPA (Modification of Water Quality Order 99-08-DWQ). The Modification was adopted to address Federal Regulations (Phase II Rule) that became final on December 9, 1999. The Phase II Rule expanded the existing NPDES program to address discharges from construction sites that result in a disturb soil area equal to or greater than one (1) acre and less than five (5) acres, and to no longer exempt municipalities with populations less than 100,000 people. The Modification established three areas for required coverage: 1) MS4s automatically designated by U.S. EPA pursuant to 40 CFR section 122.32(a)(1) because it is located within an urbanized area as defined by the Bureau of Census; 2) Traditional Small MS4s that serve cities, counties, and unincorporated areas that are designated by SWRCB or RWQCB; and 3) Non-traditional MS4s.

NPDES permits for storm water discharges must meet all applicable provisions of section 301 and 402 of the CWA. These provisions require control of pollutant discharges to the Maximum Extent Practicable (MEP) for MS4 permit requirements and to the standard of Best Available Technology Economically Achievable/Best Conventional Technology (BAT/BCT) for Construction General Permit requirements. The Department has a revised Storm Water Management Plan (SWMP, May 2003) that includes new and revised best management practices (BMPs) categories, including:

- Design Pollution Prevention BMPs – Preservation of existing vegetation, concentrated flow conveyance systems, slope/surface protection, etc.;
- Treatment BMPs – Infiltration and detention basins, traction sand traps, biofiltration, etc.;
- Construction Site BMPs – Temporary soil stabilization and sediment control, non-storm water management, and waste management; and
- Maintenance BMPs – Litter pickup, materials handling, waste management, street sweeping, etc.

In order to address BAT/BCT for Construction General Permit requirements, the Department has developed a Construction Site BMPs Manual. The Construction Site BMPs Manual identifies a suite of construction BMPs that can be divided into the following categories: Soil Stabilization, Temporary Sediment Control, Wind Erosion Control, Tracking Control, Non-Storm Water Management, and Waste Management and Material Pollution Control BMPs. Minimum Critical Construction (MCC) BMPs are identified during the PS&E phase of the project. MCC BMPs are incorporated into the contract standard special provisions (SSPs) depending on various site specific factors and expected phases of project construction.

### ***Affected Environment***

The project is located in the Big Lagoon Hydrologic Watershed Area (HA) and is within the jurisdiction of the North Coast Regional Water Quality Control Board (RWQCB). McBrindle Creek flows year round and is a primary tributary to McDonald Creek that terminates at Stone Lagoon.

### ***Impacts***

This project has the potential to adversely affect water quality during construction due to erosion that could be transported into receiving waters. Impacts to water quality will be avoided by implementing BMPs identified in the Caltrans Water Quality Handbook. Possible BMPs that may be used include silt fences, fiber rolls, straw bale barriers and temporary soil stabilization.

### ***CEQA Considerations***

Less than significant impacts to water quality pursuant to CEQA are anticipated.

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

In order to address permit compliance, appropriate selection of both structural and non-structural control measures will be considered to reduce, to the extent practicable, the discharge of pollutants from the construction and operation of this project. Adherence to the following is recommended to ensure compliance with the terms of the NPDES Permit (Order No. 99-06-DWQ) and to prevent receiving water pollution as a result of construction activities.

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS # 000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board.
- The contractor will be required to prepare a SWPPP containing effective erosion and sediment control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management and material pollution controls. It is generally accepted that practices that perform well by themselves can be complemented by other practices to raise the collective level of erosion control effectiveness and sediment retention.
- Standard Special Provision (SSP) 07-345 is a set of specifications used for projects that disturb more than one acre of soil. SSP 07-345 will be included in the construction specifications for this project and will clearly outline the contractor's responsibilities with respect to preparation and implementation of the SWPPP.

### **2.2.3. Geology/Soils/Seismic/Topography**

This project will require grading of soil to realign the creek. Erosion control methods will be used to avoid additional loss of topsoil. There will be no geology, seismic, or topography impacts from this project.

#### ***CEQA Considerations***

Less than significant impacts to soils pursuant to CEQA are anticipated.

### **2.2.4. Hazardous Waste/Materials**

#### ***Regulatory Setting***

Many state and federal laws regulate hazardous materials and hazardous wastes. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

#### ***Impacts***

An Initial Site Assessment (ISA) was completed and determined that no hazardous materials are known to exist at the project location and no impacts due to hazardous materials are expected.

### **2.2.5. Air Quality**

#### ***Regulatory Setting***

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>) and particulate matter that is 10 microns in diameter or smaller (PM<sub>10</sub>).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for the pollutants listed above. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would result in a violation of the Clean Air Act. If no violations would occur, then the regional planning organization and the appropriate federal agencies make the determination that the RTP is in conformity with the Clean Air Act. Otherwise, the

projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to be in conformity at the regional level.

Conformity at the project-level is also required. Again the pollutants of concern are: CO, NO<sub>2</sub>, O<sub>3</sub> and PM<sub>10</sub>. If a region is meeting the standard for a given pollutant, then the region is said to be in “attainment” for that pollutant. If the region is not meeting the standard, then it is designated a “non-attainment” area for that pollutant. Areas that were previously designated as non-attainment areas but have recently met the standard are called “maintenance” areas. If a project is located in a non-attainment or maintenance area for a given pollutant, then additional air quality analysis and reduction measures in regard to that pollutant is required. This is most frequently done for CO and PM<sub>10</sub>.

### **Affected Environment**

Under National Ambient Air Quality Standards, Humboldt County is designated as unclassified/attainment for all transportation related criteria pollutants. Under California Ambient Air Quality Standards, it is designated as attainment for CO and Ozone, non-attainment for PM<sub>10</sub>.

### **Impacts**

A local (project-level CO) analysis was performed using the Caltrans Transportation Project-Level Carbon Monoxide Protocol, UCD-ITS-RR-97-21, by the Institute of Transportation Studies, UC Davis.

From Figure 3, Local CO Analysis and Section 4.7.1 of the above mentioned Protocol, this project:

- Does not significantly increase vehicles operating in cold start mode,
- Does not significantly increase traffic volumes,
- Does not worsen traffic flow.

Therefore, the proposed project is not likely to worsen air quality and no local (project-level CO) impacts are anticipated.

### **Impacts-Construction**

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM<sub>10</sub>, would be the primary short-term construction impact that may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature. Caltrans Standard Specifications should effectively reduce and control emission impacts during construction.

Naturally occurring asbestos (NOA) is known to exist within serpentine, a greenish greasy-looking ultramafic rock. Ultramafic rocks are found in the eastern part of Humboldt County. No NOA was found at the project site. If NOA is found during construction, rules and regulation of the local air quality management district must be adhered to when handling this material.

### **CEQA Considerations**

Less than significant impacts to air quality pursuant to CEQA are anticipated.

**Avoidance and Minimization Measures**

- Caltrans Standard Specifications contain Section 7-1.01F, "Air Pollution Control," and Section 10, "Dust Control." These specifications require the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district. These specifications, which are included in all construction contracts, should aid in reducing construction related air quality impacts.
- If NOA is found during construction, rules and regulation of the local air quality management district must be adhered to when handling this material.

**2.2.6. Noise**

**Regulatory Setting**

CEQA provides a broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

**Affected Environment**

This project is not considered a Type 1 project as defined by 23 CFR 772. A type 1 project is "a proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through traffic lanes." Because this is not a Type 1 project, no traffic noise analysis is required.

**Impacts-Construction**

Noise may be generated from the contractor's equipment and vehicles. This impact will be temporary and will be lessened with the implementation of the avoidance and minimization measure listed below.

**CEQA Considerations**

Less than significant impacts to noise pursuant to CEQA are anticipated.

**Avoidance and Minimization Measures**

- Caltrans Standard Specifications contain Section 7-1.01I, "Sound Control Requirements." These specifications require the contractor to comply with all local sound control and noise level rules, regulations and ordinances that apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler. These specifications, which are included in all construction contracts, should aid in reducing construction related noise impacts.

## **2.3. BIOLOGICAL ENVIRONMENT**

### **2.3.1. Biological Setting**

Within the project area, on the east side of the highway, land is predominately utilized as a commercial campground and recreation area. Current land management (practiced by the private landowner) includes seasonal mowing to the water's edge of McBrindle Creek (North Fork McDonald Creek), a perennial stream. Vegetation is maintained to maximize livestock grazing and elk viewing. McBrindle Creek has been channelized and land management practices have resulted in the loss of a riparian canopy over the stream reach. The property west of the highway is part of Humboldt Lagoons State Park and has mature riparian vegetation that provides 100% canopy cover over the stream.

Vegetation in the project area is characterized by forbs and grasses within the meadow and by Himalaya blackberry and red alder adjacent to the creek.

A species list was received from the United States Fish and Wildlife Service (USFWS) of federally listed species potentially occurring in the project vicinity (Roger's Peak quadrangle, January 2005 [updated August 2006]). Further, both the California Natural Diversity Database (CNDDDB) and the California Native Plant Society (CNPS) databases were queried for potential special-status species in the project area.

Prior to field survey, habitat requirements for special-status species were reviewed and resource agency personnel were contacted to ascertain the potential for individual species presence at the project locations. Surveys for botanical and wildlife inventory; special-status species; invasive species; and for wetland delineation within the project environmental study limits (ESL) were conducted by Kelley Garrett, Caltrans biologist on March 17 and 22, April 5, May 12, June 21, July 24, August 11 and October 14 of 2005. Field surveys consisted of walking the entire project area/ESL to accurately map and describe existing habitat types.

## 2.3.2. Wetlands and Other Waters

### **Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the Environmental Protection Agency (EPA).

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the CDFG and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

### **Affected Environment**

Approximately 0.07 acres of United States Army Corps of Engineers (USACE) jurisdictional wetland exists within the project environmental study limits (ESL). The USACE wetland occurs primarily east of the highway, in a thin strip, within the confines of the existing creek channel. This wetland is also considered a coastal wetland.

Other waters within the project area include McBrindle Creek and additional coastal wetlands that do not meet the three-parameter requirements of USACE wetlands. 0.02 acres of additional coastal wetland (wet meadow type) is present within the ESL east of the highway, in a thin strip flanking the USACE wetland, along McBrindle Creek. A further 0.14 acres of additional coastal wetland (wet meadow type) is present east of the highway, in depressed areas within the meadow. Additionally, 0.29 acres of riparian habitat (coastal wetland) exists within the project study limits on the west side of the highway.

### **Impacts**

#### **WETLANDS AND OTHER WATERS OF THE U.S.**

Approximately 0.05 acres of USACE wetland will be permanently filled by project construction, while approximately 0.02 acres may be temporarily affected during construction (and potentially permanently dewatered). 0.03 acres of stream channel (other waters of the United States) will be permanently filled and up to 0.03 acres of additional channel west of the highway may be temporarily affected by dewatering and possible grading (to maintain hydrological connection).

#### **ADDITIONAL COASTAL WETLANDS**

Up to 0.02 acres additional coastal wetland (wet meadow type) on the east side of the highway, flanking the USACE wetland along McBrindle Creek, will be permanently filled. On the west side of the highway, 0.002 acres of riparian habitat (coastal wetland) will be permanently filled when the new RCBC is constructed; and, up to 0.08 acres of riparian habitat may be temporarily affected by project construction. The other additional coastal wetlands on the east side of the highway will be protected with Environmentally Sensitive Area (ESA) fencing.

### **Design Features**

The proposed channel has been designed to increase habitat complexity versus the existing channel. The proposed channel design includes an active flow channel and an associated flood terrace. Within the new channel alignment, east of the highway, approximately 0.03 acres of channel (Other Waters of the US) will be recreated. It is anticipated that most of the flood terrace (an area of approximately 0.2 acres, adjacent to the active channel) will develop into USACE wetland, with some additional coastal wetland.

The project has been designed to avoid and minimize wetland impacts to the greatest extent possible. The project will result in no net loss of jurisdictional resources. No formal wetland mitigation is proposed, as the project will be self-mitigating.

### **CEQA Considerations**

Less than significant impacts to waters of the U.S. and other waters pursuant to CEQA are anticipated.

### 2.3.3. Plant Species

#### **Regulatory Setting**

The USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section in this document for detailed information regarding these species.

This section of the document discusses all other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants. CNPS 1B plants are rare, threatened and endangered in California and elsewhere. CNPS 2 plants are rare in California and more common elsewhere.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et. seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et. seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

#### **Affected Environment**

After reviewing the habitat needs of the individual special-status species with regard to the conditions at the project site, the following species were considered to have potential for utilizing existing habitat within the project environmental study limits (ESL) as well as adjacent areas.

**Lakeshore sedge (*Carex lenticularis* var. *limnophila*) CNPS 2**

**Flaccid sedge (*C. leptalea*) CNPS 2**

**Meadow sedge (*C. praticola*) CNPS 2**

**Deceiving sedge (*C. saliniformis*) CNPS 1B**

**Green sedge (*C. viridula* var. *viridula*) CNPS 2**

**Marsh pea (*Lathyrus palustris*) CNPS 2**

**Boq club-moss (*Lycopodiella inundata*) CNPS 2**

**Running pine (*Lycopodium clavatum*) CNPS 2**

**Howell’s montia (*Montia howellii*) CNPS 2**

**Wolf’s evening primrose (*Oenothera wolfii*) CNPS 1B**

No special-status plants were observed during survey and no impacts to special status plants are expected.

## 2.3.4. Animal Species

### **Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The USFWS, the National Marine Fisheries Service (NOAA Fisheries) and the CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species section. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern (SC), and USFWS or NOAA candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

### **Affected Environment**

After reviewing the habitat needs of the individual special-status species with regard to the conditions at the project site, the following species were considered to have potential for utilizing existing habitat within the project ESL as well as adjacent areas.

### **FISH**

#### **Coastal cutthroat trout (*Oncorhynchus clarkii*) SC**

Juvenile salmonids were observed within the project area just downstream of the existing culvert. John Schwabe (California Department of Fish and Game Fish Habitat Specialist) believes these were likely to have been coastal cutthroat trout.

### **Impacts**

Project implementation may affect coastal cutthroat trout, however, proposed project measures as listed in Section 2.3.7 implemented to protect listed salmonids at the site will also minimize impacts to coastal cutthroat trout to the greatest extent possible.

### **CEQA Considerations**

Less than significant impacts to coastal cutthroat trout pursuant to CEQA are anticipated.

### **BIRDS**

#### **Great blue heron (*Ardea herodias*) no status**

#### **Black crowned night heron (*Nycticorax nycticorax*) no status**

During surveys of the project area, neither great blue heron nor black crowned night heron were found to be utilizing the area for foraging, nesting or as a rookery. Other wildlife noted to be present during survey included foraging white-tailed kite and

blackbird. Many other migratory bird species are likely to utilize the riparian area west of the highway for nesting and foraging.

All vegetation removal necessary for project construction will utilize either a window for removal (September 1 through March 1, prior to construction) or surveys will be performed in advance of any ground disturbing activities to determine presence/absence of nests. If nests are present and active, work will be delayed until the young have successfully fledged. See Section 2.3.7 for all biological avoidance and minimization measures. Project construction will have no impact on migratory nesting birds.

## **AMPHIBIANS**

### **Northern red-legged frog (*Rana aurora*) SC**

Adult northern red-legged frogs were observed within the project study limits in the vicinity of the creek on the east side of the highway.

#### ***Impacts***

The proposed in-stream work window (July 1 – October 14) will avoid affect to any potentially present egg masses. Screening and seining/electro fishing that is implemented to protect salmonids will also prevent harm to larval, juvenile and adult frogs to the greatest extent possible. Further, a pre-job meeting will be held to alert the Resident Engineer to the presence of the species as well as proper handling and relocation techniques. See Section 2.3.7 for all biological avoidance and minimization measures.

#### ***CEQA Considerations***

Less than significant impacts to northern red-legged frogs pursuant to CEQA are anticipated.

### **Western tailed frog (*Ascaphus truei*) SC**

While not observed during surveys of the stream reach, western tailed frog may be present within the study area. However, project avoidance and minimization measures implemented to protect special-status salmonids as listed in Section 2.3.7 will also minimize impacts to any potentially present tailed frog.

#### ***CEQA Considerations***

Less than significant impacts to western tailed frogs pursuant to CEQA are anticipated.

## **OTHER WILDLIFE**

Roosevelt elk are in the project area on a daily basis utilizing the meadow as a grazing and loafing site. All fuels, lubricants and any other hazardous materials associated with project construction will be safeguarded to prevent ingestion or spill. No other specific measures are proposed. See Section 2.3.7 for all biological avoidance and minimization measures.

### 2.3.5. Threatened and Endangered Species

#### **Regulatory Setting**

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of federally endangered (FE) and federally threatened (FT) species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the USFWS and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The CDFG is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

#### **Affected Environment**

After reviewing the habitat needs of the individual special-status species with regard to the conditions at the project site, the following species were considered to have potential for utilizing existing habitat within the project environmental study limits (ESL) as well as adjacent areas.

#### **FISH**

#### **Northern California Coastal (NCC) DPS steelhead (*O. mykiss*) FT**

#### **Southern Oregon/Northern California Coasts (SONCC) ESU coho (*Oncorhynchus kisutch*) FT, ST**

#### **California Coastal (CC) ESU Chinook (*O. tshawytscha*) FT**

NCC DPS steelhead spawning habitat is absent in the project area, however the area may be utilized for juvenile rearing. On August 24, 2005, a half dozen young of the year salmonids were observed in the vicinity of the existing RCBC. However, John Schwabe, California Department of Fish and Game Fish Habitat Specialist, believes these were likely to have been coastal cutthroat trout. No fish were observed in the stream on the east side of the highway during any visits to the project site but steelhead trout may utilize the project site.

McBrindle Creek is presumed to have historically supported a coho population. However, the last documented sighting was during a CDFG trapping effort in 1972 that found a single coho fry. Trapping results since that time, to the period of 2002, have found no coho. The coho population in McBrindle Creek was likely never very large and may have been exterminated. Coho salmon are unlikely to be present in the project area.

There is no suitable spawning habitat for CC ESU Chinook. Further, recent examination of CDFG files (Eureka field office) found no documentation of Chinook during any trapping efforts from the period 1972 to 2002. Chinook salmon are highly unlikely to be present in the project area.

Caltrans has performed early coordination with the NOAA Fisheries Service and will submit a Biological Assessment to NOAA Fisheries for Section 7 consultation. Caltrans will also apply for a CDFG 2080.1 Consistency Determination.

### **Impacts**

Caltrans anticipates that the project as proposed will result in the following determinations to listed salmonids:

- Likely to adversely affect, but not likely to jeopardize NCC DPS steelhead
- May affect, but is not likely to adversely affect CC ESU Chinook, or SONCC ESU coho
- May affect, but is not likely to adversely affect designated and proposed Critical Habitat for NCC DPS steelhead and SONCC ESU coho
- Will have no adverse affect to Essential Fish Habitat for CC ESU Chinook and SONCC ESU coho

### **CEQA Considerations**

Less than significant impacts to threatened fish species pursuant to CEQA are anticipated with the implementation of avoidance and minimization measures. See Section 2.3.7 for all biological avoidance and minimization measures.

### **BIRDS**

#### **Bald Eagle (*Haliaeetus leucocephala*) Federally Threatened**

No bald eagles were observed to be using the project area for nesting or foraging, and only marginal amounts of suitable roosting or nesting habitat exist within the greater project area for the species. Further, suitable habitat for the species will not be affected by project implementation. This project will have no effect on the bald eagle.

## **2.3.6. Invasive Species**

### **Regulatory Setting**

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999 directs the

use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

***Affected Environment***

Himalaya blackberry was found widely distributed in small patches on the project site. Himalaya blackberry is listed as a California Invasive Plant Council List A invasive weed. List A is comprised of weed species that have been documented as aggressive invaders, displacing natives and disrupting natural habitats. No other invasive species were observed during surveys within the project limits.

***Impacts***

It would be impracticable to attempt to eradicate Himalaya blackberry at the project site, as the species is present in great quantities adjacent to the project, west of the highway on State Park lands. However, as re-vegetation efforts within the new riparian corridor are monitored post-project construction, hand tools will be utilized to minimize and control the presence of the species adjacent to the new channel. The project will not result in the spread of invasive species.

***CEQA Considerations***

Less than significant impacts due to invasive species pursuant to CEQA are anticipated.

### 2.3.7. Biological Avoidance and Minimization Measures

The project has been designed to avoid and minimize impacts to: listed and special-status salmonids and their habitat; Northern red-legged frogs; wetlands and other waters; migratory nesting birds, and resident elk. The following measures shall be implemented as a part of the project plan and construction:

- To safeguard stream resources and wetlands, a temporary pad will be constructed for equipment staging and storage within the ESL. The pad is likely to be constructed of approximately 6" of crushed rock placed upon an impermeable membrane.
- Areas of vegetation removal will be limited to those areas identified in advance and approved by Caltrans and will not exceed the minimum necessary to complete operations. All vegetation removal necessary for project construction will utilize either a window for removal (September 1 through March 1, prior to construction) or surveys will be performed in advance of any ground disturbing activities to determine presence/absence of nests. If nests are present and active, work will be delayed until the young have successfully fledged.
- Sod will be salvaged from the area of new channel construction (top 16 inches of sod, roots and soil). Sod will be stockpiled and used as bank liner on the constructed terrace, adjacent to the new section of active channel.
- Placement of woody debris within the new stream reach will be directed on-site, during construction, as directed by the Resident Engineer in consultation with Caltrans Environmental staff and the California Department of Fish and Game.
- The new section of active channel will be lined with clean, river-run rock (washed prior to bringing to site) in size class proportions as follows: 20% at 5 inches, 40% at 3 inches and 20% at 2 inches. This same material will be specified for use in back filling the new culvert to create a natural bottom.
- Any areas of bare soil within the newly constructed stream terrace will be treated by applying ½ inches of mulch (shredded, certified weed free, wheat or rice straw will be specified to be used as mulch).
- In the year of construction, to minimize impacts to resident aquatic life, all in stream work will take place during the period July 1 to October 14.
- Prior to routing stream flow into the new channel, a fish rescue will be performed. The to-be-abandoned stream reach will be isolated with screens and then a permitted biologist will electrofish and/or seine the area.
- The newly constructed channel will be charged with 20-30% of the screened, diverted flow, until water is continuously flowing, and then 100% of the diverted stream flow will be routed into the new channel.
- If ground water is encountered during construction it will either be allowed to re-perk or it will be pumped uphill to re-perk. Any overland dewatering will be conducted in a manner that does not cause erosion or sedimentation of waterways.
- Riparian vegetation will be salvaged from the to-be-abandoned stream reach on the east side of roadway, and utilized to partially fulfill the re-vegetation effort along the new stream terrace.
- The new stream terrace will be re-vegetated with locally appropriate, native species of sedge, rush and shrubs to provide stable riparian vegetation. To avoid any roadway hazard as it relates to sight distance and the resident elk, willow will not be utilized in the re-vegetation effort. A few alders may be utilized for landscape effect.

- Caltrans will seek an agreement with the adjacent private landowner to restrict mowing around the new stream channel, such that a minimum 15 – 20 foot riparian buffer is perpetuated for a minimum 10 years.
- All construction areas will be stabilized prior to the onset of winter rains to prevent sediment loss into McBrindle Creek. All areas of disturbance will be hydro seeded and/or mulched.
- A pre-job construction meeting will be held between Caltrans Environmental staff and the Caltrans Resident Engineer, to raise awareness regarding the presence of Northern red-legged frog (CDFG Species of Concern) as well as proper handling and relocation techniques.
- All fuels, lubricants and any other hazardous material associated with project construction will be safeguarded to prevent elk interactions (including ingestion or spill) with such materials.
- The NOAA Fisheries Service is likely to issue a Biological Opinion for the proposed project. All Reasonable and Prudent Measures will be incorporated into the project to protect listed salmonids and their habitat.
- The CDFG will be issuing a Stream/Lakebed Alteration Agreement (SAA) and a 2080.1 Consistency Determination for this project. All conditions listed in the SAA and 2080.1 will be incorporated into the project.
- Environmentally Sensitive Area (ESA) fencing shall be used on the east side of the highway to protect the additional coastal wetlands.

## 2.4. CUMULATIVE IMPACTS

### ***Regulatory Setting***

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect 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.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of 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.

CEQA Guidelines, Section 15130 describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines.

### ***Impacts-Biological Resources***

The proposed project is not expected to result in significant cumulative impacts to biological resources because project related impacts are expected to be minor in scale. Avoidance and minimization measures shall be implemented to reduce impacts and therefore will reduce cumulative impacts.

### ***CEQA Considerations***

Less than significant cumulative impacts pursuant to CEQA are anticipated.

## CHAPTER 3. LIST OF PREPARERS AND TECHNICAL STUDIES

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The following people assisted in preparing and evaluating this Initial Study/ Environmental Assessment and coordinating documents:

Andy Agustinovich	Associate Environmental Planner, Community Resources
Alex Arévalo	Transportation Engineer, Water Quality
Jennifer Clark	Associate Environmental Planner
Dawn Friend	Hydraulics Engineer
Kelley Garrett	Associate Environmental Planner, Biology
Jim Hibbert	Landscape Associate, Landscape Architecture
Jeremy Ketchum	Senior Environmental Planner, S1 Branch Chief
Rich Olson	Associate Environmental Planner, Archaeology
Gail St. John	Associate Environmental Planner, Architectural History
Sharon Tang	Transportation Engineer, Air and Noise
Steve Werner	Environmental Engineer, Hazardous Waste

The following technical reports were prepared in order to analyze the potential affects this project may have on the environment and to assist in preparing this Initial Study/ Environmental Assessment. These documents are available for review Caltrans North Region Office of Environmental Management, 2389 Gateway Oaks Drive, Sacramento, CA 95833.

- Floodplain Analysis and Hydraulics Recommendations
- Historic Property Survey Report
- Initial Site Assessment for Hazardous Waste
- Natural Environment Study
- Air Quality, Noise and Energy Evaluation
- Water Quality Assessment
- Visual Impact Assessment
- Community Impact Assessment

## CHAPTER 4. PUBLIC REVIEW

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This Initial Study will be sent to the following parties for review and comments:

California State Parks  
Humboldt County Board of Supervisors  
Humboldt County Clerk Recorder  
Humboldt County Planning, Community Development Services  
Humboldt County Public Works  
Humboldt County Trinidad Library (to make available for public review)  
West Coast Real Estate Corporation (Redwood Trails Campground)  
State Clearinghouse (to be distributed to various state agencies)

# APPENDIX A. CEQA CHECKLIST

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The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The CEQA impact levels include potentially significant impact, less the significant impact with mitigation incorporation, less than significant impact, and no impact. Please refer to the following for detailed discussions regarding impacts:

## CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulation, Sections 15000 et seq. ([http://www.ceres.ca.gov/topic/env\\_law/ceqa/guidelines/](http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/))
- Statutes: Division 13, California Public Resource Code, Sections 21000-21178.1 ([http://www.ceres.ca.gov/topic/env\\_law/ceqa/stat/](http://www.ceres.ca.gov/topic/env_law/ceqa/stat/))

**AESTHETICS** - Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**AGRICULTURE 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**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. Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

CEQA			
Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporation	Less Than Significant Impact	No Impact

project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) sensitive receptors to substantial pollutant concentrations?         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**BIOLOGICAL RESOURCES** - 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 Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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 Game or US Fish and Wildlife Service?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**CULTURAL RESOURCES** - Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

significance of a historical resource as defined in §15064.5?

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**GEOLOGY AND SOILS** - Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Expose people or structures to 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. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| ii. Strong seismic ground shaking?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| iii. Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| iv. Landslides?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

CEQA			
Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporation	Less Than Significant Impact	No Impact

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

**HAZARDS AND HAZARDOUS MATERIALS -**

Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

**HYDROLOGY AND WATER QUALITY** – Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

CEQA			
Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporation	Less Than Significant Impact	No Impact

**LAND USE AND PLANNING** - Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**MINERAL RESOURCES** - 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?                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**NOISE** - Would the project result in:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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 expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

**POPULATION AND HOUSING** - Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

**PUBLIC SERVICES** - Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- a) Fire protection?
- b) Police protection?
- c) Schools?
- d) Parks?
- e) Other public facilities?

**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?

CEQA			
Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporation	Less Than Significant Impact	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?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**TRANSPORTATION/TRAFFIC** - Would the project:

- a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- e) Result in inadequate emergency access?
- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
- f) Result in inadequate parking capacity?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**UTILITIES AND SERVICE SYSTEMS** - Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**MANDATORY FINDINGS OF SIGNIFICANCE -**

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Does the project have the potential to 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, 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

# APPENDIX B. TITLE VI POLICY STATEMENT

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**DEPARTMENT OF TRANSPORTATION**  
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*Flex your power!  
Be energy efficient!*

January 14, 2005

## TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON  
Director

*"Caltrans improves mobility across California"*

# APPENDIX C. AVOIDANCE, MINIMIZATION AND MITIGATION SUMMARY

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## **UTILITIES/EMERGENCY SERVICES TRAFFIC AND TRANSPORTATION**

- A detailed Traffic Management Plan will be included as part of the Contractor's specification package in order to manage temporary construction delays.

## **VISUAL/AESTHETICS**

- McBrindle Creek should be contoured to appear like a natural stream with a wide channel.
- Revegetation should be performed along McBrindle Creek where possible. The revegetation plan shall consider local wildlife habitats and should include species not preferred by elk.

## **CULTURAL RESOURCES**

In the remote event that archaeological materials (e.g., artifacts, including, arrowheads, bottles, foundations, etc.) are discovered during construction, it is Caltrans' policy that work temporarily cease in the area of the find until the Caltrans District Archeologist can evaluate the nature and significance of the materials and consult with the State Historic Preservation Office about the disposition of the materials (Environmental Handbook, Vol. 2, Chapter 1). In the event that human remains are discovered or recognized during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the appropriate county coroner has determined that the remains are not subject to provisions of Section 27491 of the Government Code. If the coroner determines the remains to be Native American, he shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will appoint a Most Likely Descendent for disposition of the remains (Health and Safety Code Sect. 7050.5, Public Resources Code Sect. 5097.24).

## **WATER QUALITY AND STORM WATER RUNOFF**

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS # 000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board.
- The contractor will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) containing effective erosion and sediment control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management and material pollution controls. It is generally accepted that practices that perform well by themselves can be complemented by other practices to raise the collective level of erosion control effectiveness and sediment retention.
- Standard Special Provision (SSP) 07-345 is a set of specifications used for projects that disturb more than one acre of soil. SSP 07-345 will be included in the construction specifications for this project and will clearly outline the contractor's responsibilities with respect to preparation and implementation of the SWPPP.

## **AIR QUALITY**

- Caltrans Standard Specifications contain Section 7-1.01F, "Air Pollution Control," and Section 10, "Dust Control." These specifications require the contractor to comply with all pertinent rules, regulations, ordinances, and statues of the local air district. These specifications, which are included in all construction contracts, should aid in reducing construction related air quality impacts.
- If NOA is found during construction, rules and regulation of the local air quality management district must be adhered to when handling this material.

## **NOISE**

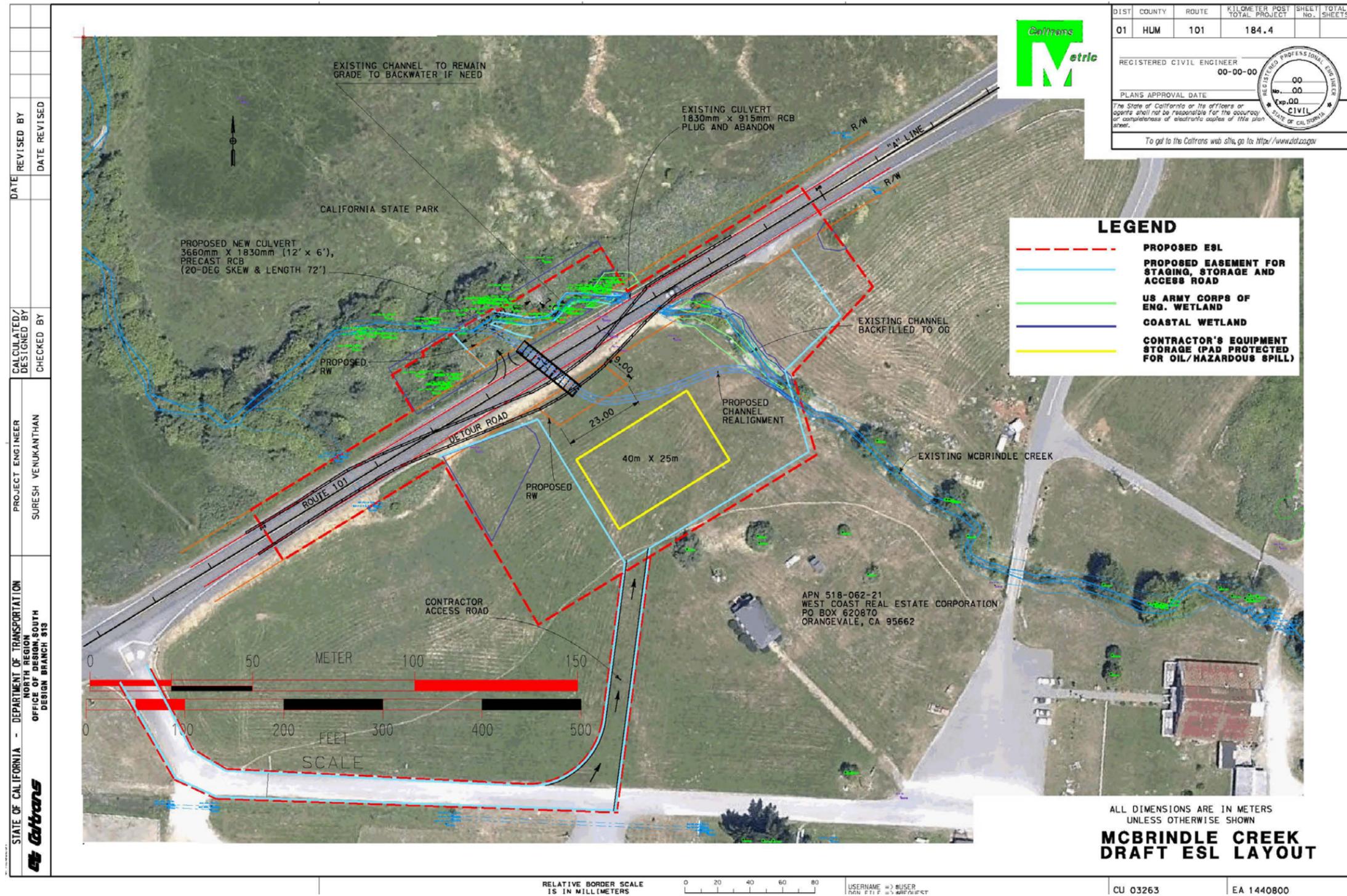
- Caltrans Standard Specifications contain Section 7-1.01I, "Sound Control Requirements." These specifications require the contractor to comply with all local sound control and noise level rules, regulations and ordinances that apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler. These specifications, which are included in all construction contracts, should aid in reducing construction related noise impacts.

## **BIOLOGICAL RESOURCES**

- To safeguard stream resources and wetlands, a temporary pad will be constructed for equipment staging and storage within the ESL. The pad is likely to be constructed of approximately 6" of crushed rock placed upon an impermeable membrane.
- Areas of vegetation removal will be limited to those areas identified in advance and approved by Caltrans and will not exceed the minimum necessary to complete operations. All vegetation removal necessary for project construction will utilize either a window for removal (September 1 through March 1, prior to construction) or surveys will be performed in advance of any ground disturbing activities to determine presence/absence of nests. If nests are present and active, work will be delayed until the young have successfully fledged.
- Sod will be salvaged from the area of new channel construction (top 16 inches of sod, roots and soil). Sod will be stockpiled and used as bank liner on the constructed terrace, adjacent to the new section of active channel.
- Placement of woody debris within the new stream reach will be directed on-site, during construction, as directed by the Resident Engineer in consultation with Caltrans Environmental staff and the California Department of Fish and Game.
- The new section of active channel will be lined with clean, river-run rock (washed prior to bringing to site) in size class proportions as follows: 20% at 5 inches, 40% at 3 inches and 20% at 2 inches. This same material will be specified for use in back filling the new culvert to create a natural bottom.
- Any areas of bare soil within the newly constructed stream terrace will be treated by applying ½ inches of mulch (shredded, certified weed free, wheat or rice straw will be specified to be used as mulch).
- In the year of construction, to minimize impacts to resident aquatic life, all in stream work will take place during the period July 1 to October 14.
- Prior to routing stream flow into the new channel, a fish rescue will be performed. The to-be-abandoned stream reach will be isolated with screens and then a permitted biologist will electrofish and/or seine the area.

- The newly constructed channel will be charged with 20-30% of the screened, diverted flow, until water is continuously flowing, and then 100% of the diverted stream flow will be routed into the new channel.
- If ground water is encountered during construction it will either be allowed to re-perk or it will be pumped uphill to re-perk. Any overland dewatering will be conducted in a manner that does not cause erosion or sedimentation of waterways.
- Riparian vegetation will be salvaged from the to-be-abandoned stream reach on the east side of roadway, and utilized to partially fulfill the re-vegetation effort along the new stream terrace.
- The new stream terrace will be re-vegetated with locally appropriate, native species of sedge, rush and shrubs to provide stable riparian vegetation. To avoid any roadway hazard as it relates to sight distance and the resident elk, willow will not be utilized in the re-vegetation effort. A few alders may be utilized for landscape effect.
- Caltrans will seek an agreement with the adjacent private landowner to restrict mowing around the new stream channel, such that a minimum 15 – 20 foot riparian buffer is perpetuated for a minimum 10 years.
- All construction areas will be stabilized prior to the onset of winter rains to prevent sediment loss into McBrindle Creek. All areas of disturbance will be hydro seeded and/or mulched.
- A pre-job construction meeting will be held between Caltrans Environmental staff and the Caltrans Resident Engineer, to raise awareness regarding the presence of Northern red-legged frog (CDFG Species of Concern) as well as proper handling and relocation techniques.
- All fuels, lubricants and any other hazardous material associated with project construction will be safeguarded to prevent elk interactions (including ingestion or spill) with such materials.
- The NOAA Fisheries Service is likely to issue a Biological Opinion for the proposed project. All Reasonable and Prudent Measures will be incorporated into the project to protect listed salmonids and their habitat.
- The CDFG will be issuing a Stream/Lakebed Alteration Agreement (SAA) and a 2080.1 Consistency Determination for this project. All conditions listed in the SAA and 2080.1 will be incorporated into the project.
- Environmentally Sensitive Area (ESA) fencing shall be used on the east side of the highway to protect the additional coastal wetlands.

# APPENDIX D. ENVIRONMENTAL STUDY LIMIT MAPPING



# APPENDIX E. PROPOSED CHANNEL DESIGN

