State Route 193
Curve Improvement

PLACER COUNTY, CALIFORNIA
DISTRICT 3 – PLA – 193, PM 4.4/5.5
EA 03-4E860, EFIS 0300000725

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

December 2012

GENERAL INFORMATION ABOUT THIS DOCUMENT

What's in this document:
The California Department of Transportation (Caltrans) has prepared this Initial Study (IS), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Placer County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). This IS has been prepared pursuant to CEQA and a Categorical Exclusion (CE) will be prepared pursuant to NEPA. This document describes the proposed project, what alternatives have been considered, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document.

- Additional copies of it, as well as of the technical studies we relied on in preparing it, are available for review at the Caltrans District 3 office at 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833. Copies of the Initial Study are available for review at the Placer County Main Library located at 350 Nevada Street, Auburn, CA 95603 and at the City of Lincoln Library located at 485 Twelve Bridges Dr, Lincoln, CA 95648.

- This document has also been made available online at the following website: http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm

- Attend the one or both of the open houses listed below:

  Thursday January 10, 2013
  McBean Pavilion, 65 McBean Park Drive, Lincoln, CA 95648
  Time: 6:00PM -8:00PM

  Thursday January 17, 2013
  Newcastle Elementary School Gym, 8951 Valley View Drive, Newcastle CA 95658
  Time 6:30PM -8:30PM

- We'd like to hear what you think. If you have any comments regarding the proposed project, please attend the open house and/or send your written comments to Caltrans by the deadline.

  - Submit comments via postal mail to:
    Caltrans Environmental Planning
    2379 Gateway Oaks Drive, Suite 150
    Sacramento, CA 95833
    Attention: Jennifer S. Clark

  - Submit comments via email to: Jennifer_Clark@dot.ca.gov.

- Be sure to submit comments by the deadline: January 31, 2013

What happens next:
After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project, (2) do 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, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Jennifer S. Clark, Environmental Planning, 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833; (916) 274-0601 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2229 (Voice) or 711.

03-PLA-193-PM 4.4/5.5
EA 03-4E860
EFIS 0300000725

Curve improvement on State Route 193 in Placer County

INITIAL STUDY with
Proposed Mitigated Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation

12-13-12
Date of Approval

For Susan D. Bauer
John Webb
Environmental Manager
District 3
California Department of Transportation

SCH: To be inserted after assigned for circulation

PROPOSED MITIGATED NEGATIVE DECLARATION
Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans) proposes to improve safety along State Route (SR) 193 in Placer County from Post Mile (PM) 4.4 to PM 5.5. The project is located approximately 4 miles east of the City of Lincoln. The project would include realigning the highway and widening the shoulders.

Determination
This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND 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 public 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 proposed project would have no effect on coastal zones, wild and scenic rivers, parks and recreation facilities, growth, timberlands, community character and cohesion, pedestrian and bicycle facilities, floodplains, and paleontology.

In addition, the proposed project would have no significant effect on existing and future land use, consistency with state, regional and local plans and programs, farmlands, Williamson Act lands, traffic and transportation, cultural resources, water quality, geology/soils, hazardous materials, air quality, and noise.

The proposed project would have no significantly adverse effect on visual and biological resources because the following mitigation measures would reduce potential effects to insignificance:

<u>Visual Resources</u>

- Areas that have removed trees, shrubs and created soil disturbance due to construction activities will be re-established by applying a permanent erosion control and re-planting trees and shrubs where they are deemed appropriate.
- Trees and shrubs removed as part of a riparian zone will be replaced as part of the required mitigation per the CDFG 1602 Stream Bed Alteration Agreement. The biologist shall work with the landscape architect to ensure that the placement of the replanted trees and shrubs will also meet the requirements of any necessary visual mitigation.
- Contour grading and slope rounding shall be utilized on all cut and fill slopes in order to help restore the environment in a manner that will blend with the surrounding natural landscape.
- The portion of the road that will be abandoned due to the new road alignment will be removed in order to allow for the restoration of trees and vegetation. This restoration

Draft

shall require the complete removal of the old road including all sub-base material and bituminous surfacing. The area will require amendment with imported soil that shall be contour graded to look natural with the surrounding landscape.

Oak Woodlands

- Compensatory mitigation for the loss of 5.75 acres of valley oak woodlands will be a combination of both on-site restoration and off-site preservation. Mitigation ratios will range from 1:1 to 3:1 depending on the size and location of the trees that are affected. This mitigation will be part of the compensation proposal prepared to minimize the project effects on riparian and stream zone environments. Caltrans will also work with Placer County to ensure, where feasible, that all oak woodland replacement meet the goals of Placer County's Oak Woodland Management Plan (included in the Natural Environment Study).
- Upon completion of the project, disturbed areas will be re-contoured to a natural grade and re-vegetated with valley oak seedlings and other native species appropriate for the site conditions.

Wetlands and other waters of the U.S.

- The proposed project would permanently impact 1.18 acres of jurisdictional wetlands which will be mitigated either through an in-lieu-fee payment to an USACE approved organization, on-site at 1:1 ratio by creating wetlands near PM 5.0 or offsite, pending consultation with USACE. Temporary impacts to 0.28 acre of jurisdictional wetlands of the U.S. would be mitigated through on-site restoration at 1:1 ratio.
- The proposed project would permanently impact 0.04 acre of jurisdictional other waters of the U.S., which will be mitigated either through an in-lieu-fee payment to an USACE approved organization, on-site at a 1:1 ratio by creating vegetated buffers along the affected other waterways in the study area or off-site, pending consultation with USACE. Temporary impacts to 0.03 acres of jurisdictional other waters of the U.S. would be mitigated on-site at 1:1 ratio by restoring stream channels to a natural state and planting vegetated buffers along disturbed waterways at the three stream locations within the project area.

Valley Elderberry Longhorn Beetle (VELB)

- To mitigate potential project impacts to three elderberry bushes, Caltrans will purchase mitigation credits at a USFWS-approved VELB mitigation bank (such as River Ranch in Colusa County or French Camp Conservation Bank in San Joaquin County) or as otherwise directed in accordance with the requirements of the Biological Opinion for this project.

Draft

_____ _____

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

Date

TABLE OF CONTENTS

CHAPTER 1 PROPOSED PROJECT 1
1.1 Introduction 1
1.2 Purpose and Need 1
1.3 Project Description 2
1.4 Alternatives 2
1.4.1 Build Alternative 2
1.4.2 No-Build Alternative 3
1.5 Alternatives Considered but Eliminated from Further Discussion 3
1.5.1 Widening the Existing Roadway Without Horizontal Alignment Improvements 3
1.6 Permits and Approvals Needed 3
CHAPTER 2 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES 13
2.1 Human Environment 13
2.1.1 Land Use 13
2.1.2 Farmlands 18
2.1.3 Relocations and Real Property Acquisition 22
2.1.4 Utilities/Emergency Services 23
2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities 24
2.1.6 Visual/Aesthetics 25
2.1.7 Cultural Resources 34
2.2 Physical Environment 37
2.2.1 Water Quality and Storm Water Runoff 37
2.2.2 Geology/Soils/Seismic/Topography 43
2.2.3 Hazardous Waste/Materials 44
2.2.4 Air Quality 46
2.2.5 Noise 48
2.3 Biological Environment 51
2.3.1 Natural Communities 55
2.3.2 Wetlands and Other Waters 57
2.3.3 Plant Species 59
2.3.4 Animal Species 60
2.3.5 Threatened and Endangered Species 62
2.3.6 Invasive Species 67
2.3.7 Cumulative Impacts 68

2.4 Climate Change 71
CHAPTER 3 COMMENTS AND COORDINATION....82
CHAPTER 4 LIST OF PREPARERS AND TECHNICAL STUDIES 83
CHAPTER 5 DISTRIBUTION LIST....84
APPENDIX A CEQA CHECKLIST 85
APPENDIX B NRCS-CPA-106 94
APPENDIX C DEPARTMENT OF CONSERVATION CORRESPONDANCE 95
APPENDIX D TITLE VI POLICY STATEMENT....100
APPENDIX E SHPO CORRESPONDANCE....101
APPENDIX F BIOLOGICAL RESOURCES MAP....105
APPENDIX G TRIBITARY MAP 109
APPENDIX H AVOIDANCE, MINIMIZATION AND/OR MITIGATION SUMMARY....113

LIST OF TABLES

TABLE 1: COLLISION ANALYSIS.... 1
TABLE 2: ZONING AND LAND USE DESIGNATIONS....13
TABLE 3: CONSISTENCY WITH STATE, REGIONAL AND LOCAL PLANS AND PROGRAMS 17
TABLE 4: FARMLAND IMPACTS....19
TABLE 5: WATER QUALITY OBJECTIVES AND BENEFICIAL USES....41
TABLE 6: LISTED AND PROPOSED SPECIES, AND CRITICAL HABITAT POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE PROJECT AREA....51
TABLE 7: IMPACTS TO WETLANDS AND OTHER WATERS OF THE U.S. 58
TABLE 8: CLIMATE CHANGE/CO2 REDUCTION STRATEGIES....78

LIST OF FIGURES

FIGURE 1: PROJECT VICINITY MAP 5
FIGURE 2: PROJECT LOCATION MAP.... 6
FIGURE 3: PROJECT LAYOUT MAP.... 7
FIGURE 4: LA FAILLE RANCH 15
FIGURE 5: BICKFORD RANCH 16
FIGURE 6: FARMLAND AND WILLIAMSON ACT MAP 20
FIGURE 7: CALIFORNIA GREENHOUSE GAS FORECAST 75
FIGURE 8: THE MOBILITY PYRAMID 76

LIST OF ACRONYMS/ABBRIEVIATED 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
CDC	California Department of Conservation
CDFG	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
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CRZ	Clear Recovery Zone
Dbh	Diameter at breast height
DWR	California Department of Water Resources
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
ft	foot/feet
GHGs	Greenhouse Gases
GIS	Graphic Information Services
GPS	Global Positioning System
HPSR	Historic Property Survey Report
in	inch(es)
MOA	Memorandum of Agreement
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOA	Naturally occurring asbestos
NO_2	Nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
PA	Programmatic Agreement
PM	post mile
PM_{10}	Particulate matter
PQS	Professionally Qualified Staff
RAP	Relocation Assistance Program

RWQCB	Regional Water Quality Control Board
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 Special Provisions
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRQCB	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
USFWS	United States Fish and Wildlife Service

CHAPTER 1 PROPOSED PROJECT

The information provided in this chapter is summarized from the Draft Project Report.

1.1 INTRODUCTION

The California Department of Transportation (Caltrans) proposes to improve safety along State Route (SR) 193 in Placer County from Post Mile (PM) 4.4 to PM 5.5 by realigning and widening the highway and providing a clear recovery zone[1] (CRZ). The proposed project is located on State Route 193 between Lincoln Boulevard (City of Lincoln) and Interstate 80 (northeast of Newcastle). The project begins approximately 500 ft west of Clark Tunnel Road and ends approximately 500 ft east of Mandarin Hill Road. See Figures 1 and 2 for project vicinity and location maps.

This project is programmed under the State Highway Operation and Protection Program (SHOPP) 201.010 Safety Improvement Program. The project is included in the Sacramento Area Council of Governments (SACOG) 2011/14 Metropolitan Transportation Improvement Program (MTIP), ID# CAL20389. Cost was estimated at $12,463,000 as of October 26, 2012, which includes $3,963,000 for right of way and utility relocation and $8,500,000 for construction.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). This Initial Study (IS) with Proposed Mitigated Negative Declaration (MND) has been prepared in compliance with CEQA. A Categorical Exclusion will be prepared pursuant to NEPA.

1.2 PURPOSE AND NEED

The purpose of this project is to improve safety along SR 193 within the project limits by providing improvements that address the observed collision patterns.

This 1.1-mile segment of roadway experienced a total of 34 collisions during the four year period April 1, 2003 to March 31, 2007 (summarized in table below), including three collisions involving fatalities. The observed total accident rate is 3.3 times higher than the statewide average for a similar type facility and the observed fatal accident rate is 11.9 times higher than the statewide average for a similar type facility.

TABLE 1: COLLISION ANALYSIS

	Actual	Statewide
Total Accident Rate (acc/mvm)	4.31	1.32
Fatal + Injury Accident Rate (acc/mvm)	2.15	0.61
Fatal Accident Rate (acc/mvm)	0.380	0.032

*acc/mvm= accidents/million vehicle miles

[1] The clear recovery zone (CRZ) begins at the edge of the travel lane and includes the shoulder. Typically, the CRZ is 20 ft which includes an 8 ft shoulder and an additional 12 ft beyond the shoulder that is cleared of fixed objects (utility poles/trees).

Summary of observed trends in the collision data:

- No dominant direction of travel: 16 eastbound collisions, 18 westbound collisions.
- Mostly single vehicle collisions: 33 of 34 collisions involve a single vehicle only. There are no cross centerline collisions involving vehicles from each opposing direction.
- Most vehicles run-off road during collision: 32 of 34 collisions. Data indicates 25% of these to the left, 75% to the right. Six run-off road vehicles hit a utility pole and two hit trees.
- 16 collisions resulted in overturned vehicles.
- Driving too fast for roadway conditions was a factor in 21 of 34 collisions.
- Seven collisions involved solo motorcycles, including the three collisions with fatalities.
- 17 collisions were located in the vicinity of the reverse horizontal curves between PM 4.95 to PM 5.10; these included six motorcycle collisions.

The overall collision history shows a run-off road pattern, however there is also a pattern of motorcycle collisions that have occurred within the reverse horizontal curves from PM 4.95 to PM 5.10. The three collisions involving fatalities were single motorcycle run-off road collisions located within this reverse curve. A review of existing roadway conditions and collision patterns indicates that improving the roadway's horizontal curvature would provide the highest probability of reducing collisions because it addresses both known geometric deficiencies and observed collision patterns.

Other beneficial elements of the project include: improving superelevation[2] which helps vehicles remain in the travel lane, improving the sight distance for drivers, widening shoulders, and creating a CRZ which would provide drivers an opportunity to recover if they leave the travel lane.

1.3 PROJECT DESCRIPTION

SR 193, within the project limits, is a rural two-lane conventional highway in rolling terrain. The existing pavement width is 24 ft (two-12 ft lanes without paved shoulders). The existing horizontal and vertical alignments are characterized by numerous horizontal curves with short tangents (straight sections of roadway) between the curves. There are no existing non-motorized facilities such as bicycle lanes and/or pedestrian facilities. The 2011 annual average daily traffic (ADT) was 4,970. This project proposes to improve safety by realigning and widening the highway and providing a CRZ. See Figure 3 for a project layout map.

1.4 ALTERNATIVES

This project has one build alternative and the no-build alternative.

1.4.1 Build Alternative

This alternative would:

- Improve the horizontal alignment[3].
- Improve the sight distance for drivers.
- Improve superelevation.

[2] Superelevation refers to the vertical distance between the heights of the inner and outer edges of pavement. The outer edge of the road is raised to create a "tilting" or "banking" of the roadway which aids the driver in maneuvering a curve.

[3] The horizontal alignment refers to the design of the road in the horizontal plane and consists of straight sections of road, known as tangents, connected by circular horizontal curves.

- Widen shoulders to 8 ft (adding pavement flaring for road and driveway intersections as necessary).
- Remove/relocate fixed objects (utility poles/trees) where feasible within the CRZ.
- Reconfigure driveways and intersections.
- Relocate roadside ditches.
- Install culverts.
- Install metal beam guard rail as appropriate.

Several cuts and fills will be required, necessitating the acquisition of both permanent and temporary right-of-way. It is anticipated that cut and fill slopes would be 2:1 (horizontal run to vertical rise) but the cut slopes may be steepened to reduce impacts.

Avoidance and Minimization Efforts

In an effort to minimize impacts to adjacent property owners and to minimize or avoid impacts to environmental resources this project proposes to use selective design criteria less than current design minimums, such as horizontal curve radius and/or superelevation transition lengths. This requires exceptions to mandatory and advisory design standards. These required exceptions have been discussed with the Caltrans design coordinator and have received tentative approval. In addition, various possible alignments were analyzed to avoid and minimize impacts to sensitive environmental resources as much as feasible. As design is finalized and further geotechnical information becomes available other possible measures to reduce impacts may be implemented including but not limited to steepening cut slopes to 1.5:1, using headwalls at selected drainage systems, and using earth retaining systems along cut slopes.

1.4.2 No-Build Alternative

This alternative would leave the roadway in its current state and would have no impacts to environmental resources. However, this alternative would not improve the safety of the roadway at this location and would not meet the purpose and need of the project.

1.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

1.5.1 Widening the Existing Roadway Without Horizontal Alignment Improvements

Widening the existing roadway without horizontal alignment improvements (adding shoulders only) was eliminated from further discussion because the anticipated reduction in collisions by widening alone is substantially less than correcting the horizontal alignment and would not adequately address the observed motorcycle collisions associated with the reverse horizontal curve in the vicinity of PM 4.95 to PM 5.10. This alternative would also limit the ability to improve superelevation because the existing tangent sections are non-standard.

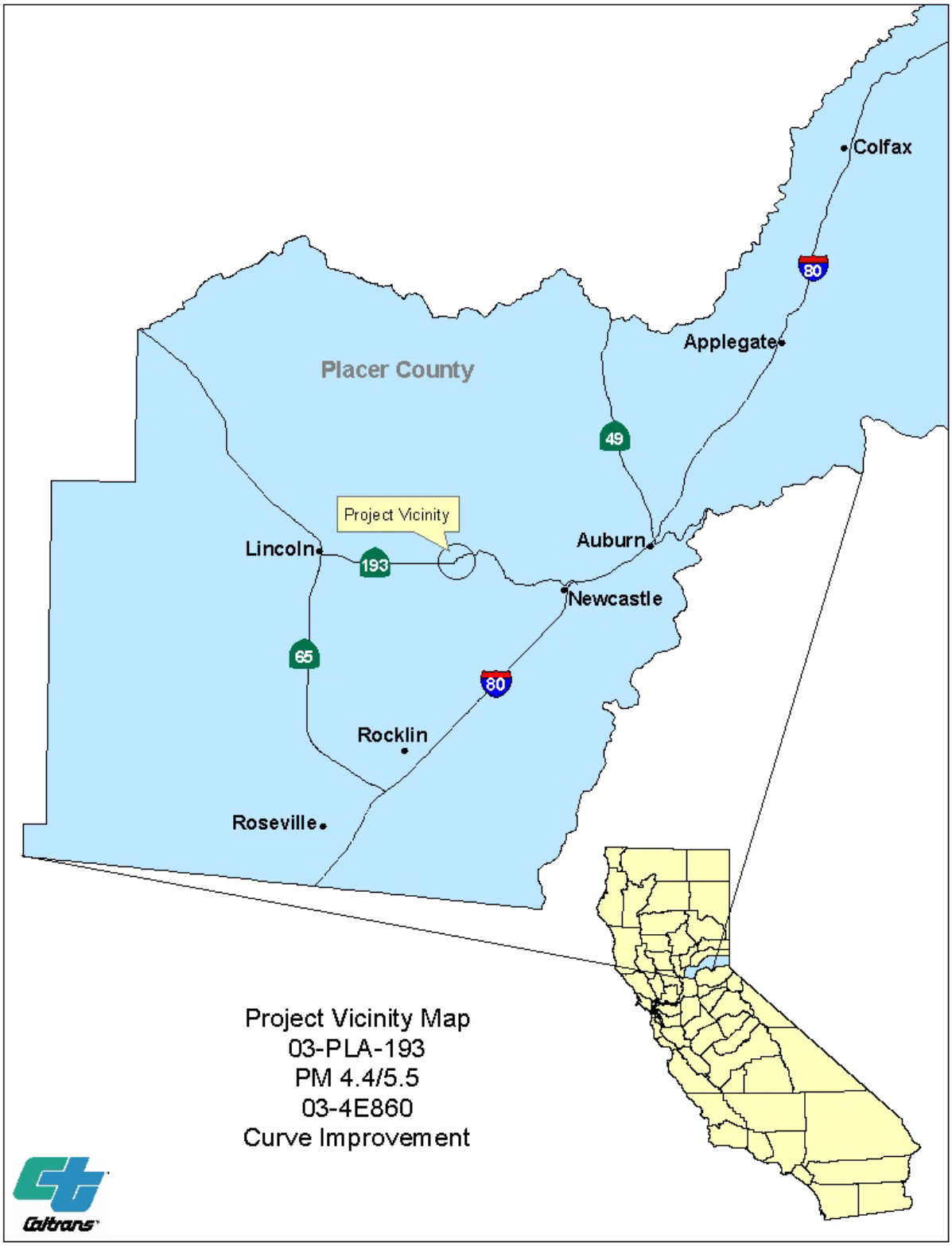
1.6 PERMITS AND APPROVALS NEEDED

The proposed project requires the following permits and approvals:

- Section 404 permit from the United States Army Corps of Engineers (USACE) for work in jurisdictional wetlands and other waters of the U. S.

- Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).
- Section 1602 Stream and Lakebed Alteration Agreement from the California Department of Fish and Game (CDFG).
- Concurrence on a Not Likely to Adversely Affect Determination for California red-legged frog (CRLF) from the United States Fish and Wildlife Service (USFWS) under Section 7 of the Federal Endangered Species Act.
- Concurrence on a Likely to Adversely Affect Determination for valley elderberry longhorn beetle (VELB) from USFWS under Section 7 of the Federal Endangered Species Act.
- Concurrence from the State Historic Preservation Officer (SHPO).

FIGURE 1: PROJECT VICINITY MAP



*Please note that this map does not reflect the new Lincoln Bypass. SR 193 no longer connects directly to SR 65. Current map files used to create this map were not available at the time of this writing.

FIGURE 2: PROJECT LOCATION MAP

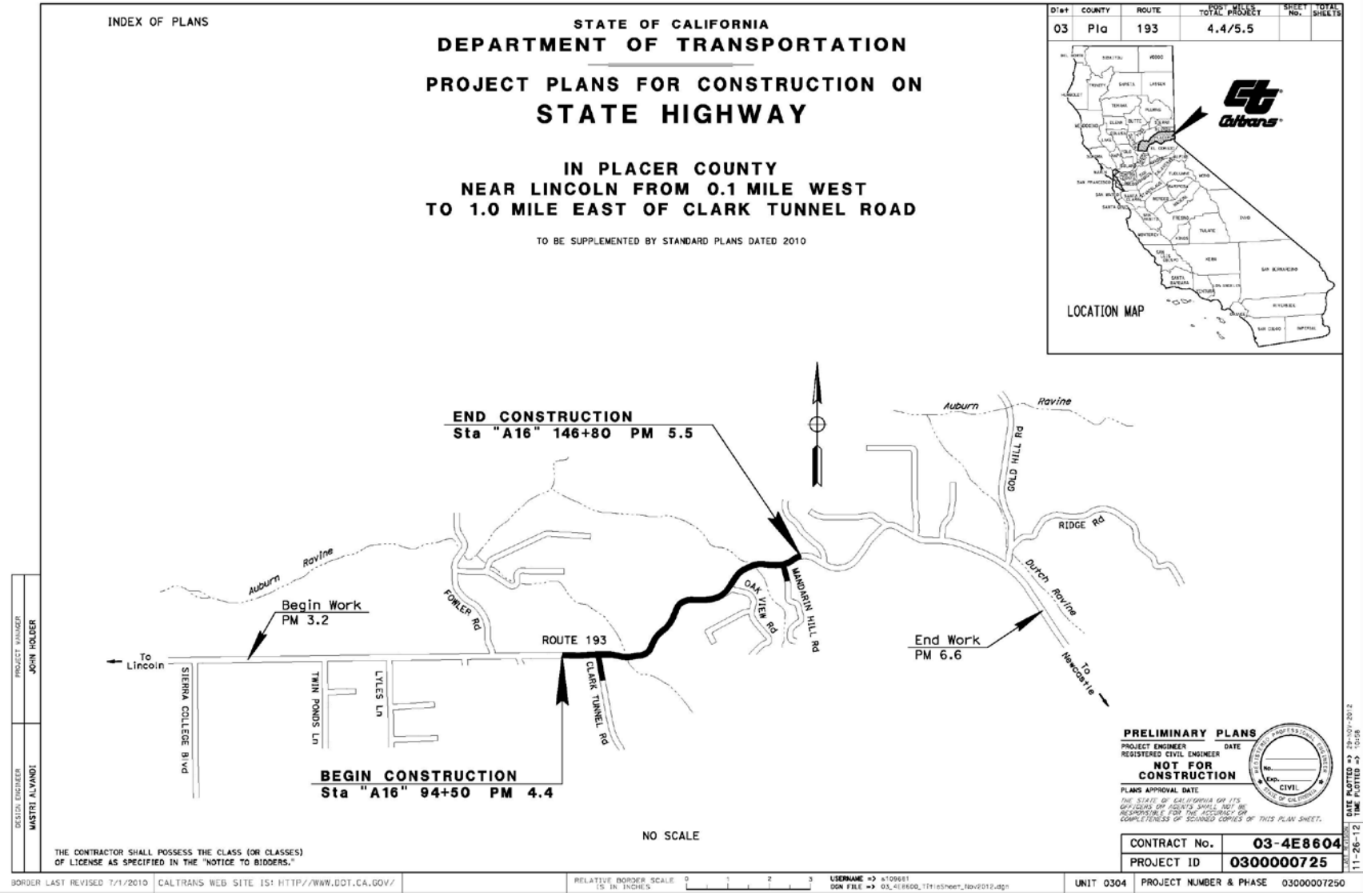
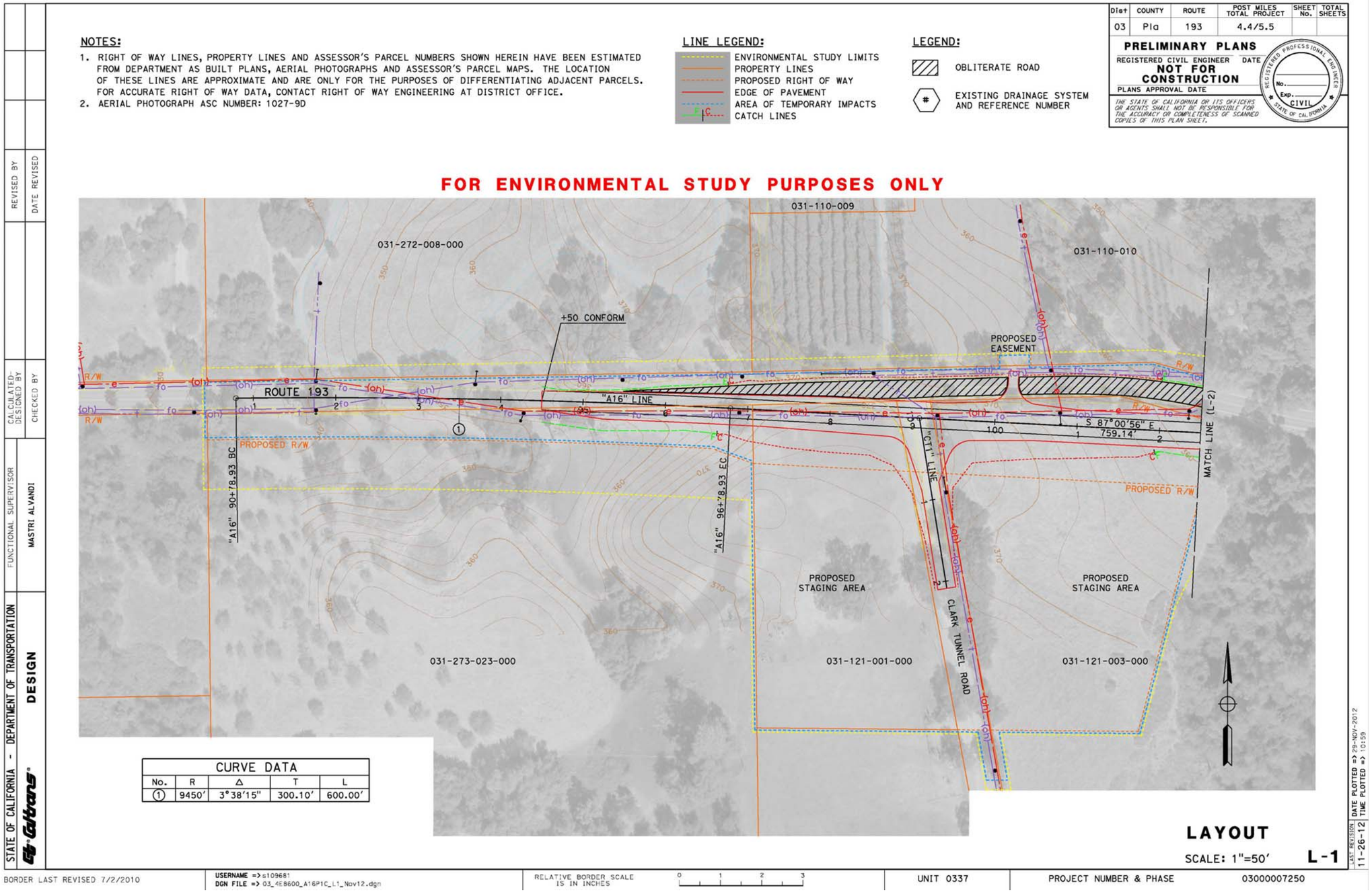


FIGURE 3: PROJECT LAYOUT MAP



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	193	4.4/5.5		

PRELIMINARY PLANS

REGISTERED CIVIL ENGINEER DATE

NOT FOR CONSTRUCTION

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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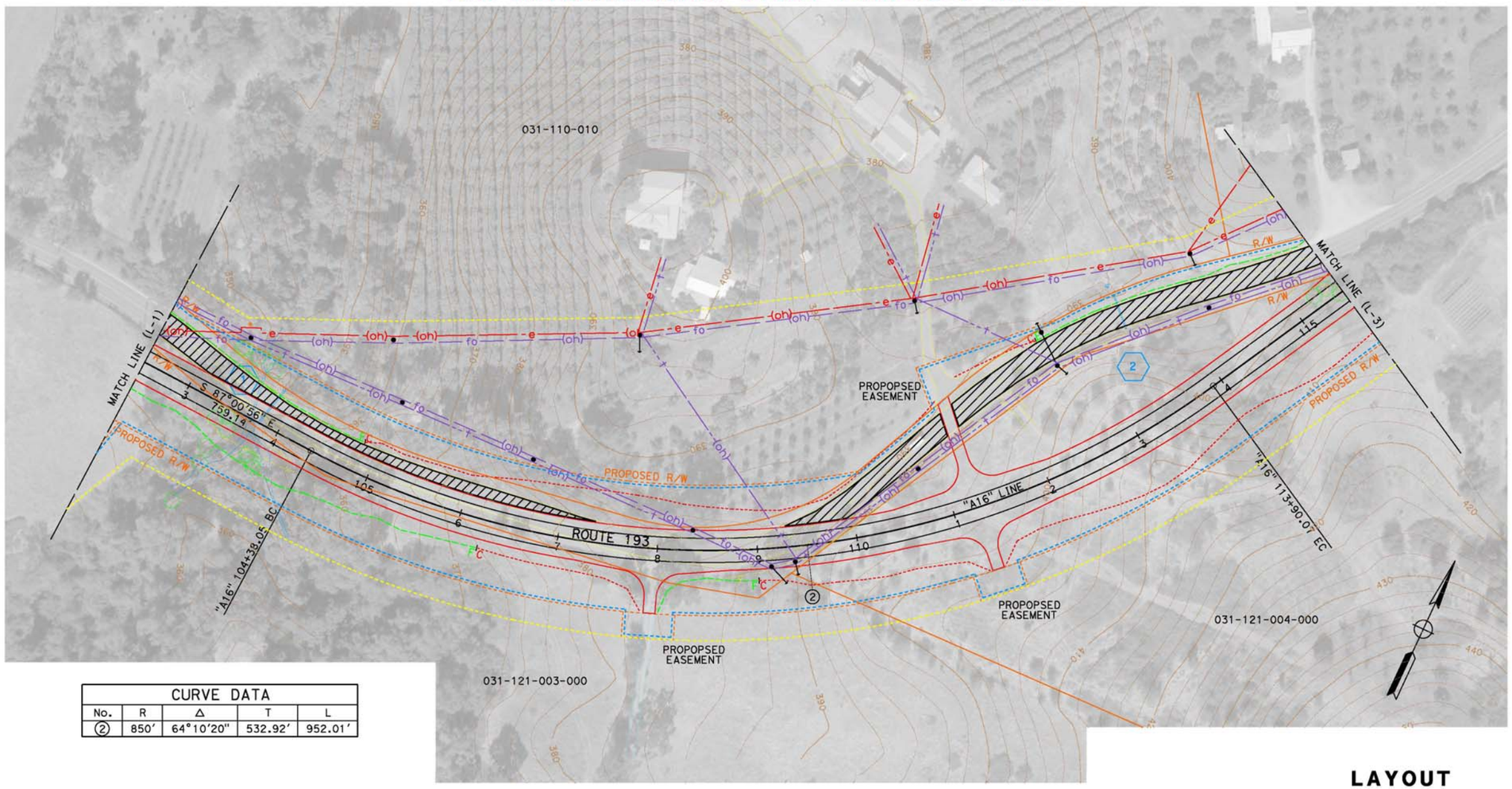
LINE LEGEND:

- ENVIRONMENTAL STUDY LIMITS
- PROPERTY LINES
- PROPOSED RIGHT OF WAY
- EDGE OF PAVEMENT
- AREA OF TEMPORARY IMPACTS
- CATCH LINES

LEGEND:

- OBLITERATE ROAD
- EXISTING DRAINAGE SYSTEM AND REFERENCE NUMBER

FOR ENVIRONMENTAL STUDY PURPOSES ONLY



CURVE DATA				
No.	R	Δ	T	L
②	850'	64°10'20"	532.92'	952.01'

LAYOUT

SCALE: 1"=50'

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: MASTRI ALVANDI

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 11-26-12

DATE PLOTTED => 29-NOV-2012

TIME PLOTTED => 10:59

BORDER LAST REVISED 7/2/2010

USERNAME => s109681

DGN FILE => 03_4E8600_A16P1C_L2_Nov12.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0337

PROJECT NUMBER & PHASE 03000007250

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	193	4.4/5.5		

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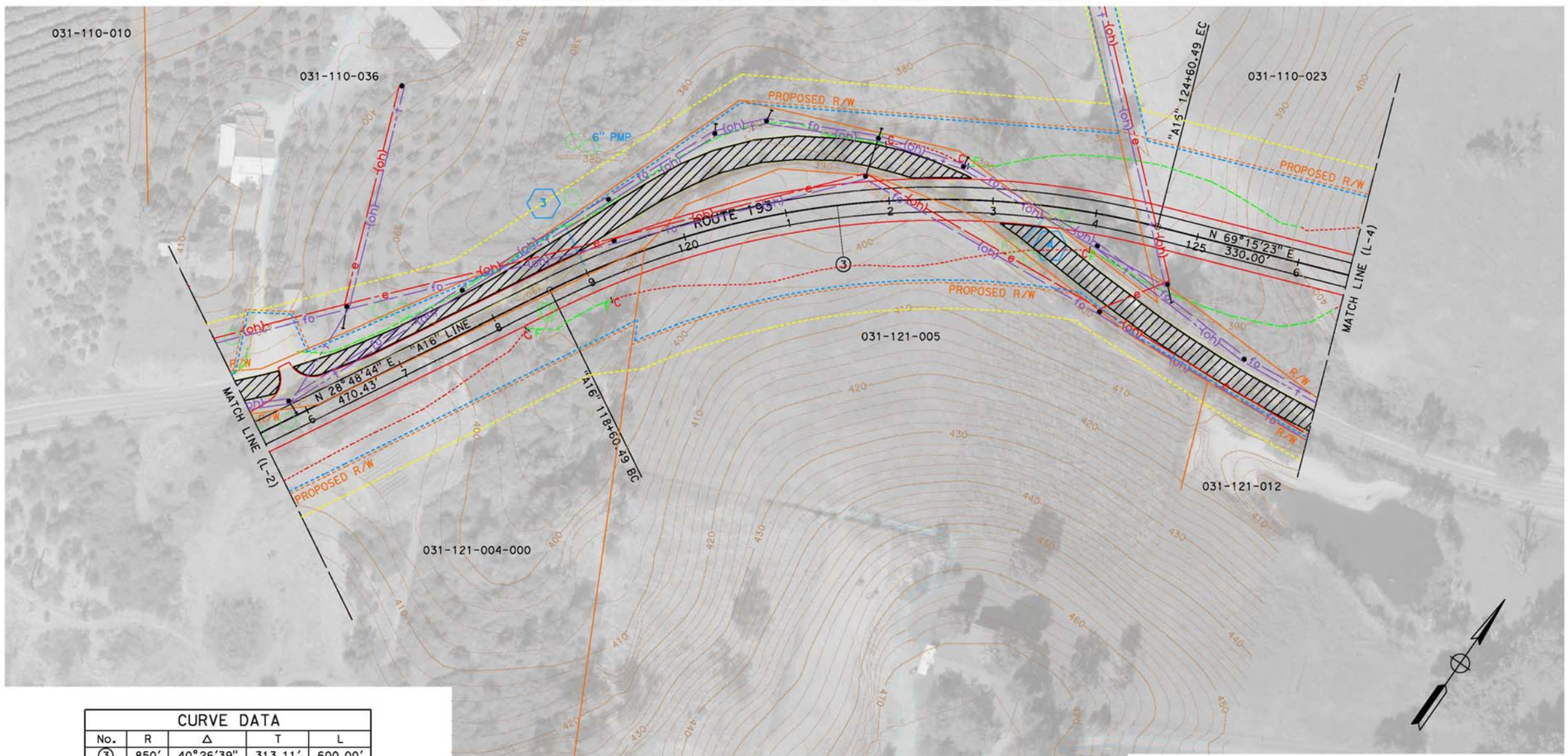

CURVE DATA				
No.	R	Δ	T	L
3	850'	40°26'39"	313.11'	600.00'

LAYOUT

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: MASTRI ALVANDI

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

LAST REVISION 11-26-12 | DATE PLOTTED => 29-NOV-2012 | TIME PLOTTED => 10:59

BORDER LAST REVISED 7/2/2010 | USERNAME => s109681 | DGN FILE => 03_4E8600_A16P1C_L3_Nov12.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0337 | PROJECT NUMBER & PHASE 03000007250

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	193	4.4/5.5		

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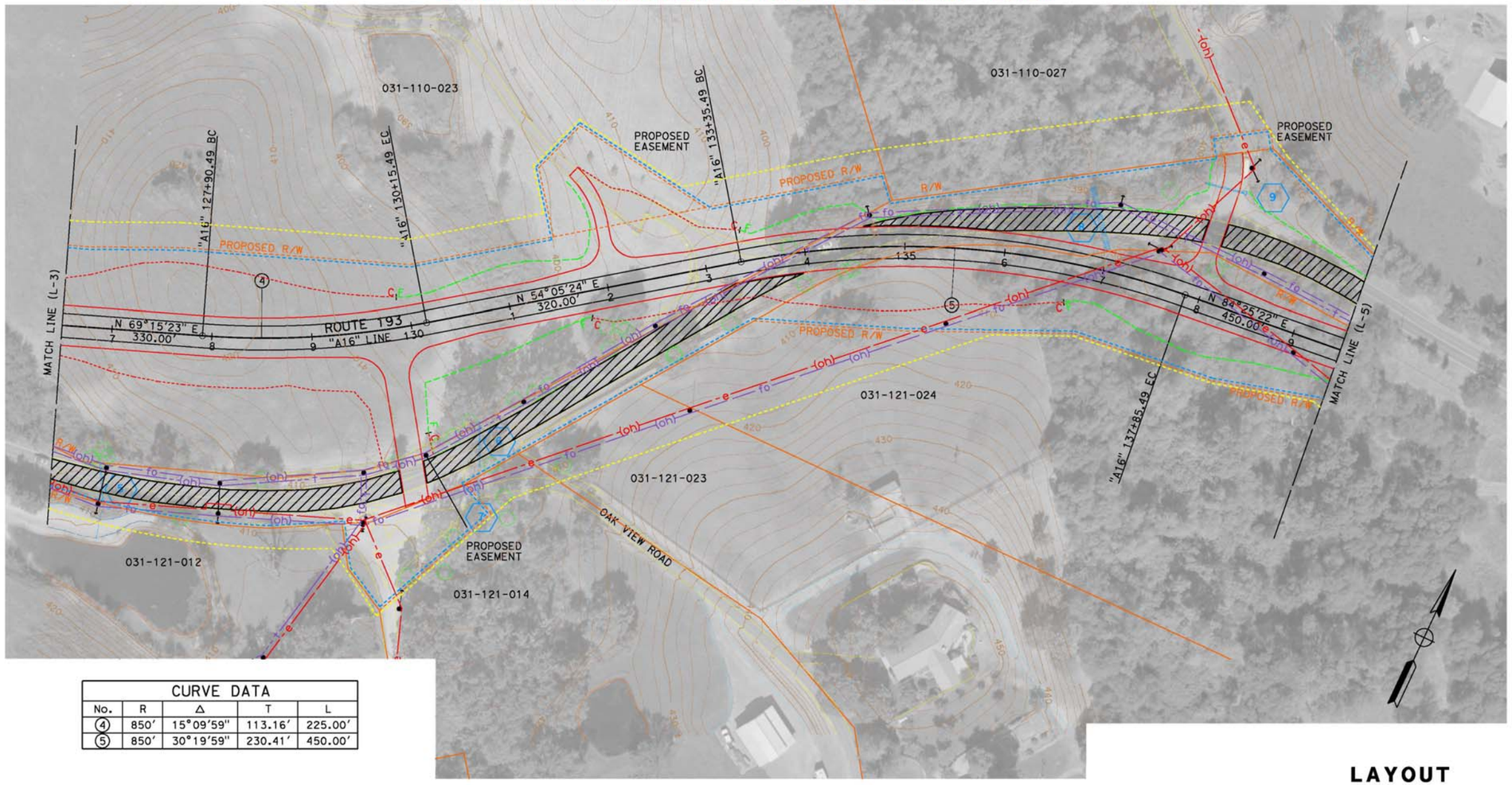


CURVE DATA				
No.	R	Δ	T	L
4	850'	15°09'59"	113.16'	225.00'
5	850'	30°19'59"	230.41'	450.00'

LAYOUT

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: MASTRI ALVANDI

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 11-26-12

DATE PLOTTED => 29-NOV-2012

TIME PLOTTED => 10:59

BORDER LAST REVISED 7/2/2010

USERNAME => s109681

DGN FILE => 03_4E8600_A16P1C_L4_Nov12.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0337

PROJECT NUMBER & PHASE 03000007250

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	193	4.4/5.5		

PRELIMINARY PLANS

REGISTERED CIVIL ENGINEER DATE

NOT FOR CONSTRUCTION

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

NOTE:

RIGHT OF WAY LINES, PROPERTY LINES AND ASSESSOR'S PARCEL NUMBERS SHOWN HEREIN HAVE BEEN ESTIMATED FROM DEPARTMENT AS BUILT PLANS, AERIAL PHOTOGRAPHS AND ASSESSOR'S PARCEL MAPS. THE LOCATION OF THESE LINES ARE APPROXIMATE AND ONLY FOR THE PURPOSES OF DIFFERENTIATING ADJACENT PARCELS. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

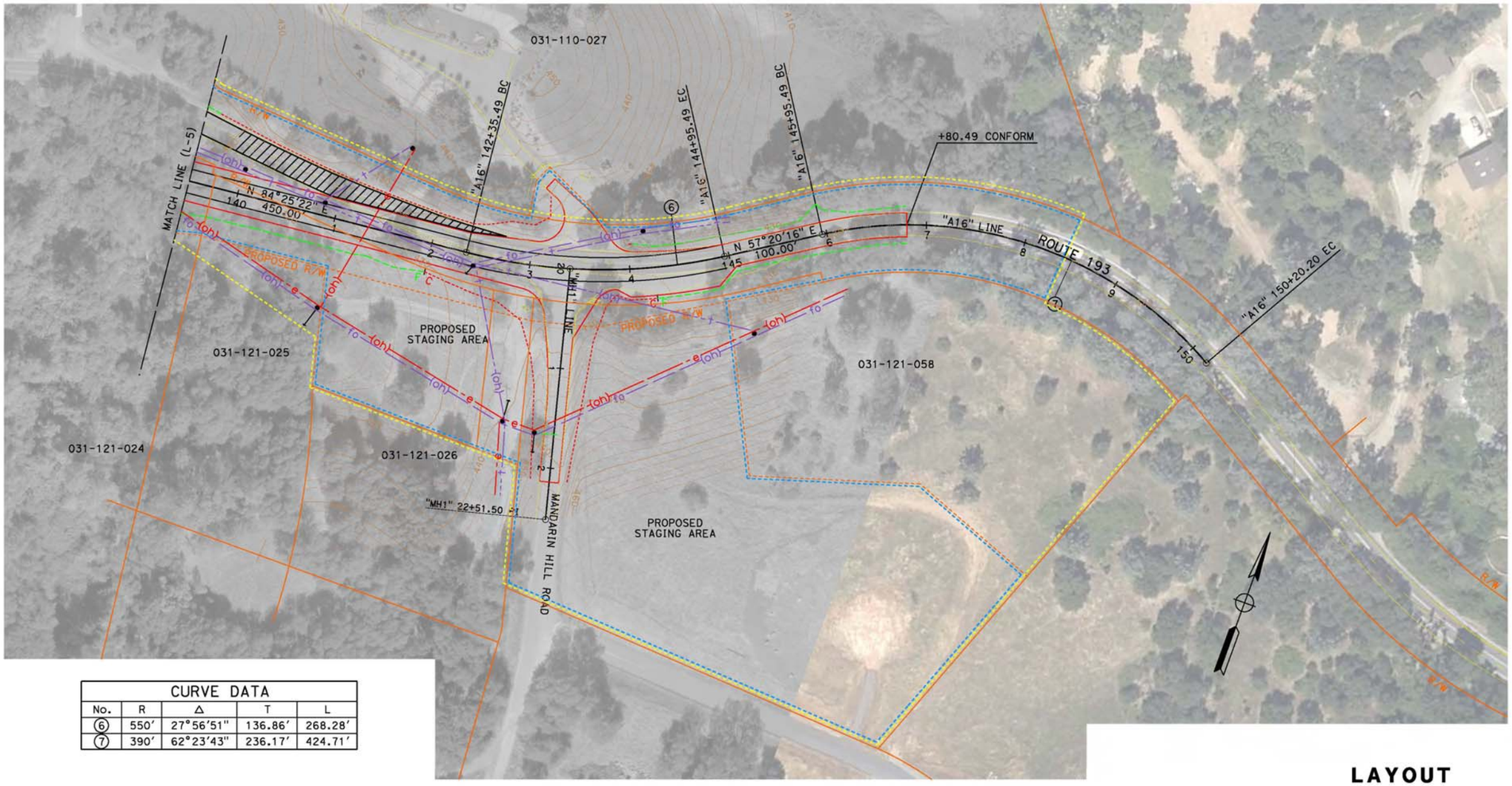
LINE LEGEND:

- ENVIRONMENTAL STUDY LIMITS
- PROPERTY LINES
- PROPOSED RIGHT OF WAY
- EDGE OF PAVEMENT
- AREA OF TEMPORARY IMPACTS
- CATCH LINES

LEGEND:

- OBLITERATE ROAD
- # EXISTING DRAINAGE SYSTEM AND REFERENCE NUMBER

FOR ENVIRONMENTAL STUDY PURPOSES ONLY



CURVE DATA				
No.	R	Δ	T	L
6	550'	27°56'51"	136.86'	268.28'
7	390'	62°23'43"	236.17'	424.71'

LAYOUT

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: MASTRI ALYANDI

CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 11-26-12 | DATE PLOTTED => 29-NOV-2012 | TIME PLOTTED => 11:00

BORDER LAST REVISED 7/2/2010 | USERNAME => s109681 | DGN FILE => 03_4E8600_A16P1C_L5_Nov12.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0337 | PROJECT NUMBER & PHASE 03000007250

CHAPTER 2 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified: coastal zones, wild and scenic rivers, parks and recreation facilities, growth, timberlands, community character and cohesion, floodplains and paleontology. Consequently, there is no further discussion regarding these issues in this document.

2.1 HUMAN ENVIRONMENT

2.1.1 Land Use

Existing and Future Land Use

Affected Environment

The proposed project is in a rural area of Placer County. There are 17 parcels adjacent to SR 193 within the project limits. According to the Placer County Geographical Information System (GIS) Basemap, the parcels have a land use designation of Agricultural/Timberland or Rural Residential and are zoned as Farm with either a 5 or 10 acre minimum (see table below). The Placer County General Plan (GP) identifies agricultural land as areas of prime agricultural soils and other productive and potentially productive lands where commercial agricultural uses can exist. Typical uses allowed include but are not limited to crop production, orchards, and grazing. Although the land use designation includes timberland, none of the parcels are zoned as timberland (TPZ). Rural residential land is generally located away from cities and unincorporated community centers, in hilly, mountainous, and/or forested terrain. It is compatible with smaller-scale farming and ranching operations. Typical uses allowed include but are not limited to detached single-family dwellings and secondary dwellings, crop production and grazing, and limited agricultural support businesses such as roadside stands.

TABLE 2: ZONING AND LAND USE DESIGNATIONS

APN*	Zoning**	GP Land Use Designation
031-110-010-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-110-023-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-110-027-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-110-036-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-121-001-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-121-003-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-121-004-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-121-005-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-121-012-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-121-014-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN

031-121-023-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-121-024-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-121-025-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-121-026-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-121-058-000	F-B-X 5 AC. MIN.	Rural Residential 1-10 AC. MIN
031-272-008-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN
031-273-023-000	F-B-X 10 AC. MIN.	Agriculture/Timberland-10 AC. MIN

*APN=Assessor's Parcel Number
**F=Farm, BX=Minimum building site size (parcel size)

There are two proposed developments near the project limits, Bickford Ranch and La Faille Ranch. La Faille Ranch is located just south of SR 193 and just east of Clark Tunnel Road (see Figure 4). Bickford Ranch is located south of SR 193 and east of Sierra College Boulevard (see Figure 5).

The La Faille Ranch development proposes to build 14 residential lots, each 10 acres or larger on a 165 acre property. CEQA review has not been completed for this project yet.

The second development proposed for this area is the Bickford Ranch development. This was to be a 1,950 home development on 1,955 acres located between the towns of Lincoln and Penryn, southwest of the project location. A Final Environmental Impact Report was approved in November 2000. The developers for this residential project filed for bankruptcy in 2008.

Environmental Consequences
Construction of the project would require new right-of-way from several of the parcels adjacent to the highway. The new right-of-way required may affect the current subdivision plan of the La Faille Ranch development as the parcels in this subdivision are planned to be at least 10 acres. The proposed right-of-way lines are preliminary and subject to change based on final project design. No impacts are anticipated to the Bickford Ranch development. The acquisition of land needed to construct the proposed safety project is not expected to substantially affect existing or future land use. Less than significant impacts to land use pursuant to the California Environmental Quality Act (CEQA) are anticipated and no avoidance, minimization, or mitigation measures are proposed.

FIGURE 4: LA FAILLE RANCH

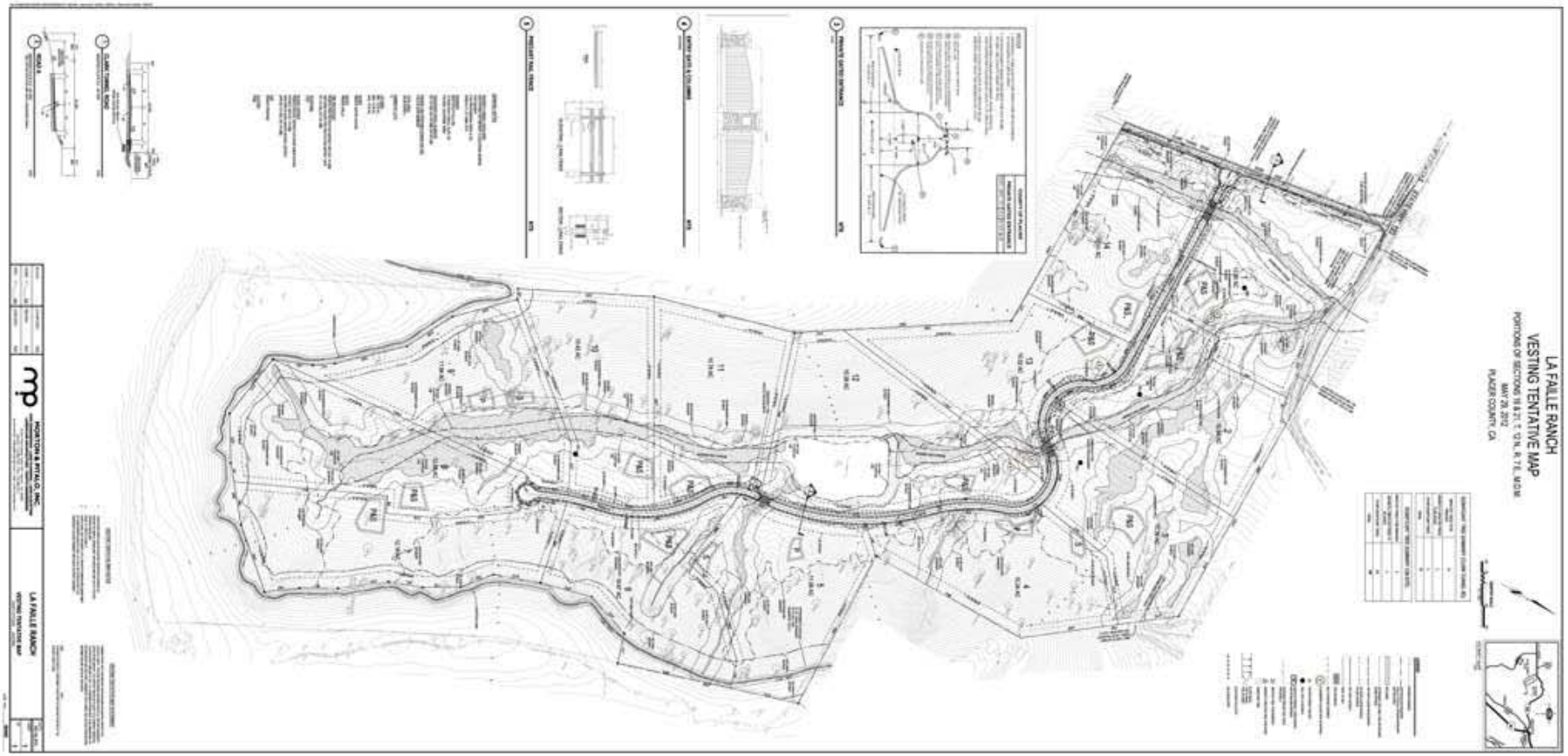
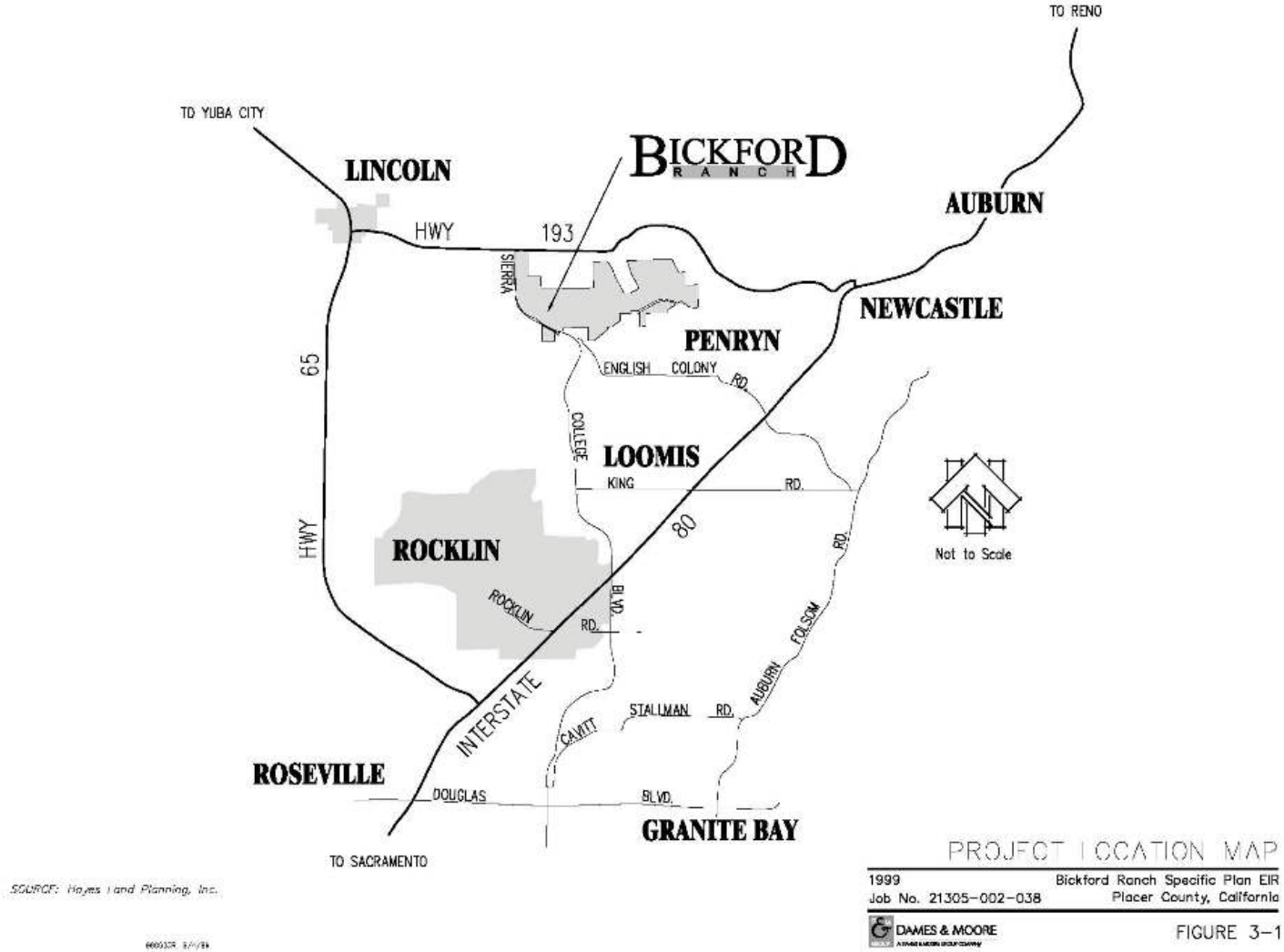


FIGURE 5: BICKFORD RANCH



Consistency with State, Regional, and Local Plans and Programs

Affected Environment

This project is located within unincorporated Placer County. The Placer County General Plan was adopted on August 16, 1994. Goals and policies from the General Plan that are applicable to the proposed project are shown in Table 3.

Placer County is included as part of the Sacramento Area Council of Governments (SACOG). SACOG is a Metropolitan Planning Organization that comprises El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba Counties. SACOG is responsible for preparing the region's long-range transportation plan, the Metropolitan Transportation Plan (MTP), and the short term transportation plan, the Metropolitan Transportation Improvement Program (MTIP).

Environmental Consequences

TABLE 3: CONSISTENCY WITH STATE, REGIONAL AND LOCAL PLANS AND PROGRAMS

Policy/Goal	**Alternative A**	**No-Build Alternative**
Goal 3.A: To provide for the long-range planning and development of the County's roadway system to ensure the safe and efficient movement of people and goods.	*Consistent* This project proposes to improve the safety of the roadway.	*Inconsistent* The No-Build Alternative would do nothing to improve the safety of the roadway.
Policy 1.H.2: The County shall seek to ensure that new development and public works projects do not encourage expansion of urban uses into designated agricultural areas.	*Consistent*. The project does not increase the capacity of the roadway and is not expected to encourage expansion of urban uses into designated agricultural areas.	*Consistent*. The No-Build Alternative would not encourage expansion of urban uses into designated agricultural areas.
Policy 1.K.5: The County shall require that new roads, parking, and utilities be designed to minimize visual impacts.	*Consistent*. The project area will be revegetated following construction to reduce visual impacts.	*Consistent*. The No-Build Alternative would not result in any visual impacts.
Policy 7.A.1: The County shall protect agriculturally-designated areas from conversion to non-agricultural uses.	*Inconsistent*. This project would require the acquisition of farmland which would result in the conversion of agriculturally-designated areas to non-agricultural uses.	*Consistent*. The No-Build Alternative would not result in conversion of agriculturally-designated areas to non-agricultural uses.

The proposed project would generally be consistent with the goals and policies listed in the General Plan with the exception of Policy 7.A.1 which protects agriculturally-designated areas from conversion to non-agricultural uses. The proposed project would require the acquisition of small strips of land adjacent to SR 193. As all of the land adjacent to SR 193 within the project limits is designated as agricultural land it is not possible to construct the proposed project without converting land to non-agricultural uses. However, the acquisition of strips of the parcels adjacent to SR 193 is not expected to preclude the future use of the surrounding land from being used for agricultural purposes. Please see the Farmland section for more information.

This project is listed in the 2011 SACOG MTIP, SACOG ID# CAL20389, and is therefore also consistent with the SACOG MTIP. Less than significant impacts are anticipated due to consistency with State, Regional, and Local Plans and Programs. No avoidance, minimization, and or mitigation measures are proposed.

2.1.2 Farmlands

Regulatory Setting

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 United States Code [USC] 4201-4209; and its regulations, 7 Code of Federal Regulations [CFR] 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, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

Affected Environment

Farmland

All of the parcels adjacent to SR 193 within the project limits are classified as Unique Farmland or Farmland of Local Importance according to the California Department of Conservation Placer County Important Farmland 2008 map. Please see Figure 6 for a map of the existing farmland. Currently the land adjacent to SR 193 within the project limits is being used for cattle grazing and for fruit crops including peaches, plums, cherries, kiwis, and mandarins. Normal farming operations include roadside produce stands and transporting the fruit off-site for sale.

Williamson Act

There are two parcels within the project limits that are under a Williamson Act contract. The Williamson Act parcels affected by this project can also be seen on Figure 6.

Environmental Consequences

Farmland

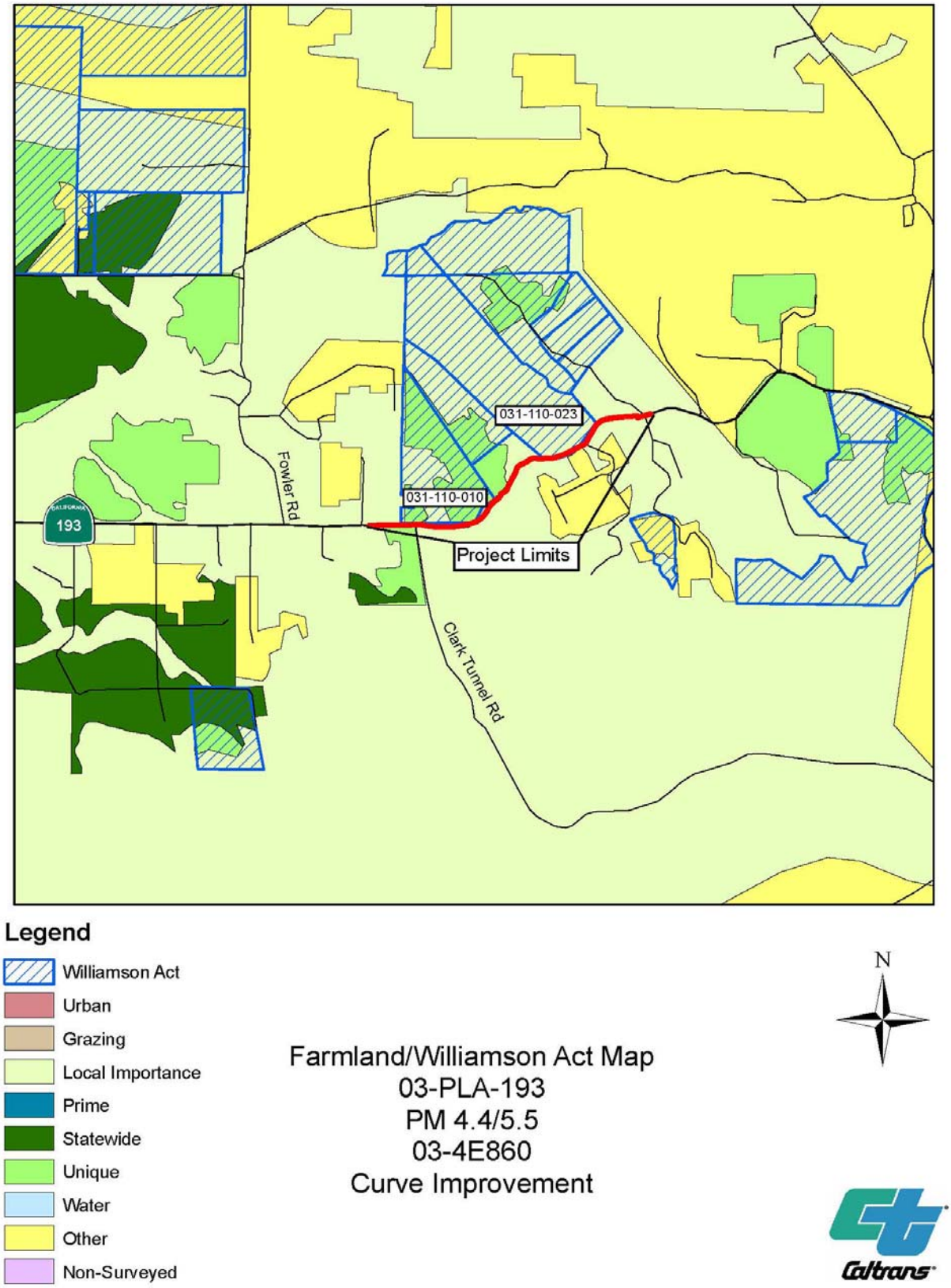
The proposed project would acquire approximately 12 acres of right-of-way, all of which is farmland (see table below). This is 0.01 % of the total farmland available in Placer County. Less than one acre of the land required is designated as Unique Farmland. The remaining acres are designated as Farmland of Local Importance. This project would not convert Prime Farmland or Farmland of Statewide Importance to non-agricultural uses.

TABLE 4: FARMLAND IMPACTS

Assessor's Parcel Number (APN)	Existing parcel (acres)	Proposed R/W acquisition (acres)*	Williamson Act Contract
031-110-010-000	48.0	0.41	Yes
031-110-023-000	84.5	3.76	Yes
031-110-027-000	31.1	0	No
031-110-036-000	11.4	0.43	No
031-121-001-000	2.0	0.32	No
031-121-003-000	67.3	1.56	No
031-121-004-000	8.7	2.26	No
031-121-005-000	7.1	0.85	No
031-121-012-000	4.9	0	No
031-121-014-000	4.3	0	No
031-121-023-000	4.2	0	No
031-121-024-000	3.2	1.15	No
031-121-025-000	1.7	0.26	No
031-121-026-000	0.8	0.02	No
031-121-058-000	5.1	0.09	No
031-272-008-000	19.5	0	No
031-273-023-000	9.1	0.62	No
Total	**312.9**	**11.73**	

*These amounts are approximate and may change based on final design.

FIGURE 6: FARMLAND AND WILLIAMSON ACT MAP



The Natural Resources Conservation Service (NRCS) was consulted about the farmland impacts. A Farmland Conversion Impact Rating For Corridor Type Projects Form NRCS-CPA-106 was used for assessing impacts (see Appendix B). The ratings used for the CPA-106 form combine soil productivity, water conditions, proximity to other urban and rural land uses, impacts on remaining farmland after conversion, and indirect or secondary effects of the project on agricultural and other local factors to arrive at a weighted score. The NRCS assigns a Land Evaluation Information score which is combined with the Corridor Assessment Criteria score determined by the federal agency (Caltrans, as assigned by FHWA). If the total rating exceeds the threshold score of 160 points, the federal agency must consider alternatives, which avoid or minimize farmland impacts so as to reduce the score. The total score determined for the proposed project was 106; therefore it is not necessary to consider alternatives to the proposed alignment.

Due to the fact that all of the parcels adjacent to SR 193 are farmland, it is not possible to construct the proposed project without the use of farmland. The use of slivers of large parcels of farmland in order to create a safer highway would not likely have a substantial impact on farming in this area. Driveways would be reconfigured to match or improve the existing geometry of the current driveway therefore the use of trucks to transport fruit off-site would not be affected. No agricultural parcels will be bisected, rendering the parcel unusable, nor would the project prevent the continued use of land adjacent to SR 193 as farmland. Within the context of the ample farmland supply in Placer County the proposed project is not expected to have a substantial effect on farmland.

There are currently two known properties which have roadside produce stands. One of the stands is a small fixed structure that is visible from SR 193. No direct impacts are anticipated to this stand. The visibility of this stand may change slightly as the highway will shift to the south approximately 35 feet.

The second produce stand consists of tables set up in front of the property owner's residence. Temporary signs are placed near the highway to alert motorists when produce is being sold. No direct impacts are anticipated to this stand. However, the visibility of the signs alerting motorists that this stand is open may change. The proposed project would realign SR 193 to the south which would require the driveway at this location to be lengthened. Currently, the right-of-way boundaries are very close to the existing highway. Following construction the distance from the right-of-way boundary to the new highway would increase as the highway will shift south approximately 100 feet. Signs placed on the property owner's land may not be as visible to highway users as the signs are at the currently used location.

Construction of the project may result in temporary impacts to normal farming operations which include roadside sales. Full closures of the highway may be necessary two separate times, each for no longer than six weeks (please see the Traffic and Transportation section for additional information). Access to the roadside produce stands may be temporarily affected during construction of the proposed project. Less than significant impacts to farmland are anticipated.

Williamson Act
Under Government Code §51295, the Williamson Act contract is cancelled only for the portion of the land that is being acquired unless the remainder is adversely affected. Two parcels covered under a Williamson Act contract will be affected by the proposed project.

Under CEQA Guidelines §15206(b)(3), the cancellation of a Williamson Act contract for any parcel of 100 or more acres is considered of local, regional, and statewide significance. The two affected parcels are both currently under 100 acres and the entire contracts would not be cancelled, only the portion which is being acquired.

According to Government Code Section 51292 no public agency or person shall locate a public improvement within an agricultural preserve unless the following findings are made:

(a) The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve.
(b) If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement.

According to Government Code Section 51293. Section 51292 shall not apply to:

(g) All state highways on routes as described in Sections 301 to 622, inclusive, of the Streets and Highways Code, as those sections read on October 1, 1965.

The need for safety improvements in this area means that some of the land adjacent to SR 193 must be acquired for the purpose of bringing the roadway up to current highway standards. The project has been designed to avoid homes, biological resources, and cultural resources as much as possible while designing to current highway standards. Due to the constraints of the surrounding topography and the need to avoid homes and other environmental resources, the design of the new alignment does not avoid contracted land. Although state highways are not subject to Section 51292, the findings required by Government Code Sections 51292(a) and 51292(b) can be made since the use of Williamson Act land is not based primarily on cost; it is based on necessity and on the existing highway's condition. The Department of Conservation has been notified about the proposed acquisition of Williamson Act land (see Appendix C). Less than significant impacts to Williamson Act land are anticipated.

Avoidance and Minimization Measures

- Following approval of the final environmental document, Caltrans Right of Way division will contact property owners to discuss right-of-way acquisitions. During this time, compensation for impacts to normal farming operations can be negotiated.

2.1.3 Relocations and Real Property Acquisition

Regulatory Setting
Caltrans's Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and

equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 United States Code [USC] 2000d, et seq.). Please see Appendix D for a copy of Caltrans's Title VI Policy Statement.

Affected Environment
New right-of-way will be required to construct this project. Portions of the existing parcels will need to be acquired prior to construction.

Environmental Consequences
No business or residential displacements are proposed for this project. Construction of the project may necessitate the movement of mailboxes, signs, and driveway realignments. Following approval of the final environmental document, Caltrans Right of Way division will contact property owners to discuss right-of-way acquisitions. Additional information regarding the right-of-way acquisition process can be found at the following website: http://www.dot.ca.gov/hq/row/acquisition/index.htm. Less than significant impacts resulting from right-of-way acquisitions are anticipated.

Avoidance and Minimization Measures
- Driveways that need to be reconstructed will conform to the new highway.
- Mailboxes and signs will be relocated as appropriate.

2.1.4 Utilities/Emergency Services

Affected Environment
Utilities within the project limits include electric power and telecommunication systems. In addition, there are privately owned pumps and water lines. The project area is serviced by the Placer County Sherriff's office and partially by the Newcastle Fire Protection District and the California Department of Forestry and Fire Protection (CAL FIRE).

Environmental Consequences
Construction of the proposed project will require public utility relocations (overhead electric distribution and telecommunication lines) and will also impact privately owned water lines and pumps. Road closures are also anticipated which may temporarily affect emergency services. Additional information regarding the closures is included in the Traffic and Transportation section of this document. Less than significant impacts to utilities and emergency services are anticipated.

Avoidance and Minimization Measures
- Following final environmental approval Caltrans North Region Right of Way Office will contact property owners to discuss impacts to privately owned pumps and water lines and Caltrans Right of Way Utilities Office will coordinate with public utilities regarding any necessary relocations.
- A Transportation Management Plan (TMP) will be prepared that will address construction-related traffic delays. See the Traffic and Transportation Section for additional details.

2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting
Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally-assisted programs is governed by the USDOT regulations (49 CFR Part 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

Traffic and Transportation
This project was initiated by the Caltrans District 3 Traffic Safety Branch in April 2008 after determining that the highway segment of PM 4.6/5.3 had a high concentration of run-off road collisions. The preliminary analysis concluded that the observed collision patterns would be best addressed with curve and superelevation improvements, shoulder widening, and a CRZ.

Pedestrian and Bicycle Facilities
There are currently no designated bicycle or pedestrian facilities within the project limits. The Placer County Bike Map for "Western Placer County: Penryn and Newcastle" includes four designations for bicycles: bike path, bike lane, on street bikeway, and rural route. SR 193 from Fowler Road to Interstate 80 has no bicycle designation according to this map.

Environmental Consequences

Traffic and Transportation
The proposed project is expected to improve the safety of the highway by realigning curves and widening shoulders. No additional capacity is being provided.

Bicycle Facilities
Although no new bicycle facilities will be provided with this project, the addition of shoulders within the project limits will better accommodate bicycles using SR 193.

Construction
At this time it is possible that two separate closures may be required. However, as the project's design is finalized, efforts will be made to reduce the need for closures as much as feasible. If closures are required, they are expected to last no more than six weeks. It is anticipated that traffic would be detoured around the project site via SR 65. Residents

within the project limits will still be able to access their properties during closures. In addition, construction activities could temporarily delay emergency service response times, school busses, and other users of the highway. Temporary construction impacts to traffic and transportation are considered less than significant and will be reduced with the implementation of the avoidance and minimization measures listed below.

Avoidance and Minimization Measures

- Traffic handling charts and specifications will be incorporated into the project during the design phase that will be included as part of the Contractor's specification package in order to manage temporary construction delays. Elements that should be considered in the Transportation Management Plan (TMP) are:
  - ❖ Restrictions on when lanes may be closed.
  - ❖ A Construction Zone Enhanced Enforcement Program (COZEEP) with the CHP during major construction that affects traffic, such as stage changes and traffic shifts.
  - ❖ Changeable message signs to alert motorists to unusual or new conditions and any delays that develop.
  - ❖ Any other pertinent issues as they may develop.
- In addition the TMP shall include:
  - ❖ A public awareness campaign.
  - ❖ Notification of construction and any detours provided to the Western Placer County Unified School District.

2.1.6 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act (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 [PRC] Section 21001[b]).

Affected Environment

The landscape along this stretch of highway typifies the foothill character seen in the Sierra Nevada Foothills where there are expanses of grasslands with sporadic canopies of oak woodlands. Over the past several years the increase in crop production and development of orchards has altered the landscape. However, this has not diminished the visual quality of the area.

Landscape Units

Landscape units have been identified to help analyze the existing visual environment of the area. They are based on the geography and land use of the area. Landscape Unit (LU) 1

begins at the western edge at PM 4.4 and extends to approximately PM 4.9 which is the edge of the land use that has been cultivated with orchards. These crops are visible from the highway facility and there are roadway signs and stands that market the various fruits that are being grown in the area. LU 2 is the eastern portion of the corridor that extends from PM 4.9 and ends at PM 5.5. This section of the corridor is natural in character. As one travels east past the agricultural development the landscape beyond the State's right-of-way is more open with grass fields. These fields are not highly visible due to the immediate vegetation that lines the corridor.

Viewsheds

Viewsheds are defined as an area that a person can see. This portion of Route 193 is not recognized for its viewsheds because of the enclosure caused by the vegetation and trees that line the highway facility. The lack of views does not have a noteworthy impact on the visual character and quality of the area. The proposed roadway project will open up some of the corridor due to the elimination of trees and vegetation which may present new viewsheds of the surrounding landscape. This may create more clear and exposed views of the surrounding hills but will not create noteworthy viewsheds.

Visual Character and Visual Quality

Visual resources of the project setting are defined and identified below by assessing *visual character* and *visual quality* in the project corridor.

Visual character includes attributes such as form, line, color, texture, and is used to describe, not evaluate, these attributes which are considered neither good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change.

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur as a result of the project.

The three criteria for evaluating visual quality are defined below:

- Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

Impacts to visual resources are assessed by evaluating the character and quality of the visual resources that comprise the project corridor before and after the construction of the proposed project.

Corridor Assessment

The existing corridor is defined and depicted in the following photographs. These photos display the visual character and quality of the existing corridor.

Photo 1 depicts the existing corridor at approximately post mile 4.55 looking east. This photo displays the beginning section of LU 1. The existing roadway along this stretch has diverse and natural plant types which create a visual integrity due to the lack of any intrusive

features. Much of this vegetation is evergreen which maintains a lush green appearance throughout most of the year. There is a consistent pattern of texture and color. The new alignment will begin to veer south just east of Clark Tunnel Road, causing much of the vegetation (as seen in the right portion of the photograph) to be removed.

Photo 1

Photo 2 was taken at approximately PM 4.72 along the corridor, looking east. Although the photo shows the beginning of the cultivation of orchards as seen along this corridor, it still has memorable character and vividness. There is a sense of unity and intactness to the environment. The visual quality would be considered high along this section of the highway corridor. The trees and shrubs on the south side of the road (right portion of the photo) will be removed and this portion of the corridor will be abandoned.

Photo 2

Photo 3 reflects the point where the LU 1 is reaching its eastern termini. Beyond the bend in the road (looking east) the land use becomes more natural. Along this stretch is a driveway

that enters into a road side stand where fruits from a local orchard are sold. This location along the corridor is approximately at PM 4.85. The new roadway alignment will move south (to the right of this picture).

Photo 3

Photo 4 was taken from a driveway at PM 5.3 looking west and shows the beginning of LU2. This section of highway curves along a more pastoral landscape. The major visual resource along this corridor is the mature and established trees. This is most apparent along the eastern portion of the highway where a ravine runs through the proposed project site. Much of this vegetation has not been disturbed. The unaltered landscape in this area defines the eastern edge of the corridor. A large portion of the vegetation that is along the edge of the existing highway will be removed. There are many trees beyond this foreground view that will help to soften the impact and protect the visual quality of the area. The roadway project will tie back into the existing corridor near Mandarin Hill Road at approximately PM 5.5.

Photo 4

Cut and Fill Slopes

Other changes that will be apparent due to this roadway project are the cut and fill slopes along the new alignment. It is anticipated that these slopes will be steep and difficult to re-

vegetate. The geology of the area has outcroppings of rock that may require cuts into the hillside that could be as steep as 50 degrees. It is also anticipated that some of these areas will be solid rock; further studies will be conducted to determine this possibility.

Areas where there is substantial rock may require blasting which would influence the visual quality of the area. Although it will be difficult to imagine the visual impact that a steep slope of rock will have on the highway corridor, there are areas where these types of slopes presently exist. These areas help to provide a glimpse of how this will appear over time. Photo 5 was taken near Mandarin Hill Road, near the eastern termini of the existing corridor (which is in LU2).

This cut slope has very little vegetation growing on it; but, it does blend with the environment and does not appear to be visually unacceptable. The rock outcropping looks very natural and blends well with the surrounding area. It presents a visual textural character.

The proposed cut slopes may look severe after the hills are cut; however, over time they will begin to blend as natural vegetation begins to grow within some of the crevices along the slopes. The areas of cut slope that have a sub grade of rock will be difficult and almost impossible to plant but the cut rock could be stained (if necessary) to help the rock blend with the hillside.

Photo 5

Viewer Groups

Consideration is given to two general viewer groups for the evaluation of viewer response, those with views from the road, and those with views of the road.

Viewers from the Road: This viewer group is comprised of the highway user. Distant views by the traveling motorist along SR 193 are generally restricted due to the trees and vegetation along the edge of the highway facility. The highway corridor is twisting and curving throughout most of the project's location and framed by mature trees and vegetation. This setting adds to the charm and memorable quality of the visual and aesthetic resources.

The foreground and middle ground views along the highway's project location are dominant. There are no outstanding viewsheds along this section of the highway facility; however,

viewers travelling SR 193 through the project area will on occasion experience periodic views of the surrounding hills, orchards and the few residential homes along this stretch of highway. Many of these homes have out buildings consisting of sheds, detached garages, and small barns. There are some areas where horses and cattle graze. The area is very pastoral and rural along this route.

The awareness of visual resources by these highway users is expected to vary with their specific activity. In general, highway users in vehicles will experience the area as a cumulative sequence of views and may not focus on specific roadway features. Local residents are the most sensitive to aesthetic issues due to their familiarity as well as their personal investment in the area.

Views from the existing road:

View of Road Side Fruit Stand at approx. PM 4.86

View of Orchards at approx. PM 4.8

View of Livestock on South Side of Highway at approx. PM 4.7

Viewers of the Road: This viewer group consist of all those who can see the road or any of its components from off-site locations. In the case of this project, the number of people with views to the specific project location is limited. Views are limited from the mature landscaping that exists along the edge of the travel way. The majority of the surrounding development is set back enough that the highway facility is not a dominant feature.

Views of the project area are available at and from the intersection of private and public roads and driveways of the residential establishments in the area. There are some long distance views from the surrounding hills within the project location; but they are scarce. The new alignment will be more visible in some areas due to the loss of vegetation but it will not be a dominant feature on the landscape.

Views of the existing road:

View of SR 193 seen from Oak View Road

Looking from Rolling Hills Lane at a Barely Visible Route 193

View Looking Southeast towards Route 193 from property near PM 4.8

<u>California State Scenic Highway</u>

This project is located in an area that is not designated as a "California State Scenic Highway"; however, the project location is in a rural segment of the corridor that has a scenic quality due to its natural state and minor rural residential development. The preservation of this visual quality should be given high priority during the design phase of this project.

Environmental Consequences

It is expected that approximately 15 acres of ground disturbance will take place due to this highway project. Some of the disturbance to this area (5.75 acres), particularly impacts to oak trees and riparian vegetation, has also been assessed within the biological analysis and will be restored as part of the biological commitments The remaining acreage will be re-vegetated to avoid erosion and to restore the visual quality of the environment to a natural, sustainable native landscape.

The new roadway alignment will require areas along SR 193 to be cut and others filled accounting for a portion of the 15 acres of vegetation disturbance. This activity will result in the removal of native grasses and shrubs as well as numerous large trees. These slopes may be tall and steep (2:1 slope) and extend for long sections of the roadway.

The most noteworthy visual impact due to the proposed project will be the alteration of the landscape within the immediate area of the existing roadway alignment. The existing trees and vegetation are a visual resource to the area; therefore, the removal of this resource will require the execution of the avoidance, minimization, and mitigation measures that will support the restoration of the landscape and the environment.

To reduce the project impacts to visual resources and to ensure the success of revegetation, portions of the existing highway facility will be abandoned and obliterated following construction of the new alignment. All aspects of the old roadway including any existing road base will be removed and the ground will be contour graded. These areas will be re-vegetated with native trees, shrubs, and grasses that are indigenous to the area.

The visual impact will initially appear substantial but will lessen over time as the proposed re-vegetation takes hold and matures. Impacts to visual resources are considered less than significant with mitigation.

Avoidance and Minimization Measures

The visual impacts of the proposed project will be minimized by the implementation of the following measures:

- All areas disturbed or used for staging of vehicles and equipment shall be hydro-seeded and restored to its pre-construction condition upon completion of the project. This can best be accomplished by loosening and re-contouring the area's soil before applying erosion control (hydro-seed).
- Minimize the removal of and avoid where feasible established vegetation including trees. The areas where trees are present should be protected to reduce damage to the trees root systems. Where it is possible to save and preserve existing trees (of significant size and maturity), care and caution should be implemented during the construction phase. Environmentally sensitive area (ESA) fencing shall be installed to demarcate areas where vegetation is being preserved.
- All disturbed areas during each construction season shall utilize best management practices (BMPs) which will include temporary erosion control consisting of a native seed mix at the end of each construction season.
- Where appropriate, disturbed soil areas shall incorporate a layer (2"-6") of compost to a depth of 12-18 inches as an erosion control measure. The actual incorporated amounts will be determined prior to the work being done and in conjunction with the biologist's recommendations. Incorporation of compost aids in the rehabilitation of soils as a growing medium and helps to restore and improve the rooting depth, infiltration, and water holding capacity of a disturbed area.
- Other erosion control measures may include bonded fiber matrix (BFM), compost blanket and a rolled erosion control product (netting/blanket). The application and installation of these measures will be determined and delineated on construction documents during the design phase of the project.
- Along the steep gradient area of a cut slope consideration should be given to stepping back the slope to help with the efforts for establishing vegetation and

reducing soil erosion. If determined necessary by the landscape architect and the resident engineer, following construction, cut slopes that expose bedrock shall be colorized or stained to reduce glare and blend with the natural landscape.

- Green and woody material from vegetation removal during clearing and grubbing shall be removed, chipped, shredded, stockpiled, and harvested from the site for future use as a mulch. These materials shall be stored and protected from the elements.
- Soil will be amended to improve infiltration, growing conditions for plants and improve overall success. Soil amendment shall be accomplished by salvaging and stockpiling the top layer (several inches if possible) of duff material (top soil and organic layer). All this work shall be defined within the work limits and called out on the construction documents, showing areas locations used for storage of green material and duff.
- Culvert repair work that will require rock slope protection (RSP) shall use indigenous rock collected from the site during construction, if this is not feasible imported RSP shall be colorized to look natural and blend with the environment. All rock to be placed within the active channel shall be natural, smooth river rock. No RSP with hard angles shall be placed within any active channel. This information will be developed during the design phase and shown on the plans.
- Excavated slopes capable for re-vegetation will be roughened by track-walking (running track mounted equipment perpendicular to slope contours).
- All finished slopes and graded areas shall be hydro-seeded with a permanent seed mix composed of native plant species indigenous to the area.

Mitigation Measures

- Areas that have removed trees, shrubs and created soil disturbance due to construction activities will be re-established by applying a permanent erosion control and re-planting trees and shrubs where they are deemed appropriate.
- Trees and shrubs removed as part of a riparian zone will be replaced as part of the required mitigation per the CDFG 1602 Stream Bed Alteration Agreement. The biologist shall work with the landscape architect to ensure that the placement of the replanted trees and shrubs will also meet the requirements of any necessary visual mitigation.
- Contour grading and slope rounding shall be utilized on all cut and fill slopes in order to help restore the environment in a manner that will blend with the surrounding natural landscape.
- The portion of the road that will be abandoned due to the new road alignment will be removed in order to allow for the restoration of trees and vegetation. This restoration shall require the complete removal of the old road including all sub-base material and bituminous surfacing. The area will require amendment with imported soil that shall be contour graded to look natural with the surrounding landscape.

2.1.7 Cultural Resources

Regulatory Setting

"Cultural resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historical-era), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966 (NHPA) , as amended sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation [36 Code of Federal Regulations (CFR) 800]. On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, the Federal Highway Administration (FHWA), State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327). Furthermore, the significance of such resources that may be affected by the undertaking must be evaluated using the criteria for listing on the California Register of Historical Resources (PRC§5024.1, Title 14 CCR, Section 4852).

Affected Environment

A Historic Property Survey Report (HPSR) was prepared to determine the potential effects of the proposed project on cultural resources. An area of potential effects (APE) was established to encompass all areas of possible direct and indirect effects to archaeological resources. The APE encompasses the entire boundaries of any archaeological site that may be affected by the proposed project. Within the APE, an Area of Direct Impacts (ADI) was established to include all reasonably foreseeable direct effects (including all potential ground disturbing activities) associated with the proposed project that may occur within the existing and proposed right-of-way and Temporary Construction Easements (TCEs).

Representatives of local Native American groups were contacted to obtain information regarding the presence of cultural resources within or adjacent to the project area and to learn of any concerns tribal members or other individuals may have regarding the project. These contacts, based on an updated list of Native American contacts provided by the Native American Heritage Commission, consisted of letters dated April 18, 2011 and follow-up phone calls. Field meetings with representatives of the United Auburn Indian Community of the Auburn Rancheria and Shingle Springs Band of Miwok Indians were conducted in December 2011 and February 2012. Representatives from the United Auburn Indian Community served as monitors during Extended Phase I/Phase II field investigations, and both groups reviewed draft reports. These contacts are detailed in a consultation log contained in the HPSR.

Local historical societies and preservation groups were contacted regarding any information or concerns related to potential historical-era resources within the project area, but none of these groups responded.

In an effort to identify cultural resources within the project limits, several record searches were performed. Search results from the North Central Information Center indicate that no previously recorded cultural resources are present within the project area. A record search of the sacred lands file of the Native American Heritage Commission did not indicate the presence of Native American cultural resources in the vicinity.

Environmental Consequences

Three archaeological sites are within the APE, CA-PLA-2434, CA-PLA-2435/H, and P-31-5466. Based on research, field surveys and Extended Phase I/Phase II excavations, Caltrans, as assigned by FHWA, has determined that the portions of these sites within the ADI would not contribute towards their potential National Register of Historic Places eligibility should any of these sites ever be determined eligible. The HPSR was sent to the SHPO on October 29, 2012 for their concurrence (see Appendix E for SHPO correspondence). Impacts to cultural resources are considered less than significant.

Avoidance and Minimization Measures

The following measures will be implemented to avoid and minimize impacts to archaeological resources:

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 3 Environmental cultural staff so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.
- Portions of sites outside the ADI will be protected against inadvertent disturbance during construction through establishment of Environmental Sensitive Areas (ESAs).

2.2 PHYSICAL ENVIRONMENT

2.2.1 Water Quality and Storm Water Runoff

Regulatory Setting

Federal Requirements: Clean Water Act
In 1972 Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity, which may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

USACE issues two types of 404 permits: Standard and General permits. There are two types of General permits, Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE’s Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have lesser effects on waters of the U.S., and not have any

other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollution Discharge Elimination System (NPDES) Program**

  Municipal Separate Storm Sewer Systems (MS4)

  Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). The U.S. EPA defines an MS4 as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs,

gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water." The SWRCB has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. Caltrans's MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The current Caltrans's MS4 Permit, NPDES No. CAS000003 issued under Order No. 99-06-DWQ has been revised. The revised permit became effective on July 1, 2012. The permit contains three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);

2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. Caltrans's storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit No. CAS000002 (Order No. 2009-0009-DWQ as amended by Order No. 2012-0006-DWQ), adopted on September 2, 2009, became effective on July 1, 2010 and will expire on July 17, 2014. The permit regulates storm water discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution

prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans's Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

There are 2 unnamed tributaries that traverse SR 193, in a northwesterly direction to Auburn Ravine. Auburn Ravine lies approximately 0.75 miles downstream from the project location; and resides in the Auburn Hydrologic Sub-Area (HAS); a sub-watershed to the Sacramento River Hydrologic Unit (HU 520.00).

The principal receiving water is Auburn Ravine, a tributary to the East Side Canal, the Cross Canal, and the Sacramento River. The Cross Canal discharges to the Sacramento River, approximately one (1) mile south of confluence of the Sacramento and Feather River, near Verona. The Caltrans Water Quality Planning Tool, the 2006 Clean Water Act (CWA) Section 303(d) List of Water Quality Limited Segments Requiring TMDLs and the 2010 Integrated Report (CWA Section 303(d) List/ 305(b) Report) lists no TMDLs or, pollutants or stressors of concern, for this tributary. However, the 2006 Clean Water Act (CWA) Section 303(d) List of Water Quality Limited Segments Requiring TMDLs and the 2010 Integrated Report (CWA Section 303(d) List/ 305(b) Report) does list Chlordane, DDT, Dieldrin, Mercury, PCBs and Unknown Toxicity as the pollutants or stressors of concern, for the Sacramento River (Knights Landing to the Delta). A TMDL for Mercury is required and the proposed implementation of the USEPA approved TMDL completion is scheduled for 2012. The proposed TMDL implementation for the remaining pollutants, have a scheduled

completion date of 2019 to 2022. The potential sources of these pollutants are from Agriculture, Resource Extraction, and Source Unknown.

The Storm Water Quality Handbooks, Project Planning and Design Guide (PPDG) defines Target Design Constituent (TDC) as a pollutant that has been identified in the Departmental runoff characterization studies, discharging with a load or concentration that commonly exceed the allowable standards, and which is considered treatable by current approved Treatment Best Management Practices (BMPs). Caltrans TDCs include: phosphorus, nitrogen, total copper, dissolved copper, total lead, dissolved lead, total zinc, dissolved zinc, sediments, and general metals [unspecified metals]. Since none of the Caltrans TDCs have been identified as contributing pollutant(s) to these water bodies, the project is not required to consider Treatment Best Management Practices (BMPs) for these TDCs. The requirement of treating a TDC is only one criterion to consider. Section 4 of the Project Planning and Design Guide (PPDG) provides additional guidance for evaluating whether a project must consider incorporating Treatment BMPs.

Listed below are the Beneficial Uses that are affected by the Caltrans TDCs; and the Numeric Water Quality Objectives for the Sacramento River (Colusa Basin Drain to the I Street Bridge).

TABLE 5: WATER QUALITY OBJECTIVES AND BENEFICIAL USES

Beneficial Use	Constituent	Limit	Units	Reference	Comments
Municipal and Domestic Supply	Copper	1.3	mg/L	TITLE 22, Pb&Cu Rule	in>10% of tap water samples collected
Municipal and Domestic Supply	Lead	0.015	mg/L	TITLE 22, Pb&Cu Rule	in>10% of tap water samples collected
Municipal and Domestic Supply	Nitrate + Nitrite (sum as nitrogen)	10		TITLE 22	
Municipal and Domestic Supply	Nitrite (as nitrogen)	1	mg/L	TITLE 22	

Beneficial uses are critical to water quality management; and the protection and enhancement of these beneficial uses are the primary goals of water quality planning. The existing and potential beneficial uses that apply to surface waters of the Sacramento River are presented in the Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region. The existing beneficial uses identified include: AGR, COLD, MIGR, MUN, NAV, REC-1, REC-2, SPWN, WARM and WILD.

The Porter-Cologne Water Quality Control Act defines “water quality objectives” as the allowable “limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.” Therefore, water quality objectives are intended to protect the public health and welfare, and to maintain or enhance water quality relation to the existing/potential beneficial uses of the water. Water quality objectives apply to all “water of the State,” surface and ground waters; and to “waters of the United States.”

Water quality objectives are numerical or narrative. Both objectives define the upper concentration or other limit(s) that the Regional Board considers protective of the beneficial uses. Water quality objectives which apply to all surface waters in the Sacramento and San Joaquin River Basin, including the Delta, are identified in Chapter 3 of the Basin Plan.

Water quality objectives to protect the beneficial uses to all ground waters of the Sacramento and San Joaquin River Basin, are identified in Chapter 3 of the Basin Plan.

Receiving water risk is based on whether a project drains to a sediment-sensitive water body. A sediment sensitive water body is either listed on the CWA 303(d) List for sedimentation, has a USEPA-approved Total Maximum Daily Load Implementation Plan for sediment; or has the beneficial uses of COLD, SPAWN, and Migratory. The project fits all three of these categories therefore, the project is considered to have a "high" receiving water risk.

The project is located within the Phase II Small Municipal Separate Storm Sewer Systems (MS4) General Permit area for Placer County.

There are no "Drinking Water Reservoirs and Recharge Facilities" where spills from the Caltrans' owned right-of-way, activities, or facilities could discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities.

An approved Storm Water Data Report (SWDR) was prepared on January 15, 2009 during the Project Initiation Document (PID) Process. The total Disturbed Soil Area (DSA) for the entire project was estimated at fourteen (14) acres. It is expected the Project Engineer will select the appropriate Design Pollution Prevention and Construction Site BMPs (per Project Planning and Design Guide and SWDR) during final design.

Environmental Consequences

The potential discharge of storm water runoff from the construction site may contribute to the violation of water quality standards or, water quality objectives; and may therefore have the potential to affect beneficial uses of the water body (Sacramento River). Storm water discharge(s) may contain sediment; non-storm water (groundwater, waters from cofferdams, dewatering, water diversions); vehicle and equipment cleaning agents, fueling, and maintenance; waste materials and materials handling and storage.

The primary pollutant of concern is sediment and siltation from the disturbed areas of construction. It is important that appropriate Construction Site BMPs are deployed during construction activities to avoid and reduce potential water quality impacts. To address the temporary water quality impacts, the Contractor will implement temporary Construction Site BMPs identified in the Storm Water Pollution Prevention Plan (SWPPP) or, included as Line Item BMPs. Less than significant impacts to water quality are anticipated.

Avoidance and Minimization Measures

Adherence to the following is recommended to prevent receiving water pollution as a result of construction activities and/or operation from this project:

- Adherence to the compliance requirements of the NPDES General Permit CAS No. 000002 (Order No. 2009-0009-DWQ, as amended) for General Construction Activities will be required.
- The Caltrans' Storm Water Management Plan (SWMP), the Project Planning and Design Guide (PPDG) Section 4, and the Evaluation Documentation Form (EDF) provide detailed guidance in determining if a specific project must consider implementing permanent Treatment BMPs. Line Item BMPs may be required to be incorporated into the Plans, Specifications, and Estimates (PS&E).

- Any anticipated dewatering may require a separate dewatering permit. If dewatering is required, coordination with the District NPDES Coordinator will occur during the PS&E phase.
- The Total DSA is expected equal or exceed 1.0 acre, therefore:
  1. A Caltrans approved SWPPP will be required, which specifies the level of temporary pollution control measures for the project.
  2. Caltrans Standard Specifications (2010 Edition) are applicable and shall be included in the PS&E to address Construction's temporary water pollution control measures. These measures must address soil stabilization, water sampling, sediment control, tracking control and wind erosion control practices. In addition, the project plans must include non-storm water controls, waste management and material pollution controls, as a minimum.
  3. To obtain coverage under the Construction General Permit (CGP), dischargers must electronically file Permit Registration Documents (PRDs) through the State Water Resource Control Board's Storm Water Multiple Application and Report Tracking System (SMARTS), prior to the commencement of construction activity.
  4. Within 90 day upon completion of the project, Caltrans shall electronically file a Notice of Termination (NOT), a final site map and photographs through the State Water Resource Control Board's SMARTS system. The Regional Water Quality Control Board (RWQCB) will consider the construction site complete only when all portions of the site have met the Conditions for Termination of Coverage, of the CGP.
- Consideration should be given to Section 13 of 2010 Standard Specification relating to Construction Site Management during PS&E to identify and control potential sources of water pollution before it encounters any storm water system or watercourse. The Contractor is required to control material pollution, manage waste and non-storm water at the construction site. The Contractor prepared SWPPP incorporates appropriate Temporary Construction Site BMPs to implement effective handling, storage, use and disposal practices during construction activities.
- Caltrans NPDES office will participate in early project design consultation with Central Valley RWQCB as the project entails one or more acre of total soil disturbance.

2.2.2 Geology/Soils/Seismic/Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans's Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. Structures are designed using the Caltrans's Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities.

Affected Environment
A Preliminary Geotechnical Report was prepared for the proposed project by the Caltrans Division of Engineering Services (Geotechnical Office). Geologic features within the project limits include Mesozoic aged, igneous intrusive rocks of the Sierra Nevada batholiths. Rock types associated with these intrusions range in composition from Diorite to Granite. Rocky outcrops observed during field visits included highly weather Granite, often referred to as Decomposed Granite and moderately weathered Granite rock. The controlling fault for peak bedrock acceleration within the project limits is the Bear Mountain Fault Zone (Deadman Fault section), which is located approximately 5 miles east of the project site. Soils within the project area are mapped as Caperton-Andregg coarse sandy loam, Sierra sandy loam and Xerofluvents frequently flooded.

Existing cuts within the project limits range in vertical height up to approximately 15 feet with slope ratios of 0.25:1 (horizontal run to vertical rise). The existing cuts are performing well with regards to global stability. All of the cuts observed exhibit local erosion instability in the form of sheet rills (a narrow and shallow incision into topsoil layers, resulting from erosion by overland flow or surface runoff). The majority of the existing fills within the project limits have slope ratios that are 1.5:1 or flatter, except in areas where culverts are located, were fills were as steep as 1:1. The fills range in vertical height up to 18 feet. All of the fills are performing well with regards to global stability. Local erosion instabilities were only observed in the 1:1 fills and consisted of sheet rills and minor slumps. The potential for slides and rockfall were not observed within the project limits.

Environmental Consequences
This project requires cuts and fills on both sides of the existing highway to allow realignment and widening of shoulders. The Geotechnical Office recommends that a slope ratio of 1.5:1 or flatter be utilized for widened fills and new fills. Steeper fills may be possible but would require additional investigation and would likely require engineered fabric for reinforcement. The Geotechnical Office recommends that new cuts could have a slope ratio of 1:1 or flatter and would be globally stable. Steeper slope ratios would likely be globally stable for shorter vertical height slopes. Due to the presence of granite outcrops, over-sized granitic boulders and potential shallow depth to non-rippable rock, it is anticipated that areas of hard rock excavation will be encountered in localized areas of proposed excavations for the project. In addition, groundwater will likely be encountered during construction. Less than significant impacts to geology and soils are anticipated.

Avoidance and Minimization
- District Landscape Architecture shall provide erosion control recommendation for any proposed fills and cuts.
- Caltrans may consider the use of standard plan and non-standard plan walls in areas where it is desired to limit cut/fill heights, right-of-way needs or reduce erosion potential.
- As the project design is finalized, coordination with the Geotechnical Office will take place as recommended in the Preliminary Geotechnical Report.

2.2.3 Hazardous Waste/Materials

Regulatory Setting
Hazardous materials, including hazardous substances and wastes are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of

hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as "Superfund," is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

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

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code California Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires clean-up of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

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

Affected Environment

An Initial Site Assessment and Site Investigation were performed for this project. Yellow traffic stripe paint and soil samples were taken within the project limits and tested for hazardous waste. Based on the studies performed the following determinations were made:

- Aerially Deposited Lead (ADL) exists at non-hazardous levels.
- Naturally Occurring Asbestos does not exist.
- The existing yellow traffic stripe paint contains both hazardous and non-hazardous levels of lead.

Environmental Consequences
The measures listed below will be implemented to avoid and minimize impacts. Impacts due to hazardous waste are considered less than significant.

Avoidance and Minimization Measures
- Standard Special Provisions will be included in the Contractor's Plans that will address the special handling of lead paints and treated wood waste.
- The Contractor shall prepare a Lead Compliance Plan to minimize worker exposure to lead-impacted soil and removed yellow traffic paint residue.

2.2.4 Air Quality

Regulatory Setting
The Federal Clean Air Act (FCAA), as amended in 1990 is the federal law that governs air quality while the California Clean Air Act of 1988 is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (ARB), 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). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns. The criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM), broken down for regulatory purposes into particles of 10 micrometers or smaller—(PM10) and particles of 2.5 micrometers and smaller—(PM2.5), lead (Pb), and sulfur dioxide (SO2). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H2S), and vinyl chloride. The NAAQS and state standards are set at a level that protects public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics). Some criteria pollutants are also air toxics or may include certain air toxics within their general definition.

Federal and state air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). In addition to this type of environmental analysis, a parallel "Conformity" requirement under the FCAA also applies.

The Federal Clean Air Act Section 176(c) prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs or projects that are not first found to conform to State Implementation Plan (SIP) for achieving the goals of Clean Air Act requirements related to the NAAQS. "Transportation Conformity" takes place on two levels: the regional—or, planning and programming—level and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the standards set for carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM10 and PM2.5), and in some areas sulfur dioxide (SO2). California has attainment or maintenance areas for all of these transportation-related

"criteria pollutants" except SO2, and also has a nonattainment area for lead (Pb). However, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (TIPs) that include all of the transportation projects planned for a region over a period of at least 20 years for the RTP and 4 years for the TIP. RTP and TIP conformity is based on use of travel demand and air quality models to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA), make determinations that the RTP and TIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or TIP must be modified until conformity is attained. If the design concept, scope, and "open to traffic" schedule of a proposed transportation project are the same as described in the RTP and TIP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is "nonattainment" or "maintenance" for carbon monoxide (CO) and/or particulate matter (PM10 or PM2.5). A region is "nonattainment" if one or more of the monitoring stations in the region measures violation of the relevant standard and U.S. EPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by U.S. EPA and are then called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a hot spot analysis. In general, projects must not cause the "hot spot" related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Climate Change

Climate change is analyzed at the end of this chapter. Neither the United States Environmental Protection Agency (U.S. EPA) nor Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in a separate California Environmental Quality Act (CEQA) discussion at the end of this chapter and may be used to inform the National Environmental Policy Act (NEPA) decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has

undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

Affected Environment
This project is exempt from all air quality conformity analysis requirements per Table 2 of 40 Code of Federal Regulations (CFR) §93.126, subsection "Safety" ("Highway Safety Improvement Program implementation"). No further analysis is required.

Environmental Consequences
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 PM10, would be the primary short-term construction impact, which 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. Impacts to air quality are considered less than significant. Avoidance and minimization measures shall be implemented to reduce temporary air quality impacts during construction.

Naturally Occurring Asbestos
Naturally occurring asbestos (NOA) is known to exist in serpentine, a greenish greasy-looking rock, found within the ultramafic rock. Based on the California Geologic Survey and National Resource Conservation Service soils map, some ultramafic rocks are found in Placer County.

Avoidance and Minimization Measures
- Caltrans Standard Specifications, a required part of all construction contracts, Section 14-9.02, Air Pollution Control, Section 14-9.03 Dust Control, and Section 7-1.02C, Emission Reduction, should effectively reduce and control emission impacts during construction. The provisions of Section 7-1.02, Laws, and Section 7-1.02A require the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.
- If NOA is found during construction, rules and regulations of the local air quality management districts must be adhered to when handling this material.

2.2.5 Noise

Regulatory Setting
The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the 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. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act
CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA).

Affected Environment

Under 23CFR772.7, projects are categorized as Type I, Type II, or Type III projects. FHWA defines a Type I project as a proposed Federal or Federal-aid highway project for the construction of a highway on a new location, the physical alteration of an existing highway where there is either a substantial horizontal or substantial vertical alteration. A Type II project involves construction of noise abatement on an existing highway with no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. This project is considered a Type III project and does not require a noise analysis. Therefore noise abatement is not considered for this project.

Substantial Vertical Alignment alteration includes when a project removes shielding thereby exposing the line-of-sight between the receptor and the traffic noise source. This is done by altering either the vertical alignment of the highway or the topography between the highway traffic noise source and the receptor. There is no natural or man-made shielding in the project limits that breaks the line of sight between the source of noise (highway) and a receptor. Therefore, the alteration of vertical alignment with regard to traffic noise is not considered substantial for this project.

Substantial Horizontal Alignment alteration is defined by a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition. The proposed change in horizontal alignment would not be halving the distance between the highway and nearby homes and therefore, it is not considered substantial.

Under CEQA, a determination must be made as to whether the proposed project will result in significant adverse environmental effects. A significant environmental effect under CEQA generally is defined as a substantial or potentially substantial adverse change in the physical environment. The increase in traffic noise caused by a project is the primary factor considered by Caltrans in assessing the significance of noise impacts under CEQA. Because CEQA focuses on comparisons to the existing conditions baseline, Caltrans determines the significance of noise impacts under CEQA based on a comparison of design-year with-project conditions to the existing conditions baseline.

The horizontal alignment change for this project will vary depending on location and topography. The predicted increase in traffic noise due to altering the alignment will be one decibel (dBA) by moving the highway closer to some homes. Generally the noise increase of less than 3 dBA is not perceived by a human ear. Therefore, the increase of 1 dBA is not considered substantial.

Environmental Consequences
During construction noise may be generated from the contractors' equipment and vehicles. These impacts are temporary and are considered less than significant. Avoidance and minimization measures shall be implemented to reduce temporary noise impacts during construction.

Avoidance and Minimization Measures
Caltrans requires the Contractor to conform to the provisions of Standard Specification, Section 14-8.02 "Noise Control". "Do not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m."

Additional potential noise abatement measures during construction include the following:

- Limit operation of jackhammer, concrete saw, pneumatic tools, and demolition equipment operations to the daytime hours (8 a.m. to 7 p.m.) to the maximum extent feasible. Notify the residents within 100 feet of the project area in advance of nighttime construction activities. Nighttime construction work should be limited to the portion of the project site furthest from the residences, to the maximum extent feasible.
- All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment may have an un-muffled exhaust.
- Changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

2.3 BIOLOGICAL ENVIRONMENT

Environmental Study Limit

The information contained in the Biological Environment section was based on information provided in the Natural Environment Study (NES). As part of the NES, an environmental study limit (ESL) was delineated to encompass all areas to be used for access, staging and storage, construction, revegetation, utility relocation and, in general, all project related activities. It is expected that the presence of equipment and noise may cause a disturbance to species occupying areas beyond the actual construction footprint. For this reason, the ESL extends beyond the limits of ground disturbance. Care was taken to include areas that could be potentially impacted indirectly but yet not to include such a large area that would be impractical to perform necessary surveys in a reasonable amount of time. Since construction activities will consist mainly of earthwork using equipment such as graders, bulldozers and dump trucks, it is expected that the noise associated with this work will not be significantly greater than the noise being currently produced by everyday traffic. Species occupying the habitat in the vicinity of the proposed construction are already subjected to considerable disturbance from the constant flow of traffic. It was determined that the established ESL would be sufficient in considering any construction related disturbance when dealing with species addressed in this document. The ESL can be seen on the Biological Resource maps included in Appendix F.

Sensitive Species

A list of species and habitats potentially occurring within the project vicinity was developed based on information compiled from the California Department of Fish and Game (CDFG) Natural Diversity Data Base (Rarefind, 2011 Gold Hill 7.5-minute USGS quad), lists provided by the United States Fish and Wildlife Service (USFWS), the California Native Plant Society, and from the current literature. A list of sensitive species and habitats considered, as part of this evaluation, is included in Table 6.

TABLE 6: LISTED AND PROPOSED SPECIES, AND CRITICAL HABITAT POTENTIALLY OCCURRING OR KNOWN TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Potential to be impacted by project.
Plants			
Jepson's onion	Allium jepsonii	1B.2	None, plant surveys completed and species does not occur within the ESL.
Big-scale balsamroot	*Balsamorhiza macrolepis var. macrolepis*	CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Stebbins' morning glory	*Calystegia stebbinsii*	FE, SE, CNPS 1B.1	None, plant surveys completed and species does not occur within the ESL.
Pine Hill ceanothus	*Ceanothus roderickii*	FE, SR, CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Red Hills soaproot	*Chlorogalum grandiflorum*	CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Hispid bird's-beak	*Chloropyron molle ssp. hispidum*	CNPS 1B.1	None, plant surveys completed and species does not occur within the

			ESL.
Brandegee's clarkia	*Clarkia biloba ssp. brandegeeae*	CNPS 1B.2	Low. Plant surveys completed and no individuals of this species was found within the ESL.
Dwarf downingia	*Downingia pusilla*	CNPS 2.2	None, plant surveys completed and species does not occur within the ESL.
Butte County fritillary	*Fritillaria eastwoodii*	CNPS 3.2	None, plant surveys completed and species does not occur within the ESL.
El Dorado bedstraw	*Galium californicum ssp. Sierra*	FE, CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	SE, CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Bisbee Peak rush-rose	*Helianthemum suffrutescens*	CNPS 3.2	None, plant surveys completed and species does not occur within the ESL.
Ahart's dwarf rush	*Juncus leiospermus var. ahartii*	CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Red Bluff dwarf rush	*Juncus leiospermus var. leiospermus*	CNPS 1B.1	None, plant surveys completed and species does not occur within the ESL.
Legenere	*Legenere limosa*	CNPS 1B.1	None, plant surveys completed and species does not occur within the ESL.
Pincushion navarretia	*Navarretia myersii ssp. Myersii*	CNPS 1B.1	None, plant surveys completed and species does not occur within the ESL.
Layne's ragwort	*Packera layneae*	CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Oval leaved viburnum	*Viburnum ellipticum*	CNPS 2.3	None, plant surveys completed and species does not occur within the ESL.
El Dorado County mule ears	*Wyethia reticulata*	CNPS 1B.2	None, plant surveys completed and species does not occur within the ESL.
Avians			
Grasshopper sparrow	*Ammodramus savannarum*	SSC	Low, prefers open grasslands with scattered shrubs.
Tricolored blackbird	*Agelaius tricolor*	SSC	Low, breeding habitat is not available in the project ESL
Burrowing owl	*Athene cunicularia*	SSC	Low, no burrowing owls detected during field investigations.
Swainsons Hawk	*Buteo swainsoni*	ST	Low, Flat grasslands are not found within the ESL.
Northern Harrier	*Circus cyaneus*	SSC	Low, species was detected during field visits. No nesting habitat was observed.
Yellow warbler	*Dendroica petechia brewsteri*	SSC	Low, nesting has not been reported in Placer county for 22 years.

White-tailed Kite	*Elanus leucurus*	SSC	Moderate, breeding and foraging habitat is available within the ESL.
Bald eagle	*Haliaeetus leucocephalus*	FD, SE, FP	None. There are no known nests within or adjacent to the ESL and foraging habitat is limited within the ESL.
California black rail	*Laterallus jamaicensis coturniculus*	ST, FP	Moderate, marginal habitat present within the ESL with some good habitat available in the project vicinity.
Purple martin	*Progne subis*	SSC	None. No nesting habitat present.
Arthropods			
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	High Likely to Adversely Affect, elderberry plants found in the project area with exit holes and removal of elderberry shrubs is proposed.
Ricksecker's water scavenger beetle	*Hydrochara ricksecker*i	SSC	None, habitat not available in or near the ESL.
Bats			
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC	None. Suitable habitat such as caves and buildings are not found in the project ESL.
Crustaceans			
Vernal pool fairy shrimp	*Banchinecta lynchi*	FT	None, vernal pools not present in project ESL.
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	None, vernal pools not present in project ESL.
California linderiella	*Linderiella occidentalis*	SSC	None, vernal pools not present in project ESL.
Fish			
Delta Smelt	*Hypomesus transpacificus*	FT,	None, habitat not available in or near the ESL.
Central Valley steelhead	*Oncorhynchus mykiss*	FT	None. Due to the presence of fish passage barriers upstream and downstream, this species is not present in the ESL.
Critical Habitat, Central Valley steelhead	*Oncorhynchus mykiss*	X	None. Critical habitat is not present in the ESL.
Spring Run Chinook Salmon	*Oncorhynchus tshawytscha*	FT	No effect. Spring Run Chinook salmon are not in Auburn ravine and will not be impacted.
Winter Run Chinook Salmon	*Oncorhynchus tshawytscha*	FE	No effect. Winter Run Chinook salmon are not in Auburn ravine and will not be impacted.
Fall/Late-Fall Run Chinook Salmon	*Oncorhynchus tshawytscha*	FSC	None. Due to the presence of fish passage barriers upstream and downstream, this species is not present in the ESL.
Reptiles & Amphibians			
Western pond turtle	*Emys marmorata*	SSC	Moderate, no impacts to occur to ponds or ponded sections of streams.
California Red-legged frog	*Rana draytonii*	FT	Not Likely to Adversely Affect, Habitat is available within the ESL, but avoidance and minimization measures will be implemented.

Foothill yellow-legged frog	*Rana boylii*	SSC	None. No suitable habitat occurs in the project area.
Western spadefoot toad	*Spea hammondii*	SSC	None, vernal pools not present in project ESL.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Candidate (FC), Federal Species of Concern (FSC); Federal Delisted (FD); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); Watch List (WL); California Native Plant Society (CNPS).

Field Surveys

Several field surveys of the project site were conducted by Caltrans biologists during 2011 to assess existing natural resources and potential impacts. Emphasis was placed on the special status species that may occur. The project site was field reviewed to 1) identify habitat types; 2) identify factors indicating the potential for rare species; 3) identify rare species present; and 4) identify potential problems for the study. Botanical surveys were conducted during appropriate blooming seasons for all rare plants that could potentially be present within the ESL. Field surveys were also conducted with the CDFG, the Central Valley Regional Water Quality Control Board (CVRWQCG), the Sacramento District US Army Corps of Engineers (USACE) and the US Fish and Wildlife Service.

Federal Endangered Species Act Consultation Summary

Pursuant to Section 7 of the Federal Endangered Species Act, Caltrans has entered into informal consultation with USFWS for this project. A request for concurrence for a “likely to adversely affect” determination for the valley elderberry longhorn beetle (VELB) and a “not likely to adversely affect” determination for California red-legged frog (CRLF) was submitted to USFWS on April 30, 2012. A concurrence to both of these determinations must be issued by USFWS in order for Caltrans to proceed with project construction. Mitigation measures are subject to the review and approval of USFWS. Caltrans would comply with any new or modified mitigation measures developed during the consultation process.

Permits

The proposed project would require the following biological permits:

- Section 404 permit from USACE for work in jurisdictional wetlands and other waters of the U. S.
- Section 401 Water Quality Certification from the RWQCB.
- Section 1602 Stream and Lakebed Alteration Agreement from CDFG.
- Concurrence on a Not Likely to Adversely Affect Determination for CRLF from USFWS under Section 7 of the Federal Endangered Species Act.
- Concurrence on a Likely to Adversely Affect Determination for VELB from USFWS under Section 7 of the Federal Endangered Species Act.

These permits/concurrences may contain restrictions or additional mitigation measures that would be incorporated into the project.

2.3.1 Natural Communities

The project area is located within the California Floristic Province, Sierra Nevada Region, and North Sierra Nevada Foothills sub region. The climate varies with the seasons with hot dry summers and cool wet winters. Average annual rainfall in the project area is 34.47 inches. Elevation of the ESL ranges from approximately 332 to 430 feet.

The following vegetation communities and land uses have been recorded within the ESL: ruderal, annual grassland, interior live oak woodland, riverine, valley oak riparian forest, willow scrub riparian forest, freshwater emergent wetland, orchard/farmland, and rural residential.

Oak Woodlands

Affected Environment
Valley oak woodland habitat comprises approximately 17.76 acres within the study area. Although several individual blue oaks were identified within the project limits, there are not sufficient numbers of these oaks to classify any area of the project as blue oak woodland habitat.

Valley oak woodlands vary from savannah-like to forest-like stands with partially closed canopies. The tree layer is dominated by valley oaks but may include California sycamore, Hinds black walnut, interior live oak, box elder, and blue oak. The shrub layer tends to be significant in riparian areas and sparse in upland areas and commonly include species such as poison oak, toyon, and coffeeberry.

Valley oak woodlands have greatly decreased ranges within Placer County and are of current management concern to the County. The remaining valley oak woodlands in Placer County have a limited range and are mainly confined to riparian areas. Their previous range has been severely reduced by conversion to irrigated agricultural uses, development, and use as firewood, while fire suppression has encouraged increased densities of live oaks and pines.

The Valley oak woodland, within the project limits, is primarily associated with the riparian zones and as such will be under the regulatory authority of the CDFG.

Environmental Consequences
Construction of the new alignment for SR 193 will directly impact 5.75 acres of valley oak woodland habitat. These direct effects would include the clearing of vegetation for temporary access and construction of the new roadbed; preparation, grading and construction of temporary access roads and staging areas, and their subsequent extensive use by heavy equipment and trucks; and soil stockpiling. Impacts to oak woodlands are considered less than significant with mitigation.

Avoidance and Minimization Measures

- During project design, several iterations of the project alignment were done to avoid impacts to oaks and the surrounding habitat to the maximum extent possible. As the scope and design of the proposed project is further defined, the impacts to oak habitat may be additionally reduced.

- A grading plan, which will be developed in cooperation with the Project Engineer and the Landscape Architect, will be implemented during the construction phase.
- A long-term mitigation and monitoring plan will also be developed, as one of the requirements of CDFG's Streambed Alteration Agreement, and implemented to ensure the success of the on-site restoration and revegetation efforts.
- Replanting within Caltrans right-of-way will take into consideration existing standards and guidelines such as sight distance and the clear recovery zone. These areas will be planted with California annuals and perennials including native grasses, forbs, and low growing shrubs, associated with the understory component of valley oak woodland habitats appropriate for the site conditions.

Mitigation

- Compensatory mitigation for the loss of 5.75 acres of valley oak woodlands will be a combination of both on-site restoration and off-site preservation. Mitigation ratios will range from 1:1 to 3:1 depending on the size and location of the trees that are affected. This mitigation will be part of the compensation proposal prepared to minimize the project effects on riparian and stream zone environments. Caltrans will also work with Placer County to ensure, where feasible, that all oak woodland replacement meet the goals of Placer County's Oak Woodland Management Plan (included in the Natural Environment Study).
- Upon completion of the project, disturbed areas will be re-contoured to a natural grade and re-vegetated with valley oak seedlings and other native species appropriate for the site conditions.

Migration Corridors

Affected Environment

The project is located in a rural development area with substantial amounts of wildlife habitat adjacent to the ESL. Deer migration through the area tends to be daily migrations to and from foraging areas and cover. CDFG also maintains the Spenceville Wildlife Area to the north of the project site which may also contribute to the population of migratory deer in the vicinity of the project area. The riparian area along the largest tributary (2c, see Appendix G) within the ESL forms a corridor for the daily movements of deer and small to midsized mammals such as coyote, fox, raccoon, skunk, and possum. A game trail follows the riparian area up to SR 193 where several deer kills and many midsized mammal kills were found during project surveys.

Environmental Consequences

The proposed project will increase site distance along this stretch which could lower animal mortality. However, this project also increases the width of the highway which may take animals longer to cross, increasing the chance for animal vehicle collisions in this area. Impacts to migration corridors are considered less than significant.

Avoidance and Minimization Measures

- To minimize potential project impacts to wildlife movement within the project area, Caltrans is proposing to install a 10' x 10' structure under the roadway at an appropriate location within the project limits. The placement of this structure will enhance wildlife movement in this area and potentially reduce animal / vehicle encounters. Additionally, where feasible, Caltrans will place two additional oversized structures, such as culverts, within the project limits to further reduce the potential

effects to wildlife corridor movements. The placement and location of these structures will be determined as the project design is further developed.

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 Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344) is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. 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 CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot 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 of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA). USACE issues two types of 404 permits: Standard and General permits. There are two types of General permits, Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA and/or Caltrans, as assigned, 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 California Department of Fish and Game (CDFG), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California 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 RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the CWA. Please see the Water Quality section for additional details.

Affected Environment

Various wetlands, perennial streams, intermittent channels, and roadside ditches are present within the project limits. Table 7 summarizes the results of surveys for the presence of wetlands and other waters of the U. S.

TABLE 7: IMPACTS TO WETLANDS AND OTHER WATERS OF THE U.S.

	Permanent Impacts	Temporary Impacts
Wetland	0.35 acres	0.11 acres
Riparian Wetland	0.83 acres	0.17 acres
Other Waters (perennial, intermittent streams/channels)	1608 linear feet (0.04 acres)	1330 linear feet (0.03 acres)
Total	**1.22 acres**	**0.31 acres**

Environmental Consequences

The project would permanently impact approximately 1.22 acres of waters of the U. S., 1.18 acres of which are wetlands. The project would temporarily impact approximately 0.31 acres of waters of the U. S., 0.28 acres of which are wetlands. Final waters of the U. S. impact totals will be calculated after the Wetland and Other Waters of the U. S. Delineation is verified by USACE. Impacts to wetlands and other waters of the U.S. are considered less than significant with mitigation.

Avoidance and Minimization Measures

The State Water Resources Control Board (SWRCB) has developed and issued a statewide National Pollutant Discharge Elimination System (NPDES) permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. All construction projects over 1 acre requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. This plan must meet the standards and objectives to minimize water pollution impacts set forth in Caltrans' Standard Specifications. The SWPPP must also be in compliance with the goals and restrictions identified in the Regional Water Quality Control Board's Plan. Any additional measures included in the 401 certification and

1602 Agreement will be complied with. These standards/objectives, at times referred to as "Best Management Practices" (BMPs), include but are not limited to:

- Where working areas encroach on live or dry streams, lakes, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems will be constructed and maintained between working areas and streams, lakes and wetlands. During construction of the barriers, discharge of sediment into streams will be held to a minimum. Discharge will be contained through the use RWQCB-approved measures to keep sediment from entering protected waters.
- Oily or greasy substances originating from the Contractor's operations will not be allowed to enter or be placed where they will later enter tributary waters.
- Asphalt concrete will not be allowed to enter tributary waters.

The following measures are proposed to minimize impacts to wetlands and other waters of the U.S. in the project area:

- Wetlands and other waters of the U.S. will be delineated as environmentally sensitive areas (ESAs) on the project plans and in the project specifications. The boundaries of the ESA will be clearly marked in the field by the installation of a temporary fence.
- ESAs will be implemented as a first order of work and will remain in place until all construction activities are complete.

Mitigation
Mitigation for jurisdictional wetlands and other waters of the U.S. will be performed to achieve no-net-loss of the functions and values within the study area in accordance with the USACE' Habitat Mitigation and Monitoring Proposal Guidelines (1991) and the Guidelines for Monitoring Riparian Mitigation (1994).

- The proposed project would permanently impact 1.18 acres of jurisdictional wetlands which will be mitigated either through an in-lieu-fee payment to an USACE approved organization, on-site at 1:1 ratio by creating wetlands near PM 5.0 or offsite, pending consultation with USACE. Temporary impacts to 0.28 acre of jurisdictional wetlands of the U.S. would be mitigated through on-site restoration at 1:1 ratio.
- The proposed project would permanently impact 0.04 acre of jurisdictional other waters of the U.S., which will be mitigated either through an in-lieu-fee payment to an USACE approved organization, on-site at a 1:1 ratio by creating vegetated buffers along the affected other waterways in the study area or off-site, pending consultation with USACE. Temporary impacts to 0.03 acres of jurisdictional other waters of the U.S. would be mitigated on-site at 1:1 ratio by restoring stream channels to a natural state and planting vegetated buffers along disturbed waterways at the three stream locations within the project area.

2.3.3 Plant Species

Regulatory Setting
The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) have 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 the other special-status plant species, including CDFG species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 Code of Federal Regulations (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 California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), CA Public Resources Code, Sections 2100-21177.

Clarkia biloba

Brandegee's clarkia is found in Foothill woodland, Yellow Pine Forests and Chaparral Communities at elevations ranging from 738 to 3002 feet. The plant is found in the sierra foothills from Sacramento and Amador Counties in the south to Butte and Sierra Counties in the north. Populations were found one mile east of the project area along cut slopes adjacent to SR 193, however, no plants were found within the ESL. The ESL is likely at too low an elevation to support the species and no plants were found during botanical surveys. No impacts are anticipated to this species and no avoidance or minimization measures are proposed.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The US Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the following section. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries Service 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 1600 – 1603 of the California Fish and Game Code
- Section 4150 and 4152 of the California Fish and Game Code

White Tailed Kite
The white-tailed kite is a common to uncommon, yearlong resident in coastal and valley lowlands, but rarely found away from agricultural areas. They range from Washington along the western coast of the United States south to southern South America. Habitat consists of herbaceous and open stages of most habitats mostly in foothill areas of California. They have extended their range and increased numbers in recent decades. Kites prey mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians and forage in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands. Nesting has been observed in Placer County within 2.6 miles of the project ESL. Adherence to nesting season work windows as outlined in the Migratory Bird Treaty Act (MBTA) will minimize any impacts to this species as a result of this project.

Western Pond Turtle
Western pond turtles require some slack- or slow-water aquatic habitat. Western pond turtles are uncommon in high gradient streams probably because water temperatures, current velocity, food resources, or any combination thereof may limit their local distribution. Habitat quality seems to vary with the availability of aerial and aquatic basking sites; western pond turtles often reach higher densities where many aerial and aquatic basking sites are available. Although western pond turtles were observed in several ponds in the project vicinity during field surveys and are found throughout much of the sierra foothills in Placer County, no turtles were found within the project limits. Due to the low water volumes of the three stream channels during the summer months, it is unlikely that this species occurs within the project limits.

Avoidance and Minimization Measures

- Field surveys will be performed two weeks prior to construction to ensure that no western pond turtles are within the project limits.

California Black Rail
In Placer County there are two recent records for black rails. One is north of the project approximately 5.5 miles and the other is in Rocklin, approximately 6.8 miles south of the project. Suitable habitat is available adjacent to the project area, however, habitat within the ESL is marginal. It is unlikely that this species is present within the project limits.

Migratory Birds
Executive Order 13186 is designed to assist federal agencies in their efforts to comply with the Federal Migratory Bird Treaty Act. Under the Federal Migratory Bird Treaty Act, take is defined as the action of or attempt to pursue, hunt, shoot, capture, collect, or kill (50 CFR 10.12) and includes “intentional” take (for example, take that is the purpose of the activity in question) and “unintentional” take (for example, take that results from, but is not the purpose of, the activity in question).

Affected Environment
It is possible that migratory birds may nest within the project limits.

Environmental Consequences
This project requires tree removal and therefore has the potential to affect nesting birds. With the implementation of work windows, impacts to nesting birds are not anticipated. In addition, it is also possible that migratory birds may nest outside the limits of ground disturbance, yet still be close enough to be disturbed by certain construction activities.

These situations will be identified during the preconstruction surveys performed by the Contractor's biologist and dealt with on a case by case basis. The avoidance measures incorporated into this project would avoid impacts to nesting birds protected by the Federal Migratory Bird Treaty Act. Impacts to migratory birds are considered less than significant.

Avoidance and Minimization Measures

- Where feasible, tree removal will be scheduled outside of the nesting season (February 15 – September 1). If the project activities begin within the nesting season due to the construction schedule, every effort will be made to remove the trees prior to this timeframe in order to avoid any nesting issues.
- A nesting bird survey will be conducted approximately two weeks prior to any ground disturbance. If active nests are found that may be affected by construction activities, Caltrans will determine an appropriate course of action. Possible solutions include but are not limited to; implementing buffer areas, monitoring active nests, nest salvage, and work windows.

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): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) 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 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a no effect finding. 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 California Department of Fish and Game (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 species listed under both FESA and CESA 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 California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Valley elderberry longhorn beetles (VELB)

Affected Environment

The valley elderberry longhorn beetle (VELB) was listed as a federal threatened species on August 8, 1980. The final ruling on Critical Habitat for VELB was published on August 8, 1980. In September 2006, the USFWS recommended that VELB be delisted. As of March 2012, VELB has not yet been delisted. The project study area does not occur within Critical Habitat for VELB.

VELB are nearly always found on or close to its host plant, elderberry. These elderberry shrubs provide breeding and foraging habitat for this species. Adults forage on leaves and larvae eat the inner stem tissues. The beetle's habitat consists of riparian forests whose dominant species include cottonwood, sycamore, Valley oak, and willow, with an understory of elderberry shrubs and adjacent elderberry savannas. VELB is most likely to occur where plants are not isolated from one another. The beetle's range extends throughout California's Central Valley and associated foothills from about the 3,000-foot elevation contour on the east and the watershed of the Central Valley on the west. VELB are known to occur in Placer County.

Four elderberry shrubs (Plants 1-4) were observed in the study area during the 06/07/2011 and 06/08/2011 botanical surveys of the study area (See Appendix F). The locations of these shrubs were recorded and the stems of each plant were measured. The western most plant (Plant 1) is located on the periphery of a riparian habitat. Plant 1 was found to have at least two stalks measuring 5" with several other smaller stalks visible. This plant was found to be intertwined with dense blackberry, making it impossible to fully investigate. Several exit holes were found on this plant consistent with VELB. Plants 2 and 3 are located in riparian habitat between Country Dam Rd. and Mandarin Hill Rd. alongside SR 193. Plant 2 has one stalk measuring 3.5" and has several exit holes. Plant 3 has just one stalk measuring 1" in diameter. An oak tree has fallen on Plant 3, and no exit holes were visible. Plant 4 is located on the eastern end of the project in an upland habitat. This plant is fairly large and contains 33 stalks with a diameter of 1" or greater.

Environmental Consequences

Plants 1-3 are all located in riparian zones adjacent to the existing alignment of SR 193 and Plant 4 is located in an upland area also adjacent to the existing road alignment. Construction of the proposed project is assumed to affect 3 elderberry shrubs (Plants 1-3). Plant 4 will be avoided through the implementation of minimization measures and will not be affected by construction activities. Because there is no feasible way to ensure avoidance of Plants 1-3 through minimization and avoidance measures, these shrubs will be removed. Due to access and safety issues, transplanting these shrubs is not feasible and will not be attempted. Based on anticipated impacts to the 3 identified elderberry shrubs, it is

anticipated that this project “may affect, is likely to adversely affect” VELB. Impacts to VELB are considered less than significant with mitigation.

Avoidance and Minimization

The measures below would be applied to minimize impacts to the VELB:

- Before initiation of any vegetation removal, grading, or any other ground-disturbing activities, a qualified biologist will conduct mandatory worker awareness training for all construction personnel. The awareness training will provide information on how to avoid impacts to biological resources, particularly special-status species. The training will also inform workers of the penalties for not complying with mitigation requirements. If new construction personnel are subsequently added to the project, they too will receive the training.
- Prior to any ground-disturbing activities associated with the project, 4-foot-tall temporary, plastic mesh construction fence (Environmentally Sensitive Area “ESA” fence) will be installed 20 feet, where possible, from the drip lines of elderberry shrubs that are not to be removed. The fencing is intended to prevent encroachment by construction vehicles and personnel. The exact location of the fencing will be determined by a qualified biologist, with the goal of protecting VELB habitat. The fencing will be strung tightly on posts set at a maximum interval of ten feet. The fencing will be installed in a way that prevents equipment from enlarging the work area beyond what is necessary to complete the work. The fencing will be checked and maintained weekly until all construction is completed.
- A sign will mark this buffer zone and state the following ‘This is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment’. The fencing and a note reflecting this condition will be shown on the construction plans. Signs will be legible from a distance of 6.1 m (20 ft) and must be maintained for the duration of construction.

Mitigation

- To mitigate potential project impacts to three elderberry bushes, Caltrans will purchase mitigation credits at a USFWS-approved VELB mitigation bank (such as River Ranch in Colusa County or French Camp Conservation Bank in San Joaquin County) or as otherwise directed in accordance with the requirements of the Biological Opinion for this project.

<u>California Red Legged Frog (CRLF)</u>

Affected Environment

The California red-legged frog (CRLF) is a federal threatened species and a state Species of Special Concern.

A CRLF habitat assessment was conducted in the study area and within a 1-mile radius of the project site. A discussion of the survey results is included in the CRLF Site Assessment Report in the Natural Environment Study.

Ponds and streams surveyed within the project CRLF Site Assessment Area have a potential to support CRLF breeding habitat. Habitat quality ranges from un-vegetated or

manicured stock ponds and small perennial streams to ponds with greater shoreline complexity and more extensive aquatic or riparian vegetation and a large perennial stream with a complex and dense riparian corridor. Based solely on observations of the structure and quality of available habitat (without considering the potential presence of bullfrog competition or predatory fish), many of the ponds and streams within the project CRLF Site Assessment Area are suitable for CRLF breeding. However, considering the presence of predatory species at these locations, it is unlikely that CRLF would be present.

Environmental Consequences

Without avoidance and minimization measures, impacts from the proposed project could result in adverse effects on CRLF, such as harassment, injury, and mortality of individuals during vegetation removal and construction activities. Direct impacts to potential CRLF habitat include the filling of riparian areas and wetlands and the temporary removal of vegetation in Tributary 2c. Indirect impacts to potential CRLF habitat include increases in sediment runoff during project construction and increases in impermeable surfaces after the project has been constructed.

Based on the scope of the proposed project and on the CRLF Site Assessment, direct and indirect impacts to CRLF are possible, but are unlikely to occur for the following reasons:

- No new barriers to CRLF dispersal (additional roads, removal of culverts, and placement of additional structures) will be implemented as part of this project. In fact, the new culverts to be placed are likely to be larger in size, making them more likely to be used as dispersal routes.
- Aquatic features capable of providing breeding habitat for CRLF within the ESL are inhabited by bullfrogs.
- No records of breeding CRLF exist within 5 miles of the project ESL. No records of individual CRLF have been recorded within 5 miles of the project ESL.
- The nearest record of CRLF was from “Auburn” (over six miles from the ESL) in 1946 and the nearest presumed extant population is in El Dorado county over 12 miles from the ESL.
- Reconnaissance level surveys within accessible areas 1.00-mile of the project ESL did not detect CRLF.
- Despite the widening of the highway throughout the ESL, the traffic usage is likely to remain unchanged.

No CRLF’s were found during USFWS 1997 guidance based focused surveys conducted for the Bickford Ranch Specific Plan.

Based on the information above and with the implementation of avoidance and minimization measures, it was determined that construction of the proposed project is not likely to adversely affect CRLF. Impacts to CRLF are considered less than significant.

Avoidance and Minimization

The project has been designed to minimize effects on aquatic and riparian habitat identified in the study area. BMP’s would be implemented to reduce water quality impacts, which may include placement of silt fencing or filter fabric along the banks of any affected waterway once the vegetation is removed. Construction activities would be implemented outside of the rainy season, which will reduce the potential for adverse impacts on the tributaries located in the study area, but would partially overlap with the breeding season for CRLF.

The following measures will be implemented during constriction to avoid or minimize project-related impacts on suitable habitat for CRLF:

- The Contractor shall time the project such that in-water work will be limited to the dry season (April 15-October 15).
- The Contractor shall retain a qualified biologist familiar with CRLF biology and habitat requirements to implement avoidance and minimization measures for the project. The Contractor shall submit the name and credentials of the biologist(s) to the U. S. Fish and Wildlife Service (USFWS) for review and approval at least 15 days prior to the onset of construction activities.
- If CRLF are found at any time the approved biologist shall ensure work stops within 300 ft of the located CRLF and immediately contact the Caltrans project biologist who will consult with the USFWS.
- The USFWS approved biologist shall conduct a CRLF survey of the ESL prior to the onset of vegetation removal within 300 feet of wetted areas.
- All initial riparian vegetation to be removed within the ESL will be manually clipped to ground level and removed by hand. This activity must be conducted in the presence of the USFWS approved biologist who will monitor the area for CRLF.
- The USFWS approved biologist shall work with the resident engineer and the Contractor to identify areas of suitable habitat outside of the work area. These riparian areas shall be staked, flagged, or signed to avoid encroachment by equipment and construction crews. The number of access routes, size and location of staging areas and the total area of impact shall be limited to the minimum necessary to achieve the project goals. This goal includes locating access routes and construction areas outside of the creek and riparian areas to the maximum extent practicable.
- The biologist shall be present to monitor, at a minimum, during all in-water work, and during all work occurring within 300 feet of wetted areas.
- If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 5 mm (0.2-in). Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering will be determined by the Contractor and are to be reviewed and approved by the USFWS approved biologist. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible; any imported material will be removed from the streambed upon completion of the project.
- All refueling and maintenance of equipment and vehicles shall occur at least 300 feet from riparian habitat and water bodies and shall not occur at a location where a spill would drain directly towards the creek. Prior to the onset of work, the Contractor shall ensure that a spill prevention and clean-up plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- Appropriate BMPs to protect water quality and control erosion shall be implemented.
- Work areas that are temporarily disturbed shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. This measure shall be implemented in all areas disturbed by activities associated with the project.

- During construction activities, all trash that may attract predators shall be properly contained, removed from the worksite, and disposed of regularly. Following construction, all trash and construction debris shall be removed from the work areas.

Mitigation
Based on the finding of the CRLF Site Assessment that it is unlikely that this species would be found within the project location, no compensatory mitigation is proposed.

2.3.6 Invasive Species

On February 3, 1999, President Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States (U.S.). 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." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list currently maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

Affected Environment
Noxious weed sources were detected in habitats in the study area and would be expected to move into newly disturbed areas.

Environmental Consequences

Habitat Vulnerability to Noxious Weed Infestation
Ground disturbance associated with construction of this project poses a high risk for the spread of noxious weeds into native habitats from ruderal roadside vegetation and cultivated fields and orchards along SR 193. The grasslands, wetlands, valley oak riparian habitats are highly vulnerable to the spread of noxious weeds.

Non-project Dependent Vectors
Farm workers, recreationists, and others can carry noxious weed seeds into the project area on clothing and tools. Wildlife and domestic animals, especially dogs, often vector noxious weed seeds in their coats. These potential noxious weed vectors are not expected to increase as a result of this project.

Habitat Alteration Expected as a Result of the Project
Construction of this project would result in new cut/fill slopes, removal of woodland canopy coverage and vegetated ground cover, and areas of disturbance associated with construction staging and access roads, resulting in a net increase in disturbed roadside area, and a reduction in shade. Habitat modification as a result of the proposed project represents a high risk for the infestation and spread of noxious weeds. If left untreated, the newly disturbed areas would provide optimal conditions for noxious weeds.

Increased Vectors as a Result of Project Implementation
Project induced vectors include weed seed brought in on tools, workers’ vehicles, and on project workers’ clothing and boots. The potential for spreading existing noxious weed infestations on workers’ clothing boots, tools, and vehicles is high. The proposed project

represents a high risk for the introduction and establishment of noxious weeds; however, minimization measures should reduce that risk.

Avoidance and Minimization

The measures below would be applied to reduce the potential for the introduction or spread of noxious weeds in the project area:

- All construction equipment will be clean of potential noxious weed sources (mud, vegetation) before entering the project area, to help ensure noxious weeds from outside of the project area are not introduced into the project area;
- Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material.
- Only native plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. Certified weed-free straw shall be required where erosion control straw is to be used. In addition, any hydro-seed mulch used for revegetation activities must also be certified weed-free. All seed mix that will be used for revegetation must be pre-approved by a revegetation specialist or botanist familiar with local plant species.
- Non-native plant control will consist of mechanical or spot chemical treatments of the selected most invasive plant species listed by the USDA, CEPPC, and CALIPC that if left untreated, would dominate the onsite mitigation area.

Impacts from noxious weeds are considered less than significant and no compensatory mitigation would be required.

2.3.7 Cumulative Impacts

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

California Environmental Quality Act (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. A definition of cumulative impacts, under the National Environmental Policy Act (NEPA), can be found in 40 Code of Federal Regulations (CFR), Section 1508.7 of the Council on Environmental Quality (CEQ) Regulations.

Affected Environment

Two large residential developments being proposed within a 5 mile radius of the project location. One of these planned communities it the La Faille Ranch development. This project is proposing to build 14 residential lots, each 10 acres or larger on a 165 acre property located at the southeast intersection of SR 193 and Clark Tunnel Road. This project is still in the planning stages and it is assumed that if it goes forward, all appropriate mitigation for impacts will be implemented.

The second large residential development proposed for this area is the Bickford Ranch development. This was to be a 2,000 home development on approximately 1,942 acres located between the towns of Lincoln and Penryn, southwest of the project location. A Final Environmental Impact Report was approved in November 2000. The developers for this residential project filed for bankruptcy in 2008.

Environmental Consequences

Farmland

According to the Bickford Ranch EIR, the entire site is Farmland of Local Importance with limited water availability and none of the land is covered under a Williamson Act contract. The EIR determined that impacts due to conversion of agricultural lands were less than significant pursuant to CEQA and no mitigation measures were proposed.

The proposed safety project would convert approximately 11 acres of Farmland of Local Importance which would add to the loss expected from the Bickford Ranch and La Faille Ranch projects. However, the project would convert less than one acre of Unique Farmland. Following construction of the new highway, the old portions of roadbed would be obliterated and the area would be revegetated. Although the land proposed for acquisition would no longer be zoned for farmland there would be a minimal amount of new pavement added to the existing farmland. No cumulative impacts to Unique Farmland are anticipated and the conversion of 11 acres of Farmland of Local Importance is not expected to be cumulatively considerable.

Visual

The Bickford Ranch EIR determined that impacts to visual resources would be significant and mitigation measures were proposed. It is assumed that once this development is funded again, these impacts will be sufficiently mitigated for. With the implementation of all appropriate mitigation, the proposed safety project is not expected to have a cumulatively considerable impact on this resource.

Oak Woodlands

Currently, two thirds of the historic oak woodlands in California remain intact, with the majority of recent losses of oak woodlands caused by conversion to urban, suburban, and rural residential areas. Only four percent of oak woodlands have formal protection from conversion. Placer County is one of the fastest growing areas in the state with a projected growth rate of 3.4 percent over the next 50 years.

Although the developers of the Bickford Ranch project filed for bankruptcy, grading of several hundred acres of oak woodland habitat was done at the site of the planned development and has since been abandoned. Impacts to these woodlands has not been mitigated for to date, however the EIR prepared for the Bickford Ranch development did propose appropriate mitigation for these impacts. It is assumed that once this development is funded again, these impacts will be sufficiently mitigated for.

Based on the minimal acreage of valley oak riparian habitat that will be impacted and implementation of all appropriate mitigation, the proposed safety project will not have a cumulatively considerable impact on this resource.

Waters of the U.S.

Impacts to waters of the U. S. resulting from the Bickford Ranch development have not been mitigated for to date, however the EIR prepared did propose appropriate mitigation for these impacts. It is assumed that once this development is funded again, these impacts will be sufficiently mitigated for.

Based on the minimal acreage of waters of the U. S. that will be affected and implementation of all appropriate mitigation, the proposed safety project will not have a cumulatively considerable impact on this resource.

Valley elderberry longhorn beetles (VELB)

According to a 5-year review of VELB, at the time of listing, the loss of riparian habitat was identified as a major threat to this species. Loss of riparian habitat between 1900 and 1990 in the Central Valley was about 96% in the southern portion of the Valley (Kern County to Fresno County), 84% in the middle Valley (Merced County to San Joaquin County), and 80% in the northern Valley (Sacramento and Solano counties to Shasta County). Between 1960 and 1990, loss rates had slowed somewhat but were still high with 59% loss in the south, 65% loss in the middle and 35% loss in the northern Central Valley.

While loss of riparian habitat has been extensive, it is unclear how much of that riparian habitat contained elderberry shrubs or was occupied by VELB. Quantifying the loss of elderberry shrubs as a result of the agricultural and urban development over the past 200 years is near impossible. Lang et al. (1989) observed fewer numbers of elderberry shrubs in the lower reach (between Sacramento and Colusa) of the Sacramento River than the northern reach (Chico to Red Bluff). They attributed this difference to the loss of elderberry shrubs and riparian habitat in the southern reach of the Sacramento River as a result of extensive flood control activities such as the construction and maintenance of levees.

Although the developers of the Bickford Ranch project filed for bankruptcy, grading of several hundred acres of oak woodland habitat, which potentially included elderberry shrubs, was done at the site of the planned development and has since been abandoned. Impacts to these woodlands has not been mitigated for to date, however the EIR prepared for the Bickford Ranch development did propose appropriate mitigation for impacts to oak woodland habitat and VELB. It is assumed that once this development is funded again, these impacts will be sufficiently mitigated for.

Based on the minimal impacts anticipated for VELB and implementation of all appropriate mitigation, the proposed safety project will not have a cumulatively considerable impact on this resource.

2.4 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988, has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of GHG emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. “Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)[4].

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year

[4] http://climatechange.transportation.org/ghg_mitigation/

2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order (EO) S-3-05: (signed on June 1, 2005, by former Governor Arnold Schwarzenegger) the goal of this EO is to reduce California's GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill (AB) 32.

AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan, (which includes market mechanisms) and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger) further directs state agencies to begin implementing AB 32, including the recommendations made by the California's Climate Action Team.

Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger) set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by the year 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007: required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Caltrans policy that will ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. This policy contributes to the Caltrans's stewardship goal to preserve and enhance California's resources and assets.

Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in the growth of vehicle hours travelled.
Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.
On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.

- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009[5]. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.[6]

[5] http://www.epa.gov/oms/climate/regulations.htm#1-1
[6] http://epa.gov/otaq/climate/regulations.htm

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO_2) per mile, (the equivalent to 35.5 miles per gallon [MPG] if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

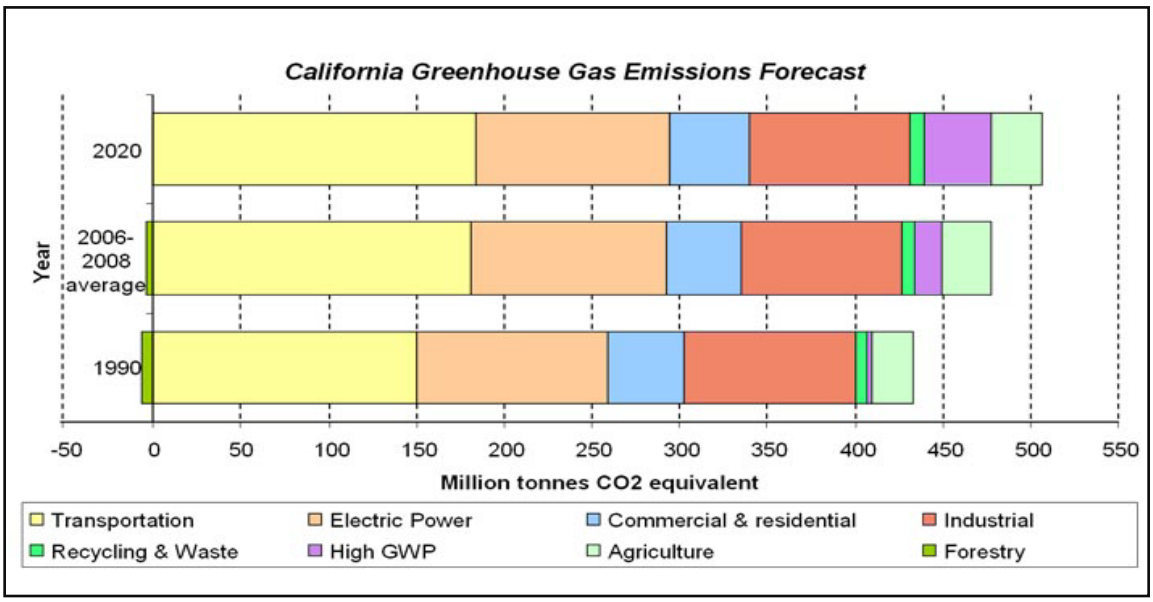
Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.[7] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

[7] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

FIGURE 7: CALIFORNIA GREENHOUSE GAS FORECAST



Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[8]

The proposed project will not increase the vehicular capacity of SR 193 as the roadway will be re-constructed with the same lane configuration and capacity as the existing roadway. The proposed project is expected to improve safety and reduce the number of collisions by improving the existing alignment and widening the shoulders. Because the project would not increase capacity nor vehicle hours travelled, no increases in operational GHG emissions are anticipated. While construction emissions of greenhouse gases are unavoidable, there will likely be long term benefits with improved safety, operation and smoother pavement surface.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be

[8] Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

While it is Caltrans's determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in the figure below.

FIGURE 8: THE MOBILITY PYRAMID

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB.

Table 8 summarizes Caltrans's and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006) which can be seen at the following website:
http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf.

TABLE 8: CLIMATE CHANGE/CO2 REDUCTION STRATEGIES						
Strategy	**Program**	**Partnership**		**Method/Process**	Estimated CO_2 Savings (MMT)	
		Lead	**Agency**		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. Landscaping reduces surface warming, and through photosynthesis, decreases CO_2. Impacts to oak woodlands will be mitigated for through on-site restoration and off-site preservation (please see the Natural Communities section for additional information). This new landscaping will help offset any potential CO_2 emissions increase.
2. According to the Caltrans's Standard Specifications, the contractor must comply with all of the local Air Pollution Control District's (APCD) rules, ordinances, and regulations regarding to air quality restrictions.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the federal government implement actions to expand and strengthen the nation's capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009)[9], which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

[9] http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010[10] to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project was programmed for construction prior to 2013. In addition the proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the

[10] Pre-publication copies of the report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, were made available from the National Academies Press on June 22, 2012. For more information, please see http://www.nap.edu/catalog.php?record_id=13389.

state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

CHAPTER 3 COMMENTS AND COORDINATION

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods. This chapter summarizes the results of the Department's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

A public open house was held on August 31, 2011 at the Newcastle Elementary School to introduce the project to the public and solicit their input.

During circulation of this Initial Study, two addition open houses will be held at the following locations and times:

Thursday January 10, 2013
McBean Pavilion, 65 McBean Park Drive, Lincoln, CA 95648
Time: 6:00PM -8:00PM

Thursday January 17, 2013
Newcastle Elementary School Gym, 8951 Valley View Drive, Newcastle CA 95658
Time 6:30PM -8:30PM

Following circulation of this Initial Study, comments made on the project submitted during circulation will be placed in and addressed in this chapter.

CHAPTER 4 LIST OF PREPARERS AND TECHNICAL STUDIES

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

Rajive Chadha	Environmental Engineer, Hazardous Waste
Jennifer Clark	Associate Environmental Planner
Darrell Naruto	Transportation Engineer, Water Quality
Suzanne Melim	Senior Environmental Planner
Maureen Doyle	Associate Environmental Planner, Biology
Jeff Haney	Associate Environmental Planner, Archaeology
Kathleen Grady	Landscape Associate
Sharon Tang	Transportation Engineer, Air
Saeid Zandian	Transportation Engineer, Noise
William Webster	Engineering Geologist

The following technical reports were prepared in order to analyze the potential effects this project may have on the environment and to assist in preparing this Initial Study/ Environmental Assessment. These documents are available for review at the Caltrans North Region Office of Environmental Management, 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833.

Historic Property Survey Report (some portions may not be available for public review)
Initial Site Assessment for Hazardous Waste
Natural Environment Study
Air Quality Assessment
Noise Assessment
Water Quality Assessment
Visual Impact Assessment
Preliminary Geotechnical Report
Community Impact Assessment

CHAPTER 5 DISTRIBUTION LIST

This document has been made available online at the following website:
http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm

A “Notice of Intent to adopt a Mitigated Negative Declaration and Announcement of Public Open House” was mailed to the following individuals, businesses, and organizations:

CAL FIRE
California Bicycle Coalition
California Highway Patrol - Valley Division
City of Auburn Public Works/Auburn Transit
Development Services Department
Gladding McBean
Interested individuals who previously commented on the project
Lincoln Fire and Police Departments
Lincoln Library and Auburn Library (to make available for public review)
Newcastle Community Association
Newcastle Fire Protection District
Northern California Regional Land Trust
Penryn, Horseshoe Bar, Newcastle/Ophir, and N. Auburn Municipal Advisory Councils (MACS)
Placer County Agricultural Commissioner
Placer County Board of Supervisors
Placer County Clerk Recorder
Placer County Community Development Resource Agency
Placer County Emergency Services
Placer County Farm Bureau
Placer County Planning
Placer County Public Works
Placer County Sheriff's Department
Placer County Transit
Placer County Transportation Planning Agency
Placer Land Trust
Planning and Conservation League
Property owners directly affected by the project and in the general project vicinity
Robinson Enterprises, Inc.
Sacramento Area Bicycle Advocates
Sacramento Audubon Society
Sacramento Bike Hikers
Sacramento Wheelmen
Shingle Springs Rancheria
Sierra Nevada Conservancy
Sierra Pacific Industries
State Clearinghouse (to be distributed to various state agencies)
The Wildlands Conservancy
Town of Loomis
United Auburn Indian Community of the Auburn Rancheria
Western Placer Unified School District
Wildlife Heritage Foundation

APPENDIX A CEQA CHECKLIST

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
III. 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?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. 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?	☐	☒	☐	☐
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?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the 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?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
VI. 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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
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)?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XII. 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
) 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?	☐	☐	☐	☒

XIII. 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?	☐	☐	☐	☒

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

XVIII. 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) 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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

APPENDIX B NRCS-CPA-106

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 12/19/11 — 4. Sheet 1 of 1
1. Name of Project State Route 193 Curve Improvement	5. Federal Agency Involved Caltrans as assigned by FHWA
2. Type of Project Highway Improvement	6. County and State Placer County, CA
* **PART II** *(To be completed by NRCS)*	1. Date Request Received by NRCS 12/20/2011 — 2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☒ NO ☐	4. Acres Irrigated 30,247 — Average Farm Size 89
5. Major Crop(s) rice, cattle, nurseries, timber, walnuts — 6. Farmable Land in Government Jurisdiction Acres: 0 %	7. Amount of Farmland As Defined in FPPA Acres: 133,922 % 14
8. Name Of Land Evaluation System Used CA System — 9. Name of Local Site Assessment System N/A	10. Date Land Evaluation Returned by NRCS 03/06/2012 (*) Revision 9/18/012

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment L1-L5	L1-L5		
A. Total Acres To Be Converted Directly	13			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor	13	0	0	0
* **PART IV** *(To be completed by NRCS) Land Evaluation Information*		(*)		
A. Total Acres Prime And Unique Farmland	5.6	0.5		
B. Total Acres Statewide And Local Important Farmland	7.3	12.6		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.01%	0.01%		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	N/A	N/A		
* **PART V** *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	44	44		
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area In Nonurban Use — 15		15		
2. Perimeter In Nonurban Use — 10		10		
3. Percent Of Corridor Being Farmed — 20		2		
4. Protection Provided By State And Local Government — 20		20		
5. Size of Present Farm Unit Compared To Average — 10		0		
6. Creation Of Nonfarmable Farmland — 25		0		
7. Availability Of Farm Support Services — 5		5		
8. On-Farm Investments — 20		10		
9. Effects Of Conversion On Farm Support Services — 25		0		
10. Compatibility With Existing Agricultural Use — 10		0		
TOTAL CORRIDOR ASSESSMENT POINTS — 160		62	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100		44		
Total Corridor Assessment (From Part VI above or a local site assessment) — 160		62	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260		106	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
L1-L5 (layouts 1-5) for Alternative 1	11.73	10-11-12	YES ☐ NO ☒

5. Reason For Selection:

Project proposes one build alternative and one no-build alternative. For the purposes of this assessment, the build alternative is chosen

Signature of Person Completing this Part: — DATE 10-11-12

NOTE: Complete a form for each segment with more than one Alternate Corridor

APPENDIX C DEPARTMENT OF CONSERVATION CORRESPONDANCE

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
703 B STREET
MARYSVILLE, CA 95901
PHONE (530) 741-4484
FAX (530) 741-4457
TTY 711

Flex your power!
Be energy efficient!

September 27, 2012

Mark Nechodom, Director
Department of Conservation
c/o Division of Land Resource Protection
801 K Street, MS 18-01
Sacramento, CA 95814

Subject: State Route 193 Curve Improvement

Dear Director Nechodom,

In accordance with Government Code Section (§) 51291(b), this letter is to serve as notification of the possible acquisition of land covered by a contract established under the California Land Conservation Act of 1965 (the Williamson Act).

Under §51291(b) the notice shall include the following:

1) A general description, in text or by diagram, of the agricultural preserve land proposed for acquisition,
2) an explanation of the preliminary consideration of Section 51292,
3) and a copy of any applicable contract created under this chapter."

Caltrans is proposing a safety project along State Route (SR) 193 in Placer County, approximately four miles east of the City of Lincoln. The project proposes to widen the shoulders and correct curves within the project limits. This project would require the acquisition of right of way from parcels adjacent to SR 193. Two of the affected parcels are covered under Williamson Act Contracts (see table below). There are no other agricultural preserves within the project limits that would be affected by this project. Neither parcels affected are prime farmland. A map has been enclosed that shows the farmland and the Williamson Act parcels within the project area.

Assessor Parcel Number (APN)	Parcel Size (Acres)	Proposed Acquisition (Acres)
031-110-010	48.0	0.41
031-110-023	84.5	3.76

Under Government Code Section 51292 no public agency or person shall locate a public improvement within an agricultural preserve unless the following findings are made:
(a) The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve.
(b) If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement.

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Although the requirements under §51292 are not required for "All state highways on routes as described in Sections 301 to 622, inclusive, of the Streets and Highways Code, as those sections read on October 1, 1965 (§51293(g))," the findings required by §51292 can still be made as the location is not based primarily on consideration of the lower cost of acquiring land in an agricultural preserve. In addition, although there is land available on the south side of the highway that is not under contract, it is not reasonably feasible to shift the road towards the south side of the highway at this location as the design is constrained by the surrounding topography, design requirements, and the necessity to avoid other environmental resources.

Caltrans is currently in the process of preparing an Initial Study with Proposed Mitigated Negative Declaration for this project. Copies of applicable environment documents will be sent to the Department of Conservation (DOC) as soon as they are available.

Caltrans understands that the DOC would like copies of documents related to eminent domain. Please note that Caltrans Right of Way Department does not begin its regular right of way acquisition process until after final environmental clearance. Therefore, documentation regarding acquisition of the affected parcels cannot be sent to the DOC until after final environmental clearance. For additional information regarding Caltrans' right of way acquisition process please refer to the Caltrans Right of Way Manual, specifically Exhibit 8-EX-1, Article 6. Acquisition Policies (enclosed). The full manual can be found at the following website: http://www.dot.ca.gov/hq/row/rowman/manual/index.htm

Please find enclosed copies of the Project Vicinity Map, Farmland/Williamson Act Map, preliminary design maps, Exhibit 8-EX-1, Article 6. Acquisition Policies, and copies of the contracts covering the affected parcels. Thank you for your consideration of this notice. If you have any questions, please contact Jennifer Clark at (916) 274-0601 or via email at Jennifer_Clark@dot.ca.gov. Please direct postal mail to Caltrans Environmental Management, 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833, ATTN: Jennifer Clark.

Sincerely,

SMelim

SUZANNE MELIM, Branch Chief
Office of Environmental Management

cc: Placer County

Enclosures:
Project Vicinity Map
Farmland/Williamson Act Map
Agricultural preserve contracts
Preliminary design maps

"Caltrans improves mobility across California"

NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • **FAX** 916 / 327-3430 • **TDD** 916 / 324-2555 • **WEBSITE** conservation.ca.gov

October 22, 2012

Ms. Suzanne Melim, Branch Chief
Office of Environmental Management
Department of Transportation (Caltrans)
703 B Street
Marysville, CA 95901

Subject: Notice of Public Acquisition for State Route 193 Curve Improvement Project, Placer County (County)

Dear Ms. Melim:

The Department of Conservation (Department) received your September 27, 2012 letter noticing the Department of Caltrans' intention to acquire a total of 3.76 acres from two properties restricted by Land Conservation (Williamson) Act Contracts for a road widening project. The Department's Division of Land Resource Protection monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and offers the following comments in accordance with the provisions of Government Code (GC) § 51291 (b).

Project Description

Caltrans is proposing a project along State Route (SR) 193 in Placer County, approximately four miles east of the City of Lincoln. The Project proposes to widen the shoulders and correct curves within the Project limits. The Project would require the acquisition of right-of-way from parcels adjacent to SR 193. Two of the affected parcels are covered under Williamson Act Contracts (APNs 031-110-010 and 031-110-023).

Required Findings

In addition to notice in advance of acquisition, the Williamson Act requires that public agencies shall not locate public improvements in agricultural preserves unless the following specific findings can be made (Government Code § 51292):

- *"The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve* (§51292(a))."

The letter explained that the findings under Government Code §51292 are not applicable to the Project, because SR 193 is described in Sections 301- to 622 of the Streets and Highways Code as those sections read on October 1, 1965 (GC 51293(g)). The Department agrees that the information provided in the Caltrans' letter is consistent with the provisions of the Williamson Act and the agency may be considered exempt from making the findings.

- *"If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement* (§51292(b)).

Caltrans stated in its letter that although there is uncontracted land available on the south side of the highway, Caltrans determined that it did not consider the sites as feasible locations for the Project, because the design requirements for the Project are constrained by the surrounding topography. The letter only eluded to design issues, but did not provide any evidence or documentation about the specific design issues motivating Caltrans to make the decision to site the curve improvement project on land restricted by Williamson Act contract. Additionally, Caltrans stated in its letter that a need to avoid other environmental resources also influenced the site selection process, but did not provide any documentation in support of the statement. The letter also did not provide any explanation about what environmental resources Caltrans was obliged to avoid in the vicinity of the project that made it necessary to locate the curve improvement project on land restricted by Williamson contract, and resulted in a determination that no other land was found suitable within or outside of the preserve on which it is reasonably feasible to locate the road Project. The explanation about design constraints does not appear to support a finding that the project as proposed is consistent with Government Code §51292(b). However, the exemption stipulated in Government Code §51293 (g)) is still applicable and Caltrans is not required to make the findings indicated in Government Code §51292(a) (b)).

Eminent Domain

A Williamson Act contract is an enforceable restriction pursuant to Article XIII, section 8 of the California Constitution and Government Code §51252. Assuming all necessary requirements are met, acquisition of Williamson Act land or interests in the land must be made via the eminent domain process, or in lieu of eminent domain, in order to void the contract (pursuant to Government Code §51295). Purchase via the eminent domain process or in lieu of eminent domain must also meet the requirements of eminent domain law (Code of Civil Procedure section 1230.010 et seq. and Government Code §7260 et seq.). If the acquisition is not done properly to void the contracts, the uses of the contracted properties will continue to be limited by the terms of the contracts and provisions of the Act. The Department does not provide counsel regarding eminent domain law but encourages Caltrans to obtain legal counsel for this purpose.

Additional Requests and Notification

Please be advised that the Department must also be notified within 10 days regarding what properties or portions of properties, including how many acres from each property were actually acquired for the Project, described above, pursuant to the stipulations of (Government Code §51291(c)). If Caltrans determines not to locate the proposed curve improvement project on the subject properties, before returning the lands to private ownership, the agency must notify the Department and Placer County, and the lands must be reenrolled in new contracts or encumbered by enforceable restrictions at least as restrictive as that provided by the Williamson Act (Government Code §51295). If you have any additional questions, please contact Jacquelyn Ramsey, Associate Environmental Planner at (916) 323-2379.

Sincerely,

Molly A. Penberth, Manager
Division of Land Resource Protection
Conservation Program Support Unit

cc: Placer County Board of Supervisors
175 Fulweiler Avenue, Suite 205
Auburn, CA 95603

Placer County Farm Bureau
10120 Ophir Road
Newcastle, CA 95658

APPENDIX D TITLE VI POLICY STATEMENT

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. Box 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY 711

Flex your power!
Be energy efficient!

July 20, 2010

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, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Charles Wahnon, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14th Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353 or toll free 1-866-810-6346 (voice), TTY 711, fax (916) 324-1869, or via email: charles_wahnon@dot.ca.gov.

Cindy McKim
CINDY McKIM
Director

"Caltrans improves mobility across California"

APPENDIX E SHPO CORRESPONDANCE

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN JR, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
703 B STREET
P. O. BOX 911
MARYSVILLE, CA 95901-0911
PHONE (530) 741-4017
FAX (530) 741-4457
TTY (530) 741-4509

Flex your power!
Be energy efficient!

October 29, 2011

Ms. Carol Roland Nawi
State Historic Preservation Officer
P. O. Box 942896
Sacramento, CA 94296-0001

03-PLA-193
K.P. 7.08-8.85 (P.M. 4.40-5.50)
EA 03-4E8600
EFIS 0300000725

Re: Historic Property Survey Report for a Proposed Safety Improvement Project, Placer County, California; 03-PLA-193, K.P. 7.08-8.85 (P.M. 4.40-5.50).

Dear Ms. Roland Nawi:

The California Department of Transportation (Caltrans), District 03, proposes to improve safety along a 1.61 km (1.00 mile) section of State Route (SR) 193 east of the town of Lincoln in Placer County, California. The accident rate is 3.4 times higher than the statewide average for a similar type facility and the purpose of the project is to reduce the number and severity of collisions. The proposed project requires new right-of-way and temporary construction easements. This consultation is undertaken in accordance with 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, as it Pertains to the Administration of the Federally-Aided Highway Program in California* (PA).

This consultation is being undertaken in accordance with the January 1, 2004 Federal-Aid Highway Programmatic Agreement (PA). Caltrans is initiating consultation as part of its NEPA assignment of federal responsibilities by the Federal Highway Administration (FHWA), effective October 1, 2012 and pursuant to 23 USC 327. Please direct all future correspondence on this project to Caltrans.

An archaeological survey identified three sites within the project's Area of Potential Effects (APE): CA-PLA-2434, CA-PLA-2435/H, and P-31-5466. CA-PLA-2434 appears to contain a midden deposit and three bedrock milling features. An Extended Phase I/Phase II study was completed within the Area of Direct Impacts (ADI) along the northern margin of the site. Excavation of 1.1 m^3 in soil volume yielded six flakes. The flakes, which were recovered from depths of 0-10 cm below the ground surface, appear to be re-deposited from above slopes through surface erosion. The paucity of artifactual remains limits the research value of this portion of the site, and this area would not

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contribute towards the potential National Register of Historic Places (NRHP) eligibility of the site should it ever be determined eligible.

Site CA-PLA-2435/H contains a scatter of historic and prehistoric materials among six bedrock milling features. Almost 45% of this site is within the ADI, and excavation of 1.9 m^3 in soil volume within this area yielded 12 pieces of debitage, 9 groundstone tools, and 5 historic or recent items (fragments of glass, ceramic and metal). Historic materials on the site surface consist of Chinese, American, and European origin and generally date to the late 19th and early 20th century. The property is associated with the Bickford ranch, and the historic is component probably represents secondary deposition of refuse from the Bickford family and Chinese laborers who lived elsewhere on the ranch property. The depositional integrity of the site has been substantially and irrevocably compromised due to highway construction and recent earth-moving activities. Construction of SR 193 along the southern site boundary destroyed an unknown proportion of the site. Clearing and earthmoving conducted by the landowner disturbed more than a third of site area within the ADI, including areas surrounding the bedrock mortar features. These activities displaced most of the groundstone artifacts and historic refuse on the site surface. No temporal data related to the prehistoric component was recovered during the investigation and the paucity of prehistoric artifactual remains limits the research potential of this portion of the site. Historic-era materials are limited and fragmentary in nature and any interpretive statements would not enhance our understanding of the Overseas Chinese experience in California. As a consequence, the portion of CA-PLA-2435/H within the ADI would not contribute towards the potential NRHP eligibility of the site should it ever be determined eligible.

Site P-31-5466 consists of two separate bedrock outcrops that contain a total of four mortar depressions. The site, which does not contain any surface artifacts, appears to represent an isolated bedrock milling station. The evaluated portion of P-31-5466 (the two exposed bedrock mortar features) does not contribute to the site eligibility. The area surrounding the features was not tested for buried deposits due to access restrictions and remains unevaluated.

Pursuant to Stipulation VIII.C.5 of the PA, Caltrans is requesting your concurrence with that the portions of sites CA-PLA-2434, CA-PLA -2435/H, and P-31-5466 within the ADI would not contribute towards their potential NRHP eligibility should any of these sites ever be determined eligible. Caltrans plans to submit a No Adverse Effect finding for the undertaking with an assumption of eligibility for those portions of sites CA-PLA-2434 and -2435/H that are outside the ADI and protection against inadvertent disturbance during construction through establishment of Environmental Sensitive Areas. The No Adverse effect finding would also include a condition and proposal for completing excavations within the ADI at P-31-5466 after project

approval if Caltrans is unable to obtain a permit to enter. The proposal will include provisions for reporting results of this investigation.

This letter is concurrently being sent to Cultural and Community Studies Office and consulting parties as required under Stipulation X.B.2.b of the PA. Please contact Jeff Haney, Associate Environmental Planner (Archaeology), at (530) 741-7114 if you have any questions regarding this document.

Sincerely,

SMelim

SUZANNE MELIM, Chief
Environmental Management, M2 Branch

Attachment: HPSR for the Proposed SR 193 Safety Improvement Project, Placer County, California

cc: JClark, Project Coordinator, Caltrans District 03/North Region
TJaffke, Section 106 Coordinator, Cultural Studies Office, Caltrans HQ
MGuerrero, THPO, United Auburn Indian Community of the Auburn Rancheria
DKeyser, Chairperson, United Auburn Indian Community of the Auburn Rancheria
DFonseca, THPO, Shingle Springs Band of Miwok Indians
NFonseca, Chairperson, Shingle Springs Band of Miwok Indians

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APPENDIX F BIOLOGICAL RESOURCES MAP

Legend

- ESL
- Culverts
- Elderberry Shrubs
- Wetland
- Proposed Fill
- Proposed Cut
- Temporary Stream Impacts
- Permanent_Stream_Impacts
- Temporary Riparian Impacts
- Permanent Riparian Impacts

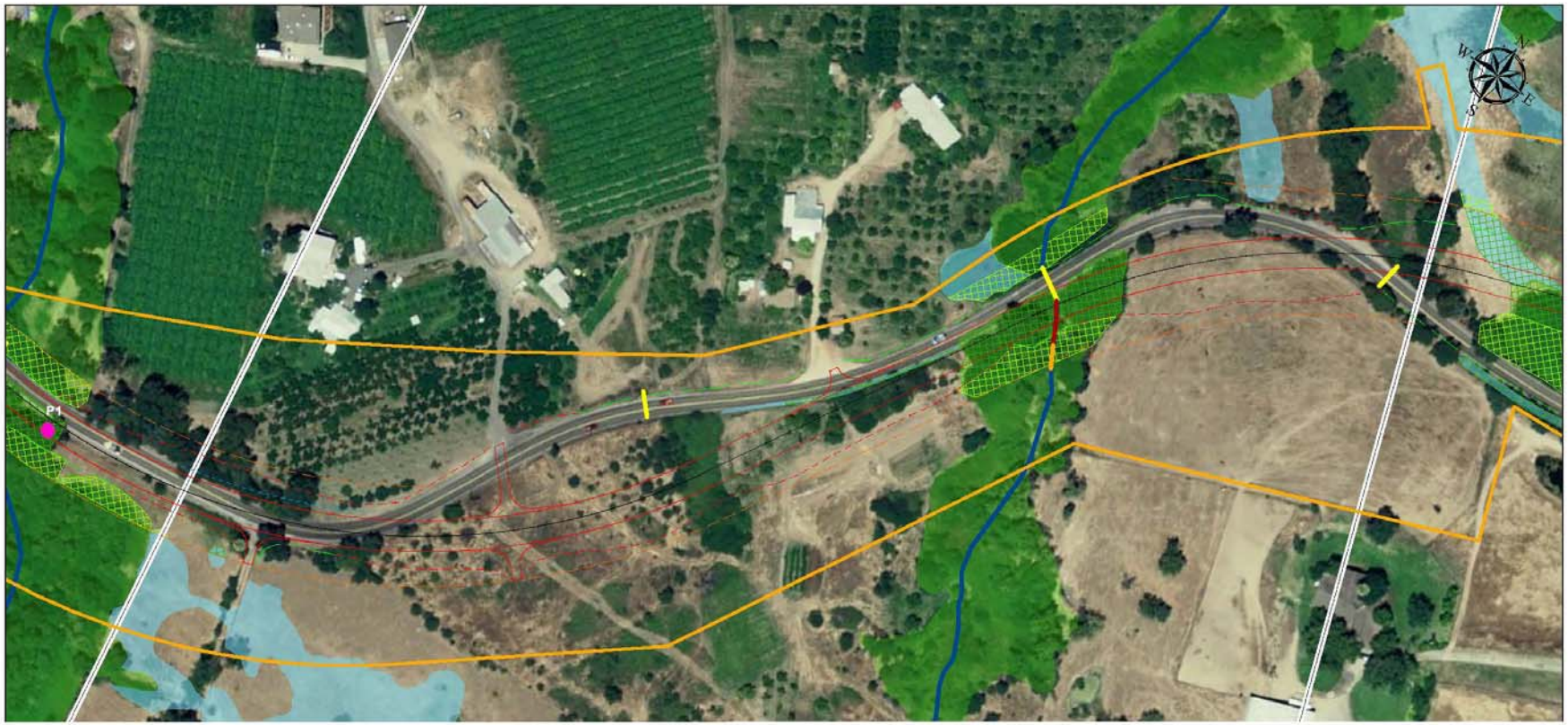
0 60 120 240 360 480 Feet

Aerial Map
Caltrans Placer 193 Realignment
Safety Project
EA: 03-4E860

Gold Hill USGS 7.5-Minute Quadrangle
At: State Route 193, Post Miles 4.5 to 5.5
County of: Placer State of: California

Map Prepared By:
Maureen Doyle, Caltrans Biologist
on April 12, 2012

Page 1 of 4



Legend

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Gold Hill USGS 7.5-Minute Quadrangle
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County of: Placer State of: California

Map Prepared By:
Maureen Doyle, Caltrans Biologist
on April 12, 2012

Page 2 of 4

Legend

0 60 120 240 360 480 Feet

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Safety Project
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Map Prepared By:
Maureen Doyle, Caltrans Biologist
on April 12, 2012

Gold Hill USGS 7.5-Minute Quadrangle
At: State Route 193, Post Miles 4.5 to 5.5
County of: Placer State of: California

Page 3 of 4

Legend

0 60 120 240 360 480 Feet

- ESL
- Culverts
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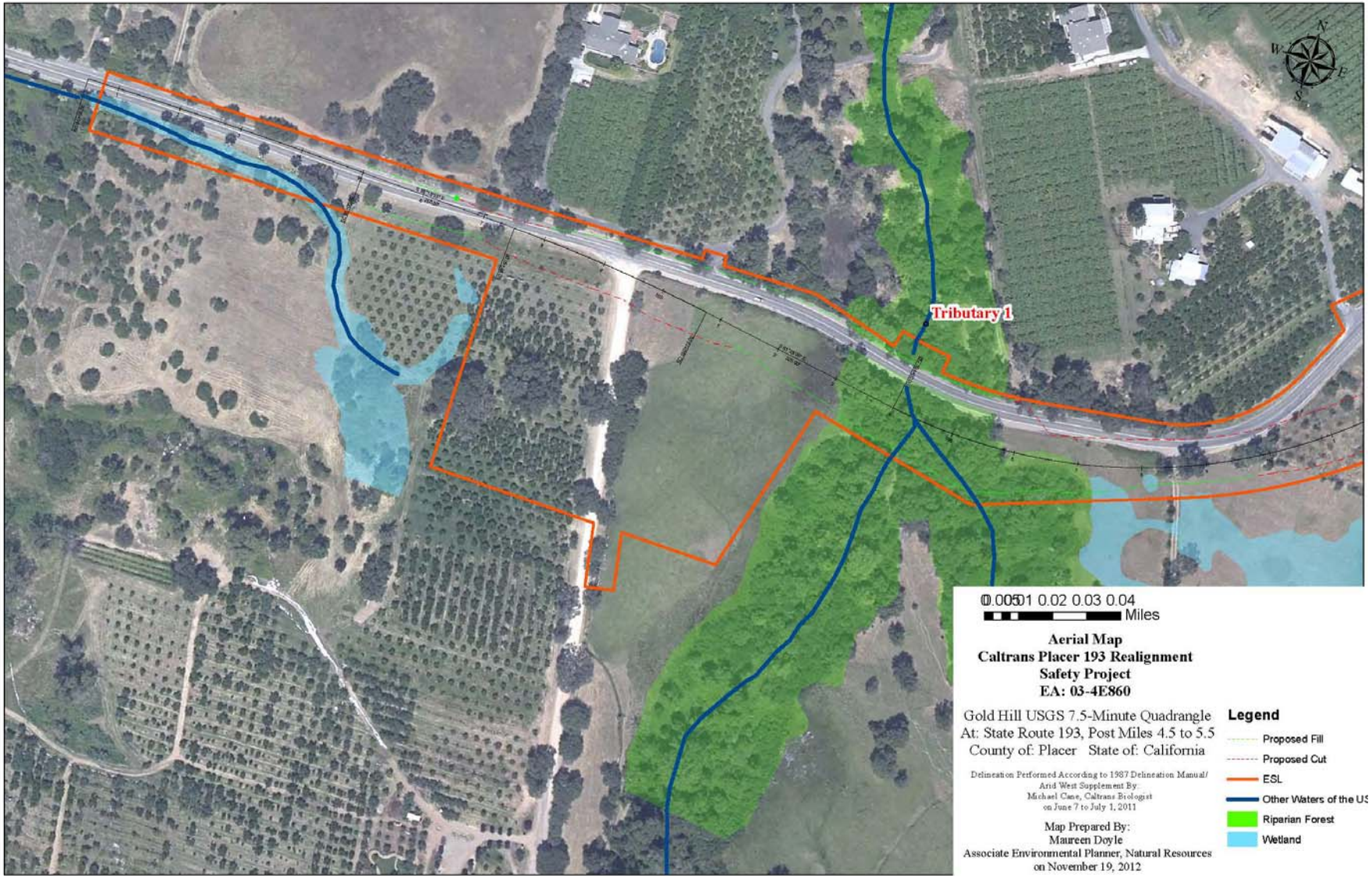
Aerial Map
Caltrans Placer 193 Realignment
Safety Project
EA: 03-4E860

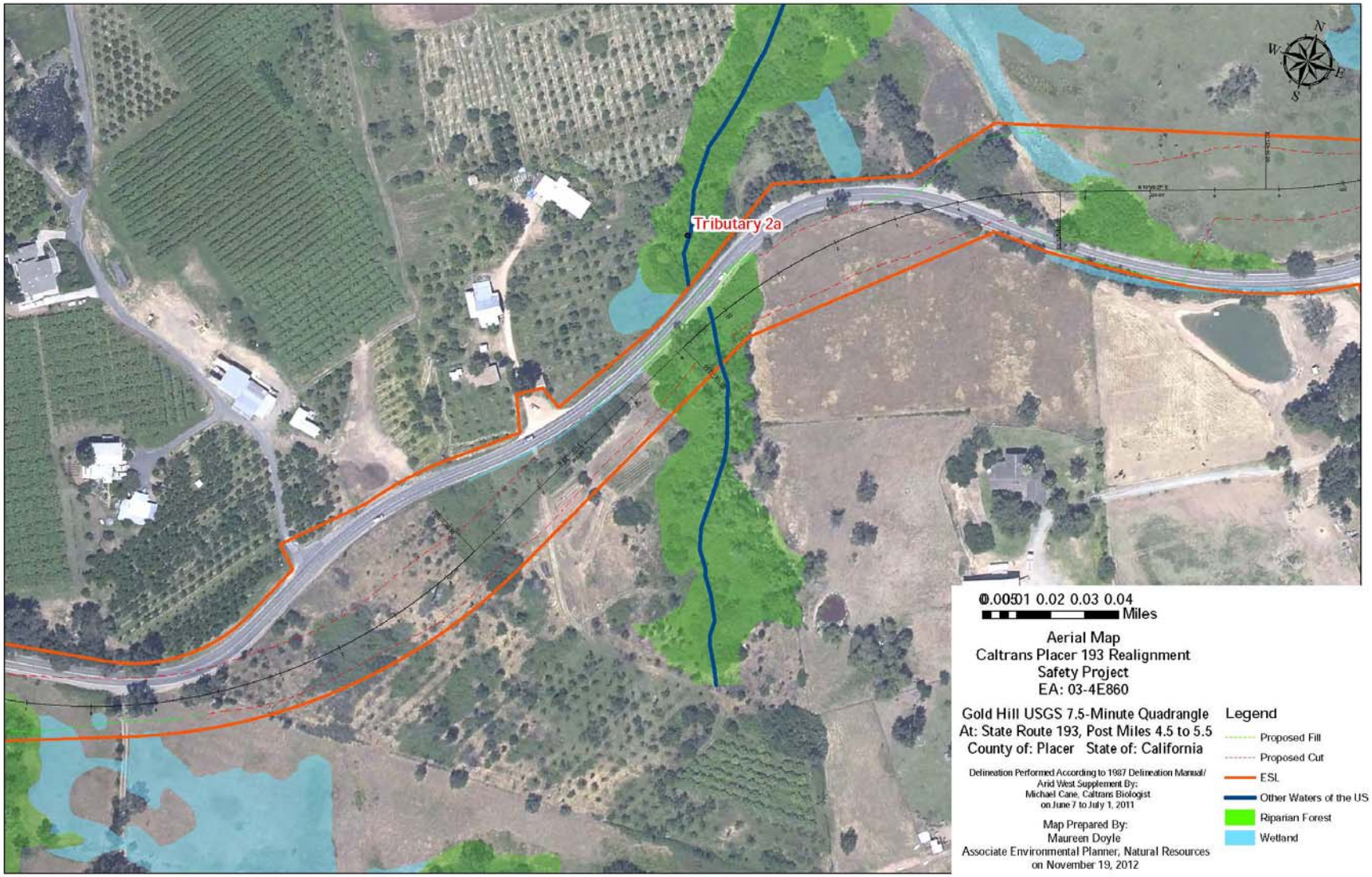
Gold Hill USGS 7.5-Minute Quadrangle
At: State Route 193, Post Miles 4.5 to 5.5
County of: Placer State of: California

Map Prepared By:
Maureen Doyle, Caltrans Biologist
on April 12, 2012

Page 4 of 4

APPENDIX G TRIBITARY MAP

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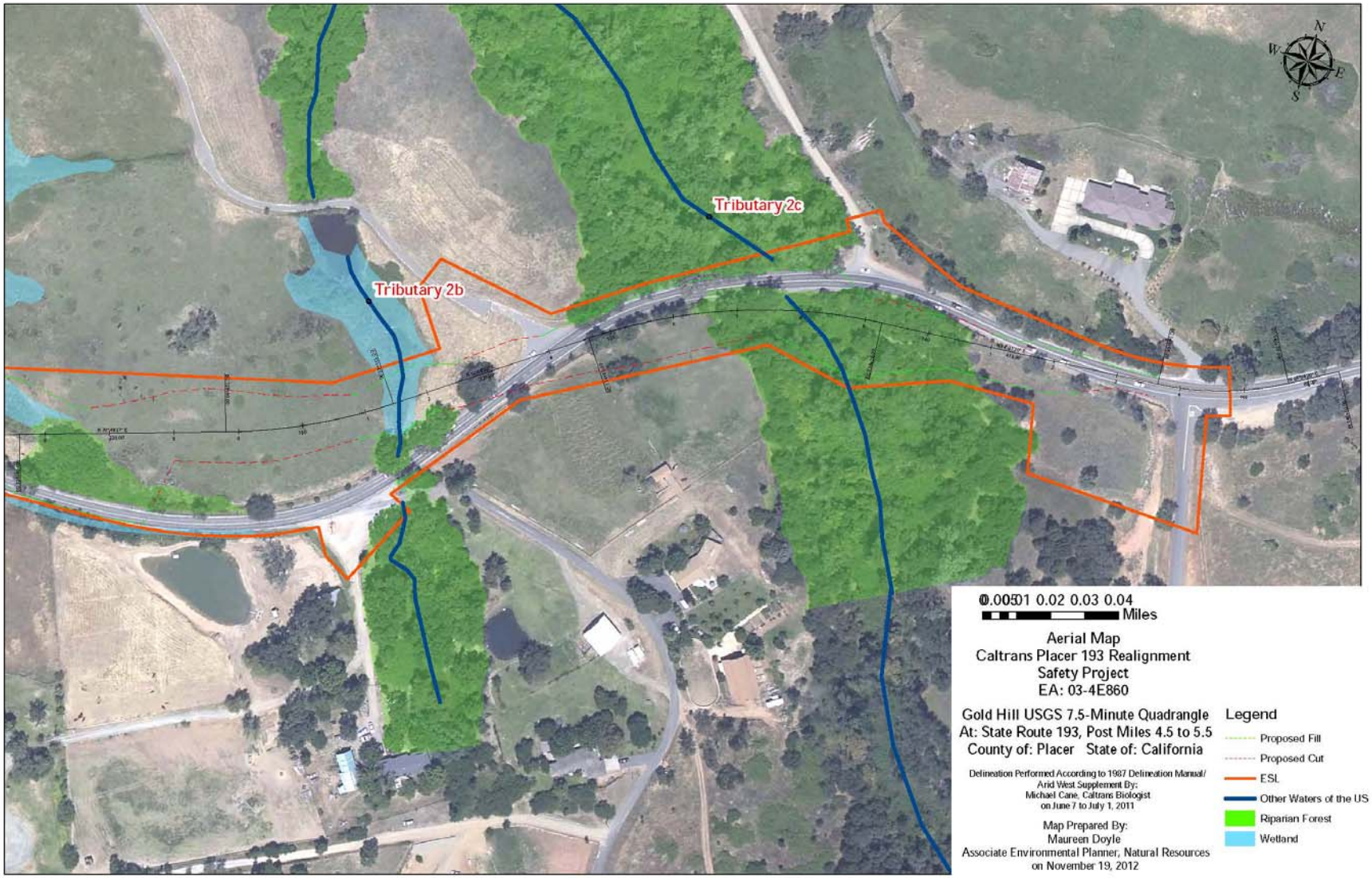
Gold Hill USGS 7.5-Minute Quadrangle
At: State Route 193, Post Miles 4.5 to 5.5
County of: Placer State of: California
Delineation Performed According to 1987 Delineation Manual/
Arid West Supplement By:
Michael Cane, Caltrans Biologist
on June 7 to July 1, 2011
Map Prepared By:
Maureen Doyle
Associate Environmental Planner, Natural Resources
on November 19, 2012
Legend
Proposed Fill
Proposed Cut
ESL
Other Waters of the US
Riparian Forest
Wetland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APPENDIX H AVOIDANCE, MINIMIZATION AND/OR MITIGATION SUMMARY

Farmland

Avoidance and Minimization Measures

- Following approval of the final environmental document, Caltrans Right of Way division will contact property owners to discuss right-of-way acquisitions. During this time, compensation for impacts to normal farming operations can be negotiated.

Real Property Acquisition

Avoidance and Minimization Measures

- Driveways that need to be reconstructed will conform to the new highway.
- Mailboxes and signs will be relocated as appropriate.

Utilities/Emergency Services

Avoidance and Minimization Measures

- Following final environmental approval Caltrans North Region Right of Way Office will contact property owners to discuss impacts to privately owned pumps and water lines and Caltrans Right of Way Utilities Office will coordinate with public utilities regarding any necessary relocations.
- A Transportation Management Plan (TMP) will be prepared that will address construction-related traffic delays. See below.

Traffic and Transportation

Avoidance and Minimization Measures

- Traffic handling charts and specifications will be incorporated into the project during the design phase that will be included as part of the Contractor's specification package in order to manage temporary construction delays. Elements that should be considered in the Transportation Management Plan (TMP) are:
  - Restrictions on when lanes may be closed.
  - A Construction Zone Enhanced Enforcement Program (COZEEP) with the CHP during major construction that affects traffic, such as stage changes and traffic shifts.
  - Changeable message signs to alert motorists to unusual or new conditions and any delays that develop.
  - Any other pertinent issues as they may develop.
- In addition the TMP shall include:
  - A public awareness campaign.
  - Notification of construction and any detours provided to the Western Placer County Unified School District.

Visual/Aesthetics

Avoidance and Minimization Measures

The visual impacts of the proposed project will be minimized by the implementation of the following measures:

- All areas disturbed or used for staging of vehicles and equipment shall be hydro-seeded and restored to its pre-construction condition upon completion of the project. This can best be accomplished by loosening and re-contouring the area's soil before applying erosion control (hydro-seed).
- Minimize the removal of and avoid where feasible established vegetation including trees. The areas where trees are present should be protected to reduce damage to the trees root systems. Where it is possible to save and preserve existing trees (of significant size and maturity), care and caution should be implemented during the construction phase. Environmentally sensitive area (ESA) fencing shall be installed to demarcate areas where vegetation is being preserved.
- All disturbed areas during each construction season shall utilize best management practices (BMPs) which will include temporary erosion control consisting of a native seed mix at the end of each construction season.
- Where appropriate, disturbed soil areas shall incorporate a layer (2"-6") of compost to a depth of 12-18 inches as an erosion control measure. The actual incorporated amounts will be determined prior to the work being done and in conjunction with the biologist's recommendations. Incorporation of compost aids in the rehabilitation of soils as a growing medium and helps to restore and improve the rooting depth, infiltration, and water holding capacity of a disturbed area.
- Other erosion control measures may include bonded fiber matrix (BFM), compost blanket and a rolled erosion control product (netting/blanket). The application and installation of these measures will be determined and delineated on construction documents during the design phase of the project.
- Along the steep gradient area of a cut slope consideration should be given to stepping back the slope to help with the efforts for establishing vegetation and reducing soil erosion. If determined necessary by the landscape architect and the resident engineer, following construction, cut slopes that expose bedrock shall be colorized or stained to reduce glare and blend with the natural landscape.
- Green and woody material from vegetation removal during clearing and grubbing shall be removed, chipped, shredded, stockpiled, and harvested from the site for future use as a mulch. These materials shall be stored and protected from the elements.
- Soil will be amended to improve infiltration, growing conditions for plants and improve overall success. Soil amendment shall be accomplished by salvaging and stockpiling the top layer (several inches if possible) of duff material (top soil and organic layer). All this work shall be defined within the work limits and called out on the construction documents, showing areas locations used for storage of green material and duff.
- Culvert repair work that will require rock slope protection (RSP) shall use indigenous rock collected from the site during construction, if this is not feasible imported RSP shall be colorized to look natural and blend with the environment. All rock to be placed within the active channel shall be natural, smooth river rock. No RSP with hard angles shall be placed within any active channel. This information will be developed during the design phase and shown on the plans.
- Excavated slopes capable for re-vegetation will be roughened by track-walking (running track mounted equipment perpendicular to slope contours).

- All finished slopes and graded areas shall be hydro-seeded with a permanent seed mix composed of native plant species indigenous to the area.

Mitigation Measures

- Areas that have removed trees, shrubs and created soil disturbance due to construction activities will be re-established by applying a permanent erosion control and re-planting trees and shrubs where they are deemed appropriate.
- Trees and shrubs removed as part of a riparian zone will be replaced as part of the required mitigation per the CDFG 1602 Stream Bed Alteration Agreement. The biologist shall work with the landscape architect to ensure that the placement of the replanted trees and shrubs will also meet the requirements of any necessary visual mitigation.
- Contour grading and slope rounding shall be utilized on all cut and fill slopes in order to help restore the environment in a manner that will blend with the surrounding natural landscape.
- The portion of the road that will be abandoned due to the new road alignment will be removed in order to allow for the restoration of trees and vegetation. This restoration shall require the complete removal of the old road including all sub-base material and bituminous surfacing. The area will require amendment with imported soil that shall be contour graded to look natural with the surrounding landscape.

Cultural Resources

Avoidance and Minimization Measures

The following measures will be implemented to avoid and minimize impacts to archaeological resources:

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 3 Environmental cultural staff so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.
- Portions of sites outside the ADI will be protected against inadvertent disturbance during construction through establishment of Environmental Sensitive Areas (ESAs).

Water Quality and Storm Water Runoff

Avoidance and Minimization Measures

Adherence to the following is recommended to prevent receiving water pollution as a result of construction activities and/or operation from this project:

- Adherence to the compliance requirements of the NPDES General Permit CAS No. 000002 (Order No. 2009-0009-DWQ, as amended) for General Construction Activities will be required.

- The Caltrans' Storm Water Management Plan (SWMP), the Project Planning and Design Guide (PPDG) Section 4, and the Evaluation Documentation Form (EDF) provide detailed guidance in determining if a specific project must consider implementing permanent Treatment BMPs. Line Item BMPs may be required to be incorporated into the Plans, Specifications, and Estimates (PS&E).
- Any anticipated dewatering may require a separate dewatering permit. If dewatering is required, coordination with the District NPDES Coordinator will occur during the PS&E phase.
- The Total DSA is expected equal or exceed 1.0 acre, therefore:
    1. A Caltrans approved SWPPP will be required, which specifies the level of temporary pollution control measures for the project.
    2. Caltrans Standard Specifications (2010 Edition) are applicable and shall be included in the PS&E to address Construction's temporary water pollution control measures. These measures must address soil stabilization, water sampling, sediment control, tracking control and wind erosion control practices. In addition, the project plans must include non-storm water controls, waste management and material pollution controls, as a minimum.
    3. To obtain coverage under the Construction General Permit (CGP), dischargers must electronically file Permit Registration Documents (PRDs) through the State Water Resource Control Board's Storm Water Multiple Application and Report Tracking System (SMARTS), prior to the commencement of construction activity.
    4. Within 90 day upon completion of the project, Caltrans shall electronically file a Notice of Termination (NOT), a final site map and photographs through the State Water Resource Control Board's SMARTS system. The Regional Water Quality Control Board (RWQCB) will consider the construction site complete only when all portions of the site have met the Conditions for Termination of Coverage, of the CGP.
- Consideration should be given to Section 13 of 2010 Standard Specification relating to Construction Site Management during PS&E to identify and control potential sources of water pollution before it encounters any storm water system or watercourse. The Contractor is required to control material pollution, manage waste and non-storm water at the construction site. The Contractor prepared SWPPP incorporates appropriate Temporary Construction Site BMPs to implement effective handling, storage, use and disposal practices during construction activities.
- Caltrans NPDES office will participate in early project design consultation with Central Valley RWQCB as the project entails one or more acre of total soil disturbance.

Geology/Soils

Avoidance and Minimization

- District Landscape Architecture shall provide erosion control recommendation for any proposed fills and cuts.
- Caltrans may consider the use of standard plan and non-standard plan walls in areas where it is desired to limit cut/fill heights, right-of-way needs or reduce erosion potential.
- As the project design is finalized, coordination with the Geotechnical Office will take place as recommended in the Preliminary Geotechnical Report.

Hazardous Waste/Materials

Avoidance and Minimization Measures

- Standard Special Provisions will be included in the Contractor's Plans that will address the special handling of lead paints and treated wood waste.
- The Contractor shall prepare a Lead Compliance Plan to minimize worker exposure to lead-impacted soil and removed yellow traffic paint residue.

Air Quality

Avoidance and Minimization Measures

- Caltrans Standard Specifications, a required part of all construction contracts, Section 14-9.02, Air Pollution Control, Section 14-9.03 Dust Control, and Section 7-1.02C, Emission Reduction, should effectively reduce and control emission impacts during construction. The provisions of Section 7-1.02, Laws, and Section 7-1.02A require the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.
- If naturally occurring asbestos (NOA) is found during construction, rules and regulations of the local air quality management districts must be adhered to when handling this material.

Noise

Avoidance and Minimization Measures

Caltrans requires the Contractor to conform to the provisions of Standard Specification, Section 14-8.02 "Noise Control". "Do not exceed 86 dBA LMax at 50 feet from the job site activities from 9 p.m. to 6 a.m."

Additional potential noise abatement measures during construction include the following:

- Limit operation of jackhammer, concrete saw, pneumatic tools, and demolition equipment operations to the daytime hours (8 a.m. to 7 p.m.) to the maximum extent feasible. Notify the residents within 100 feet of the project area in advance of nighttime construction activities. Nighttime construction work should be limited to the portion of the project site furthest from the residences, to the maximum extent feasible.
- All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment may have an un-muffled exhaust.
- Changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

Oak Woodlands

Avoidance and Minimization Measures

- During project design, several iterations of the project alignment were done to avoid impacts to oaks and the surrounding habitat to the maximum extent possible. As the scope and design of the proposed project is further defined, the impacts to oak habitat may be additionally reduced.
- A grading plan, which will be developed in cooperation with the Project Engineer and the Landscape Architect, will be implemented during the construction phase.

- A long-term mitigation and monitoring plan will also be developed, as one of the requirements of CDFG's Streambed Alteration Agreement, and implemented to ensure the success of the on-site restoration and revegetation efforts.
- Replanting within Caltrans right-of-way will take into consideration existing standards and guidelines such as sight distance and the clear recovery zone. These areas will be planted with California annuals and perennials including native grasses, forbs, and low growing shrubs, associated with the understory component of valley oak woodland habitats appropriate for the site conditions.

Mitigation

- Compensatory mitigation for the loss of 5.75 acres of valley oak woodlands will be a combination of both on-site restoration and off-site preservation. Mitigation ratios will range from 1:1 to 3:1 depending on the size and location of the trees that are affected. This mitigation will be part of the compensation proposal prepared to minimize the project effects on riparian and stream zone environments. Caltrans will also work with Placer County to ensure, where feasible, that all oak woodland replacement meet the goals of Placer County's Oak Woodland Management Plan (included in the Natural Environment Study).
- Upon completion of the project, disturbed areas will be re-contoured to a natural grade and re-vegetated with valley oak seedlings and other native species appropriate for the site conditions.

Migration Corridors

Avoidance and Minimization Measures

- To minimize potential project impacts to wildlife movement within the project area, Caltrans is proposing to install a 10' x 10' structure under the roadway at an appropriate location within the project limits. The placement of this structure will enhance wildlife movement in this area and potentially reduce animal / vehicle encounters. Additionally, where feasible, Caltrans will place two additional oversized structures, such as culverts, within the project limits to further reduce the potential effects to wildlife corridor movements. The placement and location of these structures will be determined as the project design is further developed.

Wetlands and Other Waters

Avoidance and Minimization Measures

The State Water Resources Control Board (SWRCB) has developed and issued a statewide National Pollutant Discharge Elimination System (NPDES) permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. All construction projects over 1 acre requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. This plan must meet the standards and objectives to minimize water pollution impacts set forth in Caltrans' Standard Specifications. The SWPPP must also be in compliance with the goals and restrictions identified in the Regional Water Quality Control Board's Plan. Any additional measures included in the 401 certification and 1602 Agreement will be complied with. These standards/objectives, at times referred to as "Best Management Practices" (BMPs), include but are not limited to:

- Where working areas encroach on live or dry streams, lakes, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into

these systems will be constructed and maintained between working areas and streams, lakes and wetlands. During construction of the barriers, discharge of sediment into streams will be held to a minimum. Discharge will be contained through the use RWQCB-approved measures to keep sediment from entering protected waters.
- Oily or greasy substances originating from the Contractor's operations will not be allowed to enter or be placed where they will later enter tributary waters.
- Asphalt concrete will not be allowed to enter tributary waters.

The following measures are proposed to minimize impacts to wetlands and other waters of the U.S. in the project area:

- Wetlands and other waters of the U.S. will be delineated as environmentally sensitive areas (ESAs) on the project plans and in the project specifications. The boundaries of the ESA will be clearly marked in the field by the installation of a temporary fence.
- ESAs will be implemented as a first order of work and will remain in place until all construction activities are complete.

Mitigation
Mitigation for jurisdictional wetlands and other waters of the U.S. will be performed to achieve no-net-loss of the functions and values within the study area in accordance with the USACE' Habitat Mitigation and Monitoring Proposal Guidelines (1991) and the Guidelines for Monitoring Riparian Mitigation (1994).

- The proposed project would permanently impact 1.18 acres of jurisdictional wetlands which will be mitigated either through an in-lieu-fee payment to an USACE approved organization, on-site at 1:1 ratio by creating wetlands near PM 5.0 or offsite, pending consultation with USACE. Temporary impacts to 0.28 acre of jurisdictional wetlands of the U.S. would be mitigated through on-site restoration at 1:1 ratio.
- The proposed project would permanently impact 0.04 acre of jurisdictional other waters of the U.S., which will be mitigated either through an in-lieu-fee payment to an USACE approved organization, on-site at a 1:1 ratio by creating vegetated buffers along the affected other waterways in the study area or off-site, pending consultation with USACE. Temporary impacts to 0.03 acres of jurisdictional other waters of the U.S. would be mitigated on-site at 1:1 ratio by restoring stream channels to a natural state and planting vegetated buffers along disturbed waterways at the three stream locations within the project area.

Western Pond Turtle

Avoidance and Minimization Measures
- Field surveys will be performed two weeks prior to construction to ensure that no western pond turtles are within the project limits.

Migratory Birds

Avoidance and Minimization Measures
- Where feasible, tree removal will be scheduled outside of the nesting season (February 15 – September 1). If the project activities begin within the nesting season due to the construction schedule, every effort will be made to remove the trees prior to this timeframe in order to avoid any nesting issues.

- A nesting bird survey will be conducted approximately two weeks prior to any ground disturbance. If active nests are found that may be affected by construction activities, Caltrans will determine an appropriate course of action. Possible solutions include but are not limited to; implementing buffer areas, monitoring active nests, nest salvage, and work windows.

Valley Elderberry Longhorn Beetle (VELB)

Avoidance and Minimization
The measures below would be applied to minimize impacts to the VELB:

- Before initiation of any vegetation removal, grading, or any other ground-disturbing activities, a qualified biologist will conduct mandatory worker awareness training for all construction personnel. The awareness training will provide information on how to avoid impacts to biological resources, particularly special-status species. The training will also inform workers of the penalties for not complying with mitigation requirements. If new construction personnel are subsequently added to the project, they too will receive the training.
- Prior to any ground-disturbing activities associated with the project, 4-foot-tall temporary, plastic mesh construction fence (Environmentally Sensitive Area "ESA" fence) will be installed 20 feet, where possible, from the drip lines of elderberry shrubs that are not to be removed. The fencing is intended to prevent encroachment by construction vehicles and personnel. The exact location of the fencing will be determined by a qualified biologist, with the goal of protecting VELB habitat. The fencing will be strung tightly on posts set at a maximum interval of ten feet. The fencing will be installed in a way that prevents equipment from enlarging the work area beyond what is necessary to complete the work. The fencing will be checked and maintained weekly until all construction is completed.
- A sign will mark this buffer zone and state the following 'This is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment'. The fencing and a note reflecting this condition will be shown on the construction plans. Signs will be legible from a distance of 6.1 m (20 ft) and must be maintained for the duration of construction.

Mitigation
- To mitigate potential project impacts to three elderberry bushes, Caltrans will purchase mitigation credits at a USFWS-approved VELB mitigation bank (such as River Ranch in Colusa County or French Camp Conservation Bank in San Joaquin County) or as otherwise directed in accordance with the requirements of the Biological Opinion for this project.

California Red Legged Frog (CRLF)

Avoidance and Minimization
The project has been designed to minimize effects on aquatic and riparian habitat identified in the study area. BMP's would be implemented to reduce water quality impacts, which may include placement of silt fencing or filter fabric along the banks of any affected waterway once the vegetation is removed. Construction activities would be implemented outside of the rainy

season, which will reduce the potential for adverse impacts on the tributaries located in the study area, but would partially overlap with the breeding season for CRLF.

The following measures will be implemented during constriction to avoid or minimize project-related impacts on suitable habitat for CRLF:

- The Contractor shall time the project such that in-water work will be limited to the dry season (April 15-October 15).
- The Contractor shall retain a qualified biologist familiar with CRLF biology and habitat requirements to implement avoidance and minimization measures for the project. The Contractor shall submit the name and credentials of the biologist(s) to the U. S. Fish and Wildlife Service (USFWS) for review and approval at least 15 days prior to the onset of construction activities.
- If CRLF are found at any time the approved biologist shall ensure work stops within 300 ft of the located CRLF and immediately contact the Caltrans project biologist who will consult with the USFWS.
- The USFWS approved biologist shall conduct a CRLF survey of the ESL prior to the onset of vegetation removal within 300 feet of wetted areas.
- All initial riparian vegetation to be removed within the ESL will be manually clipped to ground level and removed by hand. This activity must be conducted in the presence of the USFWS approved biologist who will monitor the area for CRLF.
- The USFWS approved biologist shall work with the resident engineer and the Contractor to identify areas of suitable habitat outside of the work area. These riparian areas shall be staked, flagged, or signed to avoid encroachment by equipment and construction crews. The number of access routes, size and location of staging areas and the total area of impact shall be limited to the minimum necessary to achieve the project goals. This goal includes locating access routes and construction areas outside of the creek and riparian areas to the maximum extent practicable.
- The biologist shall be present to monitor, at a minimum, during all in-water work, and during all work occurring within 300 feet of wetted areas.
- If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 5 mm (0.2-in). Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering will be determined by the Contractor and are to be reviewed and approved by the USFWS approved biologist. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible; any imported material will be removed from the streambed upon completion of the project.
- All refueling and maintenance of equipment and vehicles shall occur at least 300 feet from riparian habitat and water bodies and shall not occur at a location where a spill would drain directly towards the creek. Prior to the onset of work, the Contractor shall ensure that a spill prevention and clean-up plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- Appropriate BMPs to protect water quality and control erosion shall be implemented.
- Work areas that are temporarily disturbed shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. This measure shall be implemented in all areas disturbed by activities associated with the project.

- During construction activities, all trash that may attract predators shall be properly contained, removed from the worksite, and disposed of regularly. Following construction, all trash and construction debris shall be removed from the work areas.

Invasive Species

Avoidance and Minimization

The measures below would be applied to reduce the potential for the introduction or spread of noxious weeds in the project area:

- All construction equipment will be clean of potential noxious weed sources (mud, vegetation) before entering the project area, to help ensure noxious weeds from outside of the project area are not introduced into the project area;
- Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material.
- Only native plant species appropriate for the project area will be used in any erosion control or revegetation seed mix or stock. Certified weed-free straw shall be required where erosion control straw is to be used. In addition, any hydro-seed mulch used for revegetation activities must also be certified weed-free. All seed mix that will be used for revegetation must be pre-approved by a revegetation specialist or botanist familiar with local plant species.
- Non-native plant control will consist of mechanical or spot chemical treatments of the selected most invasive plant species listed by the USDA, CEPPC, and CALIPC that if left untreated, would dominate the onsite mitigation area.