

Savage Way Rehabilitation

State Route 26 in San Joaquin and Calaveras Counties
from Wimer Road to Savage Way

10-SJ/CAL-26
SJ PM 20.3/20.5
CAL PM 0.0/3.0
10-2A4200

Initial Study with Mitigated Negative Declaration



Prepared by the
State of California
Department of Transportation

September 2006



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration, which examines the potential environmental impacts of alternatives being considered for the proposed project located in San Joaquin and Calaveras counties in California. This document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, potential impacts from each of the alternatives, and the proposed avoidance, minimization and/or mitigation measures.

An Initial Study with Proposed Mitigated Negative Declaration was circulated for public review and comment from June 29, 2005 to August 10, 2005. Public notices were published in the *Stockton Record*, *Valley Springs Daily News*, and *Calaveras Enterprise*. Comments received and responses to comments made on the circulation of the Initial Study are located in Appendix H, which has been added. Elsewhere in the document, a vertical line in the margin indicates text that has been changed or added since the document was circulated, in response to comments received.

What happens after this?

The proposed project has completed the environmental review process. When funding is approved, the California Department of Transportation and the Federal Highway Administration can design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille or large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Gary Gagliolo, Central Sierra Environmental Analysis Branch, 2015 E. Shields Avenue, Suite 100, Fresno CA 93726; (559) 243-8274 Voice, or use the California Relay Service TTY number, 1-800-735-2929.

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Rehabilitate and realign State Route 26 in San Joaquin and Calaveras counties from Wimer Road to Savage Way

**INITIAL STUDY
with Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA
Department of Transportation

9/15/06
Date of Approval

Gary Gagliolo
Gary Gagliolo
Acting Branch Chief
Central Sierra Environmental Analysis Branch
Central Region Environmental Planning
California Department of Transportation



Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate and realign State Route 26 in the counties of San Joaquin and Calaveras from Wimer Road to Savage Way.

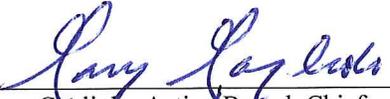
Determination

Caltrans has prepared an Initial Study for this project and has determined 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 significant effect on air quality, water quality, or sensitive noise receptors.
- The proposed project would have no significant effect on hazardous waste, environmental justice, utility service, or emergency service.

The proposed project would have no significantly adverse effect on the human environment, biological resources, cultural resources, visual resources, or paleontology because the following mitigation measures would reduce potential effects to insignificance:

- A single residential displacement would receive assistance through the Relocation Assistance Program.
- Impacts to wetlands and vernal pool species would be minimized with Best Management Practices and mitigated offsite through a mitigation bank approved by the U.S. Fish and Wildlife Service.
- Environmentally Sensitive Area fencing would be used to protect three archaeological sites eligible for the National Register of Historic Places. These sites would also be monitored during construction to ensure they are not affected.
- Oak tree replanting or the purchase of offsite oak preservation would mitigate the removal of approximately 160 oak trees.
- A qualified paleontologist would monitor construction and recover any fossils uncovered during construction.



Gary Gagliolo, Acting Branch Chief
Central Sierra Environmental Analysis Branch
Central Region Environmental Planning
California Department of Transportation



Date



Summary

The California Department of Transportation (Caltrans) proposes to rehabilitate the pavement and bring a section of State Route 26 to current design standards in San Joaquin and Calaveras counties. The 3.25-mile project would begin where State Route 26 intersects Wimer/Ospital Road in San Joaquin County and end where State Route 26 intersects Savage Way in Calaveras County.

The purpose of the project is to correct non-standard highway design features and rehabilitate pavement. Two alternatives are under consideration: a build alternative and a no-build alternative. The build alternative would:

- Repair pavement by applying an overlay of asphalt concrete.
- Widen lanes to 12 feet and shoulders to 8 feet.
- Correct nonstandard road curves and dips to meet a minimum design speed of 45 miles per hour.
- Reconstruct public and private road intersections to meet current standards. Widening would be required to meet truck turn requirements at public road intersections.
- Add left-turn lanes at the intersections of State Route 26/Warren Road, State Route 26/Milton Road, and State Route 26/Burson Road.
- Construct new embankments (fill slopes) and cut slopes. Fill slopes would be built on a 1:4 slope. Cut slopes would be constructed on a 1:1.5 slope. Standard erosion control would be applied on all new slopes.
- For storm water drainage purposes: replace or extend culverts, construct earth ditches at the toe of fills and the top of cuts as needed to direct and control storm water runoff, and remove and replace asphalt concrete dikes as needed.
- Relocate utilities.
- Upgrade metal beam guardrail to meet current standards.

The no-build alternative would leave the roadway as it is.

After the public review and comment period for the Initial Study with Proposed Mitigated Negative Declaration, the build alternative was selected as the preferred alternative for the project.

Summary of Major Potential Impacts from Alternatives

Potential Impact		Build Alternative	No-Build Alternative
Consistency with the Calaveras County General Plan		This alternative is consistent with Calaveras County's long-range plan for State Route 26.	No impact
Farmlands		Approximately 30.7 acres of farmland would be affected, 4 acres of which are under Williamson Act contract.	No impact
Relocation	Business displacements	N/A	No impact
	Housing displacements	One residence would be relocated.	No impact
	Utility service relocation	Utilities would require relocation.	No impact
Environmental Justice		No disproportionate impacts to low-income or minority populations.	No impact
Visual/Aesthetics		Visual impacts from new cut and fill slopes and oak tree removal.	No impact
Cultural Resources		Three archaeological sites eligible for the National Register of Historic Places for the purposes of the project would be affected.	No impact
Water Quality and Storm water Runoff		Provisions of Caltrans' storm water permit would be followed to minimize impacts from runoff.	No impact
Paleontology		Unique paleontological deposits may be found in the project area.	No impact
Natural Communities		3.5 acres of blue oak woodlands and 10.3 acres of annual grasslands would be affected.	No impact
Wetlands and other Waters		0.243 acres of jurisdictional waters of the United States would be permanently affected.	No impact
Plant Species		Approximately 160 oak trees greater than 6 inches in diameter at breast height would be removed.	No impact
Animal Species		Habitat for California linderiella and Western spadefoot toads would be affected.	No impact
Threatened and Endangered Species		Habitat for vernal pool fairy shrimp, vernal pool tadpole shrimp, and California tiger salamander would be affected.	No impact
Construction		Short-term construction noise and air quality impacts.	No impact

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List of Abbreviated Terms

Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
CEQA	California Environmental Quality Act
FHWA	Federal Highway Administration
KP	kilometer post
NEPA	National Environmental Policy Act
PM	post mile
USC	United States Code



Chapter 1 **Proposed Project**

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to rehabilitate the pavement and bring a section of State Route 26 in San Joaquin and Calaveras counties to current design standards. State Route 26 runs west to east beginning at State Route 99 in Stockton, continuing through San Joaquin, Calaveras, and Amador counties, and ending at State Route 88, near Pine Grove in Amador County.

Currently, the highway has many nonstandard features including narrow lane and shoulder widths, very sharp curves, and dips in the road. The proposed project would correct these features and repair deteriorated pavement beginning at the State Route 26 intersection with Wimer/Ospital Road in San Joaquin County and extending to the intersection with Savage Way in Calaveras County—a distance of approximately 3.25 miles. Figures 1-1 and 1-2 show the project vicinity and location.

Small amounts of right-of-way would be acquired from several properties along State Route 26, and one residence would be displaced. The total amount of new state right-of-way required by the proposed project is approximately 30.7 acres. The project was programmed in the 2000 State Highway Operation and Protection Program as an HA-22 pavement rehabilitation project. The current cost estimate for the proposed project (construction and right of way) is approximately \$13,000,000 .

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the proposed project is to do the following:

- Repair deteriorated pavement.
- Widen lane and shoulder widths to current highway standards.
- Correct non-standard curves and dips.

1.2.2 Need

State Route 26 was originally a county road and was not built to standard state highway design specifications. The lane widths are less than the standard 12 feet, and the shoulders are very narrow or nonexistent throughout the project limits (standard shoulder width is 8 feet). The lack of shoulders leaves inadequate room for

emergency maneuvers or parking for stalled vehicles. Severe curves and dips in the road result in decreased visibility and sight restrictions for motorists.

1.3 Alternatives

1.3.1 Build Alternative

The build alternative would rehabilitate the pavement and bring the roadway to current highway design standards by widening the entire segment and realigning nonstandard curves on State Route 26. The proposed project would:

- Repair pavement by applying an overlay of asphalt concrete.
- Widen lanes to 12 feet and shoulders to 8 feet. See Figure 1-3 for a proposed roadway cross-section.
- Correct nonstandard curves and dips to meet a minimum design speed of 45 miles per hour.
- Reconstruct public and private road intersections to meet current standards. Widening the intersections would meet truck-turning requirements at public road intersections.
- Add left-turn lanes and realign the intersections at Milton Road and Burson Road. (Figures 1-4 and 1-5).
- Add a left-turn lane at Warren Road.
- Construct new embankments (fill slopes) and cut slopes. Fill slopes would be built on a 1:4 slope. Cut slopes would be constructed on a 1:1.5 slope. Standard erosion control would be applied on all new slopes.
- Improve drainage by replacing or extending culverts, constructing earth ditches at the toe of fills and the top of cuts to direct and control storm water runoff, and removing and replacing asphalt concrete dikes.
- Relocate utilities.
- Upgrade metal beam guardrail to meet current standards.

After the public review and comment period for the Initial Study with Proposed Mitigated Negative Declaration, the build alternative was selected as the preferred alternative for the project.

1.3.2 No-Build Alternative

The no-build alternative would leave the existing roadway as it is. The pavement would continue to deteriorate and the nonstandard features would remain.

1.3.3 Comparison of Alternatives

The build alternative would repair the pavement and bring the roadway up to current design standards. The no-build alternative would not address the poor pavement conditions, resulting in higher maintenance costs. The no-build alternative would also leave the roadway with nonstandard lane and shoulder widths, and curves that do not meet current design standards.

1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Table 1.1 Permits/Approvals Required

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 consultation for threatened and endangered species Review and comment on Clean Water Act Section 404 Permit	Formal consultation for vernal pool fairy shrimp and vernal pool tadpole shrimp was initiated December 26, 2002. California tiger salamander was added January 21, 2005. A Biological Opinion was issued for the project February 15, 2006.
U.S. Army Corps of Engineers	Clean Water Act Section 404 permit for filling or dredging waters of the United States	Concurrence on wetlands delineation was received May 28, 2003. The 404 permit application would be submitted after project approval.
California Department of Fish and Game	Department of Fish and Game Code Section 1602 Streambed Alteration Agreement	The streambed alteration agreement would be applied for after project approval.
Regional Water Quality Control Board	Clean Water Act Section 401 water discharge permit	The Section 401 permit application would be submitted after project approval.



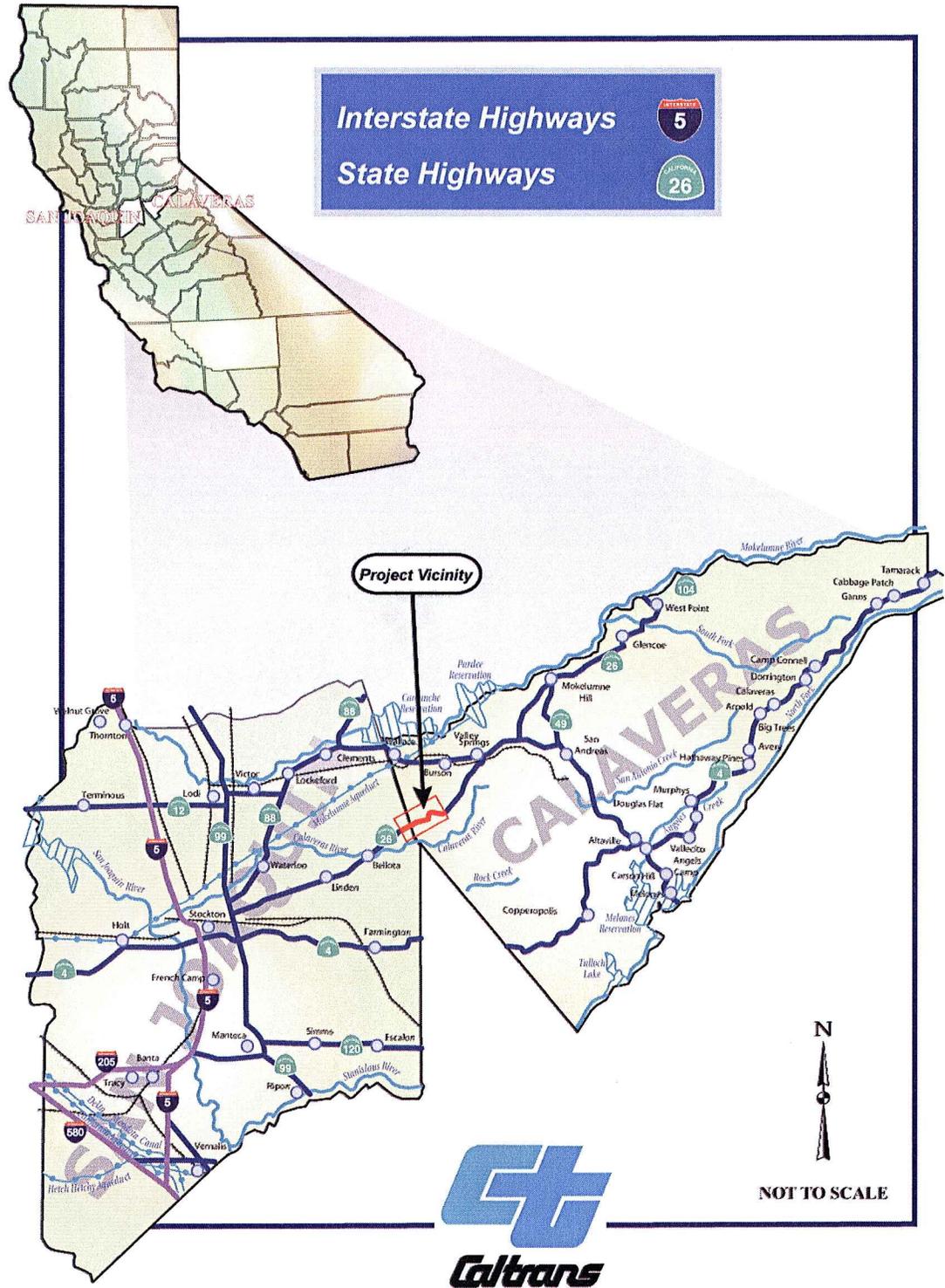


Figure 1-1 Project Vicinity Map



State Route 26 Rehabilitation

San Joaquin and Calaveras Counties

Wimer Road/Ospital Road to Savage Way

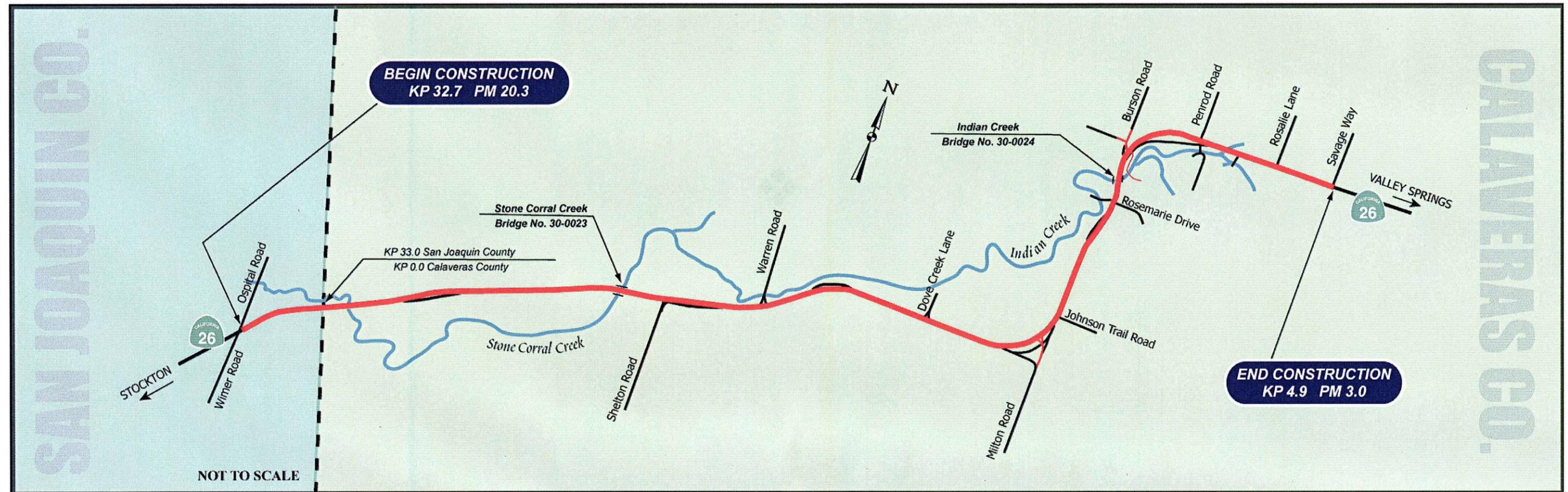


Figure 1-2 Project Location Map



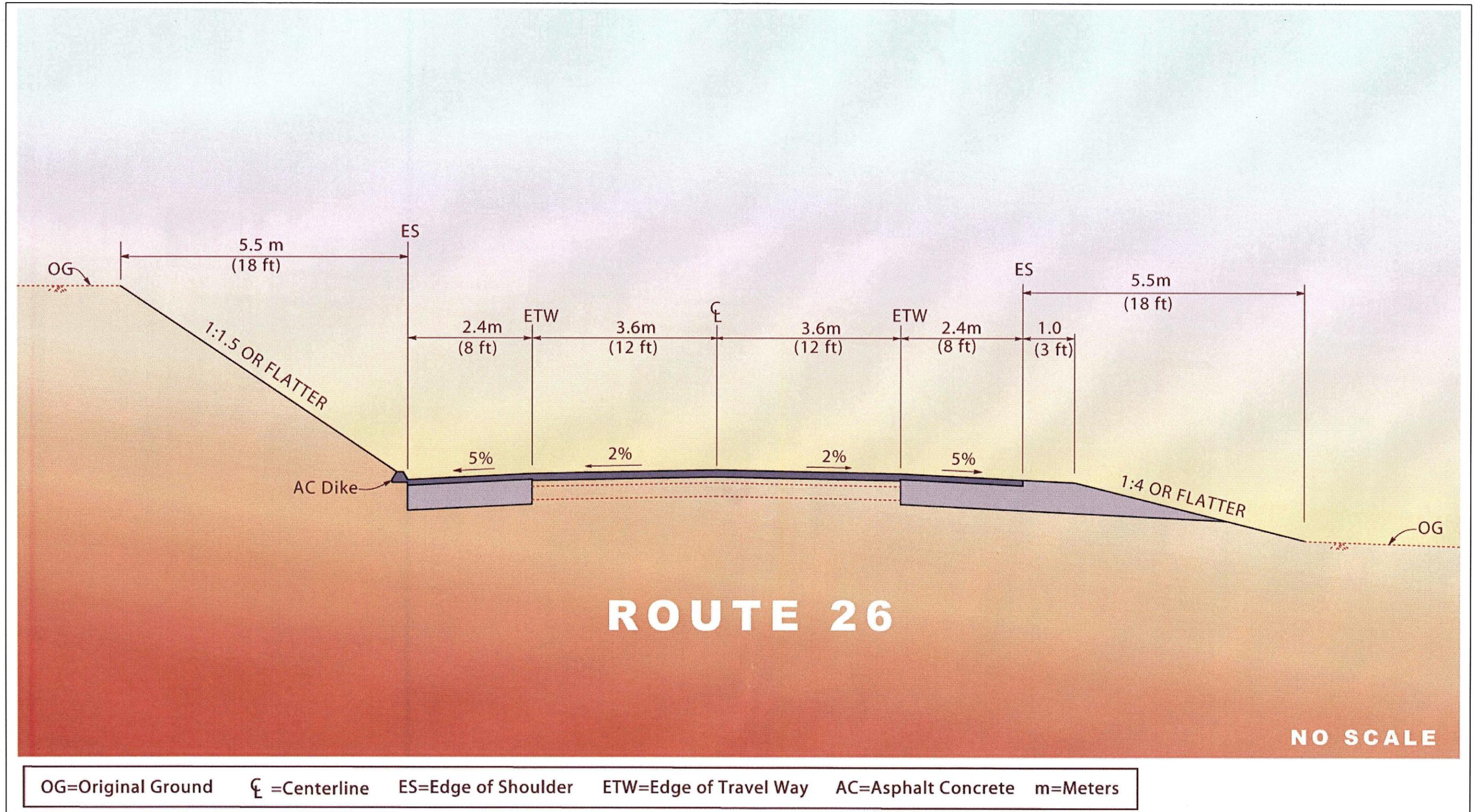


Figure 1-3 Proposed State Route 26 Cross-section



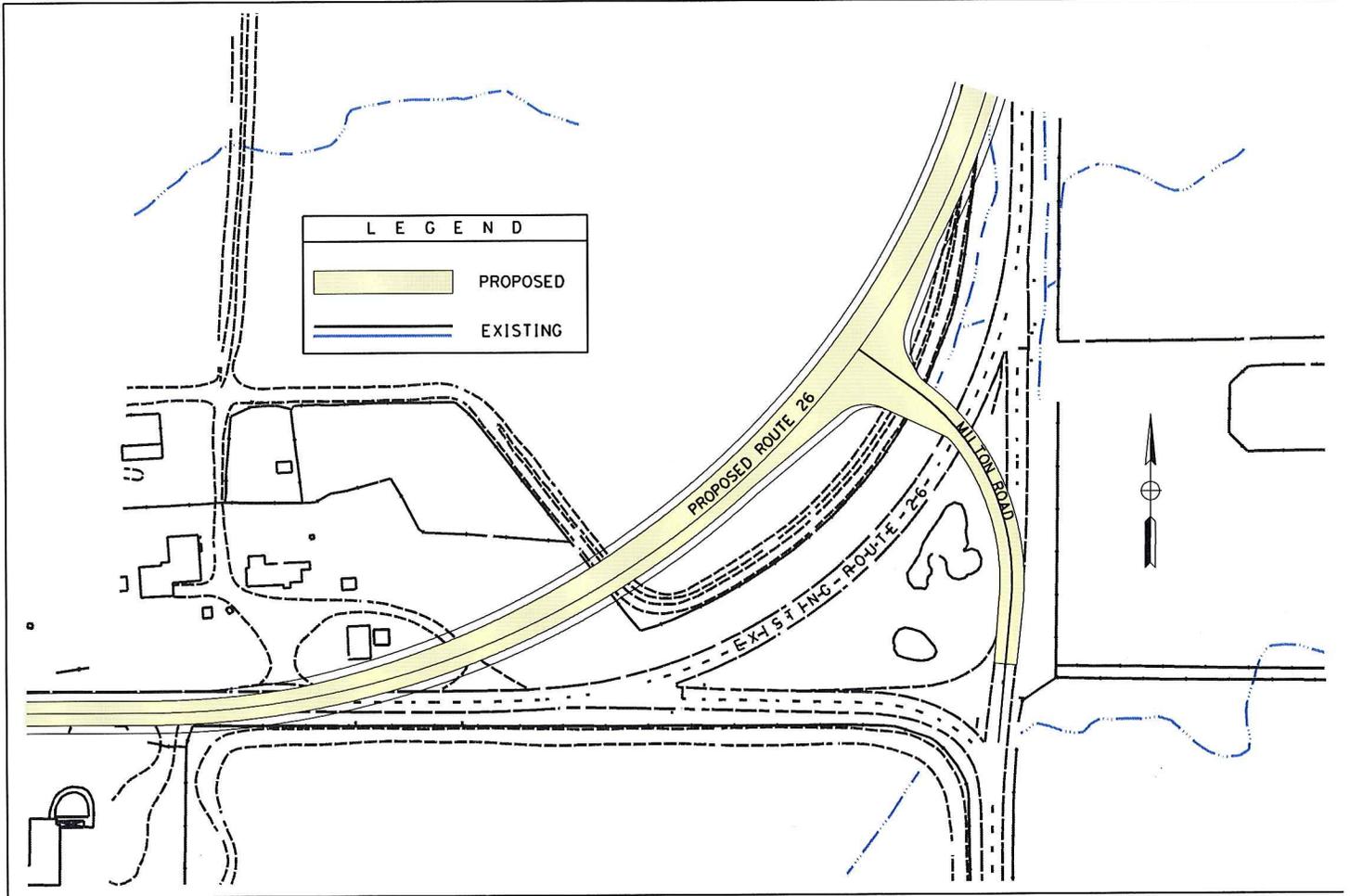


Figure 1-4 Proposed State Route 26/Milton Road Intersection



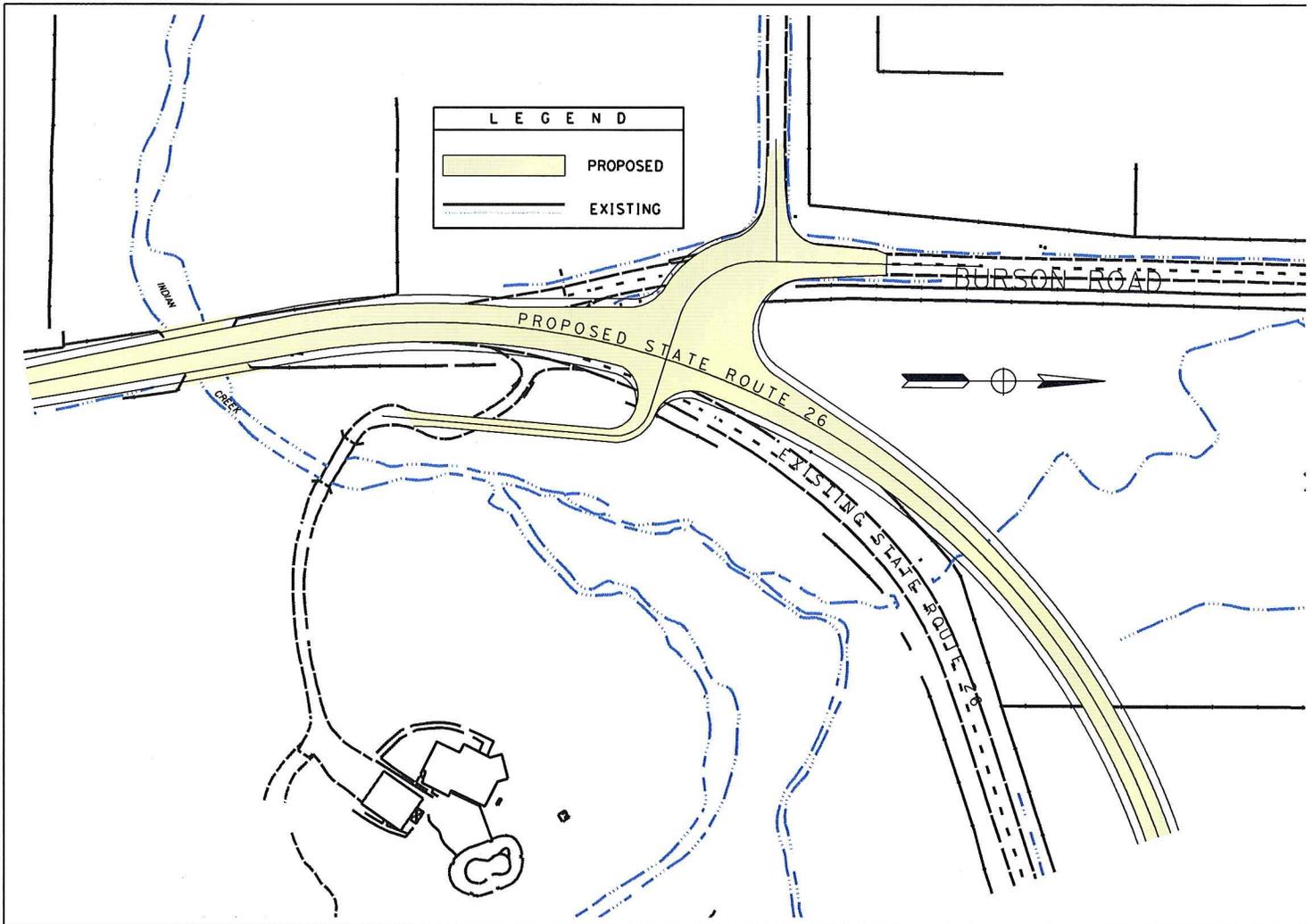


Figure 1-5 Proposed State Route 26/Burson Road Intersection



Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical and biological environments in the project area. It describes the existing environment that could be affected by the project and potential impacts from each of the alternatives.

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered, but no potential for adverse impacts to these resources were identified. Consequently, there is no further discussion regarding these resources in this document:

- Growth—The growth patterns in nearby communities would not be affected by the proposed project (field review, November 2004).
- Utilities/Emergency Services—No disruption in utility or emergency services is anticipated (determination of project engineer, February 14, 2005).
- Traffic and Transportation/Pedestrian and Bicycle Facilities—There are no sidewalks or bike lanes in the project area (field visit, November 2004).
- Hydrology and Floodplain—The project does not encroach on the base floodplain (Location Hydraulic Study, January 31, 2001)
- Geology/Soils/Seismic/Topography—The project area is not prone to substantial seismic ground-shaking, landslides, or soil instabilities (Geotechnical Design Report, August 11, 1999).
- Hazardous Waste/Materials—No hazardous wastes would be generated. However, a health and safety plan for lead, that complies with state and federal Occupational Safety and Health Administration regulations, must be in place before any ground-disturbing work takes place (Initial Site Assessment, March 5, 2002).

- Air Quality—Calaveras County is attainment for carbon monoxide (CO) and particulate matter (PM 10 and PM 2.5), therefore, no hot-spot analysis is required under federal air quality standards (Air Quality Report, March 3, 2005).
- Noise and Vibration—The proposed project would not result in any significant permanent increase in noise for sensitive receptors. Temporary noise impacts would occur from construction activity (Noise Report, March 8, 2005).

2.1 Human Environment

2.1.1 Farmlands

Regulatory Setting

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

The California Environmental Quality Act 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.

The Williamson Act requires that a public agency not locate a public improvement within an agricultural preserve unless the following findings are made:

1. The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve (Government Code section 51292(a)), and,

2. 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 (Government Code section 51292 (b)).

Affected Environment

Land use in the project area is residential and agricultural. Approximately 30.7 acres would be acquired for construction of the proposed project. A Farmland Conversion Impact Rating form (Form AD-1006) was sent to the Natural Resources Conservation Service to determine if the project area contains farmland subject to the Farmland Protection Policy Act. Notification was also sent to the Department of Conservation because almost 4 acres out of the 30.7 acres being acquired would be from two parcels currently under Williamson Act contract.

Impacts

The total points on the Form AD-1006 were 144 out of 260 possible (see Appendix B). The threshold for considering potentially significant effects from farmland conversion is 160 points. Therefore, it was determined that the proposed project would not have adverse effects to farmland entitling it to greater protection under the Farmland Protection Policy Act.

Because the acquisition of approximately 4 acres of farmland under Williamson Act contract complies with the findings from Government Code sections 51292 (a) and (b) (above), the proposed project is in compliance with the Williamson Act.

2.1.2 Community Impacts

2.1.2.1 Relocations

Regulatory Setting

Caltrans' Relocation Assistance Program 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 Part 24. The purpose of the Relocation Assistance Program is to ensure persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix D for a summary of the Relocation Assistance Program.

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 U.S.C. 2000d, et seq.). Please see Appendix C for a copy of Caltrans' Title VI policy statement.

Affected Environment

One single-family residence at the Penrod Road intersection would be acquired.

Impacts

Acquisition of the residence at Penrod Road would require displacement and relocation of the current residents. A Relocation Impact Study for this displacement was completed February 11, 2005. Based on a 34% vacancy rate for Calaveras County, there would be a sufficient selection of single-family residences available for rent or purchase equal to or better than the displacement property.

Avoidance, Minimization and/or Mitigation Measures

All individuals displaced from the residence at Penrod Road would receive relocation assistance through Caltrans' Relocation Assistance Program in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. A summary of relocation benefits is provided in Appendix D.

2.1.2.2 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Bill Clinton on February 11, 1994. This executive order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. "Low income" is defined based on the Department of Health and Human Services' poverty guidelines. For 2004, this was \$18,850 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is shown by its Title VI policy statement, which can be found in Appendix C of this document.

Affected Environment

Various 2000 Census data were collected for census blocks within 1,650 feet of the project area. These data were analyzed to determine ethnicity and income levels for residents in or near the project area compared with Calaveras County. The study area has a population of 823, and 15.3% of these residents are minority. Minorities in all of Calaveras County comprise about 12.5% of the total population. The percentage of families below the poverty level in the study area is 4.3%—lower than the percentage of families below the poverty level in the county (11.8%).

Impacts

The proposed project would not have a disproportionate impact to any low-income or minority populations. The improvements to State Route 26 would provide a benefit for residents in the area. The build alternative would, therefore, not cause disproportionately high and adverse effects to any minority or low-income populations per Executive Order 12898 regarding environmental justice.

2.1.3 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings (42 U.S.C. 4331(b)(2)). To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act (23 U.S.C. 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 of 1970 as amended 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” (California Public Resources Code Section 21001(b)).

Affected Environment

The area within the project limits covers rolling hills and valleys that are typical of the foothills of the San Joaquin Valley. In areas undisturbed by agriculture, blue oaks and interior live oaks are the dominant tree species. Annual grasslands are also present and are composed of almost equal parts grasses and forbs (non-grass

herbaceous species). During winter and spring, the oak-covered hillsides and grasslands are green and heavily vegetated with scrub and wildflowers. In summer and fall, they are golden and brown with dry grasses and trees.

Impacts

A Visual Impact Assessment was completed in February 2003 to study potential visual impacts. The proposed project would remove vegetation and excavate hills, resulting in new cut and fill slopes. Approximately 160 oaks greater than six inches in diameter at breast height would be removed.

Avoidance, Minimization and/or Mitigation Measures

To avoid visual impacts, the following measures should be implemented during construction:

- Use native trees and shrubs to replant excavation slopes, embankment slopes and other disturbed areas.
- Include native grass species in the erosion control mix.
- Construct slopes flatter than 1:2 when possible to provide optimum conditions for the application of revegetation materials.
- Round slopes to blend the tops and bottoms of embankments with existing contours.
- Avoid large trees when possible.
- Avoid exposing roots of trees adjacent to the project area.
- Establish environmentally sensitive areas to protect vegetation.
- Treat exposed rock to give the surfaces a weathered effect.

Oak mitigation is described in detail in this chapter under Section 2.3.3 Plant Species.

2.1.4 Cultural Resources

Regulatory Setting

“Cultural resources” as used in this document refers to historic and archaeological resources. The primary laws dealing with historic and archaeological resources include the following:

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

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

Affected Environment

A Historic Property Survey Report detailing the identification and eligibility of cultural resources in the project area was completed December 23, 2004. Three archaeological sites were identified as eligible for the National Register of Historic Places only for the purposes of the project: CA-CAL-1245, CA-CAL-1616, and CA-CAL-1983. (Caltrans may consider archaeological properties eligible for the National Register of Historic Places for the purposes of the project without conducting subsurface testing or surface data collection if the establishment of an environmentally sensitive area protects an archaeological property. Environmentally sensitive areas are locations of identified cultural, biological, or other resources that are to be protected by avoidance during construction.)

CA-CAL-1245

Only a small portion of this site falls within the area of direct impact. This portion of the site underwent subsurface testing to determine if it contained artifacts that would contribute to the site’s eligibility for the National Register of Historic Places. The testing results found that the site areas located within the project impact area do not contribute to the eligibility of the site.

CA-CAL-1616

A subsurface investigation determined that the portions of the site within the area of direct impact do not contribute to the National Register of Historic Places’ eligibility of the site.

CA-CAL-1983

A portion of this site underwent subsurface testing and was found not to contribute to the site's National Register of Historic Places eligibility. However, most of the site lies under a residence and was not accessible for testing. Because this area is within the area of direct impact, further investigation would be required to determine if there are any deposits that contribute to the eligibility of the site for inclusion in the National Register of Historic Places.

Impacts

Caltrans, under the authority of the Federal Highway Administration, has determined that archaeological sites CA-CAL-1245, CA-CAL-1616, and CA-CAL-1983 are eligible for inclusion in the National Register of Historic Places only for the purposes of the project. The State Historic Preservation Officer concurred with Caltrans' findings pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (see Appendix F for the State Historic Preservation Officer concurrence letter).

No effects are anticipated for sites CA-CAL-1245 and CA-CAL-1616 if the avoidance and minimization measures listed below are implemented. Because a portion of site CA-CAL-1983 within the area of direct impact could not be tested, a Programmatic Agreement was prepared for the project. The State Historic Preservation Officer and Federal Highway Administration approved the Programmatic Agreement on September 8, 2006 (Appendix J).

Avoidance, Minimization and/or Mitigation Measures

The following provisions apply to archaeological sites CA-CAL-1245, CA-CAL-1616, and CA-CAL-1983 in order to avoid potential effects:

- Portions of the sites outside the area of direct impact must be designated as environmentally sensitive areas, and fences must be placed along the edge of the area of direct impact near the site to ensure that construction of the project would not disturb archaeological deposits in the environmentally sensitive area.
- A professional archaeologist who meets the Caltrans Professionally Qualified Staff and/or Secretary of the Interior's Standards in the discipline of archaeology must conduct or supervise the monitoring of the implementation of the project where such implementation would disturb natural ground.

In addition to these provisions, site CA-CAL-1983 required a Programmatic Agreement for the untested portions of the site underneath a house (Appendix J). When the house site can be tested (following acquisition of the property), if nothing is found that meets the National Register of Historic Places' eligibility criteria, then the above provisions would be applied to the site and Caltrans' compliance with Section 106 of the National Historic Preservation Act would be complete. If, however, deposits that meet the eligibility criteria were uncovered, they would have to be recovered.

2.2 Physical Environment

2.2.1 Water Quality and Stormwater Runoff

Regulatory Setting

The main federal law regulating water quality is the Clean Water Act. Section 401 of the act requires a water quality certification from the State Board or Regional Board when a project: (1) requires a federal license or permit (a Section 404 permit is the most common federal permit for Caltrans projects), and (2) would result in a discharge to waters of the United States.

Section 402 of the act establishes the National Pollutant Discharge Elimination System permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. To ensure compliance with Section 402 of the Clean Water Act, the State Water Resources Control Board has issued a National Pollutant Discharge Elimination System Statewide Storm Water Permit to regulate storm water discharges from Caltrans facilities. The permit regulates storm water discharges from Caltrans right-of-way both during and after construction, as well as from existing facilities and operations.

In addition, the State Water Resources Control Board has issued a construction general permit for most construction activities covering greater than 1 acre that are part of a Common Plan of Development exceeding 5 acres or that have the potential to significantly impair water quality. Some construction activities may require an individual construction permit. All Caltrans projects that are subject to the construction general permit require a Storm Water Pollution Prevention Plan, while all other projects require a Water Pollution Control Program. Subject to Caltrans' review and approval, the contractor prepares both the Storm Water Pollution

Prevention Plan and the Water Pollution Control Program. These identify construction activities that may cause pollutants in storm water and measures to control these pollutants. Since neither the Water Pollution Control Program nor the Storm Water Pollution Prevention Plan are prepared at this time, the following discussion focuses on anticipated pollution controls.

Affected Environment

A Water Quality Study was completed February 4, 2005. The only surface water bodies in the vicinity of the proposed project are two seasonal streams: Indian Creek and Stone Corral Creek. These creeks are within the Calaveras River watershed and drain to the Pacific Ocean via the Calaveras River, San Joaquin River, and Sacramento-San Joaquin Delta.

Impacts

With the implementation of minimization measures (discussed in the next subsection), no long-term impacts to surface water quality are anticipated. In the construction phase, the contractor has the responsibility, as stated in Caltrans' Standard Specifications Section 7-1.01G, to take necessary steps to eliminate potential impacts during construction.

Short-term surface water quality impacts may occur during construction of the proposed project. The primary impacts would occur from surface water exposed to loose soil during excavation, grading, and filling activities. The suspended solids, dissolved solids, and organic pollutants in surface water runoff could increase while nearby soils are disturbed and dust is generated. These short-term water quality impacts are minor and would not cause or substantially contribute to the impairment of a designated beneficial use. With the implementation of minimization measures (see next subsection), no short-term impacts to surface water quality are anticipated.

In accordance with Section 402 of the Federal Clean Water Act, this project would be covered by the Caltrans National Pollutant Discharge Elimination System storm water permit (Order No. 99-06-DWQ, National Pollutant Discharge Elimination System No. CAS000003) issued by the State Water Resources Control Board. Under this permit, the required statewide Storm Water Management Plan directs that potential impacts to water quality be addressed in the planning, design, and construction phases.

Avoidance, Minimization and/or Mitigation Measures

By incorporating proper and accepted engineering practices during construction and post-construction, in addition to Best Management Practices, the project would not produce substantial impacts to water quality during construction or operation.

Examples of Best Management Practices may include, but are not limited to, the following measures:

- Physically protect areas that provide important water quality benefits or are particularly susceptible to erosion or sediment loss.
- Limit land disturbance such as clearing and grading to reduce erosion and sediment loss.
- Limit disturbance of natural drainage features and vegetation.
- Prepare and implement an approved storm water pollution prevention plan.
- Ensure proper storage and disposal of toxic material.
- Incorporate pollution prevention into operation and maintenance procedures to reduce pollutant loading to surface runoff.
- Develop and implement runoff pollution controls for existing road systems to reduce pollutant concentrations and volumes.

2.2.2 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. Although there is no federal law that specifically protects natural or paleontological resources, there are a number of laws that have been interpreted to do so—one being the Antiquities Act of 1906, which protects historic or prehistoric ruins or monuments and objects of antiquity. This act has been amended to specifically allow funding for paleontological mitigation. Under California law, paleontological resources are protected by the California Environmental Quality Act, the California Administrative Code, Title 14, Section 4306 et seq., and Public Resources Code Section 5097.5.

Affected Environment

Paleontology studies were completed May 19, 2003 and March 1, 2005. The proposed project is located on the eastern edge of the Great Valley geomorphic province where low rolling hills gradually begin to merge into the Sierra Nevada. Elevations in the project area range from 180 to 400 feet above sea level. Non-marine

Tertiary and Quaternary sedimentary formations lie underneath the highway. Two Tertiary formations (Mehrten and Valley Springs) and two Quaternary formations (Modesto-Riverbank) lie within the construction area. The Mehrten and Valley Springs formations are ranked high in sensitivity and the Modesto-Riverbank formations moderate in sensitivity for containing rare and unique fossil deposits.

Impacts

The sedimentary formations found in the project area may contain sensitive and unique paleontological resources. Excavation in these areas may affect sensitive and unique paleontological resources.

Avoidance, Minimization and/or Mitigation Measures

Paleontological salvage would be required where excavation disturbs the Valley Springs, Mehrten, or Modesto-Riverbank formations. Bulk sediment samples would be collected from fossiliferous strata and processed for microvertebrate remains by a qualified principal paleontologist (M.S. or Ph.D. in paleontology or geology familiar with paleontological procedures and techniques) in consultation with the Caltrans paleontology coordinator. All geologic work would be performed under the supervision of a California Professional Geologist. The contractor doing the salvage would develop a paleontological mitigation plan that explains the procedures for collecting fossils. A nonstandard special provision for paleontology mitigation would be included in the construction contract to notify the construction contractor of the paleontological salvage.

2.3 Biological Environment

The following discussion is based on the Natural Environment Study completed in August 2002 and Biological Assessment completed in September 2002 for the proposed project. Study methods consisted of a review of resource agency databases and inventories of special-status species, agency coordination and professional contacts, protocol-level surveys, field reconnaissance, assessment of vegetation and habitat characteristics, and evaluation of impacts to identified resources. These studies were undertaken to meet both state and federal environmental regulations.

2.3.1 Natural Communities

Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in Section 2.3.5 Threatened and Endangered Species. Wetlands and other waters are discussed in Section 2.3.2.

Affected Environment

Blue Oak Woodlands

Blue oak woodlands occur along the margins of the Central Valley at elevations between 300 and 3,000 feet above sea level. Blue oak woodlands are characterized by a relatively open canopy of blue oaks with an understory of annual grasses and forbs (non-grass herbaceous species). Individual trees are typically less than 2 feet in diameter, but occur in relatively dense stands of more than 60 trees per acre.

Blue oak woodlands are scattered throughout the project area. The dominant tree is the blue oak (*Quercus douglasii*), but other species that occur in smaller numbers include interior live oak (*Quercus wislizenii* var. *wislizenii*), foothill pine (*Pinus sabiniana*), and California buckeye (*Aesculus californica*).

Annual Grasslands

Annual grasslands in the Central Valley occur mainly at elevations below 300 feet. They can also occur at higher elevations on dry south-facing slopes or in areas with shallow soils and relatively few trees. Annual grasslands are composed of almost equal parts grasses and forbs. Most of the dominant grass species in the project area are non-natives, but native forbs and grasses still persist in some areas. Annual grasslands in the project area provide foraging habitat for a variety of wildlife species. Several small mammal, reptile, and bird species forage in annual grasslands and use adjacent oak woodland and riparian areas for breeding, resting, and escaping cover.

Impacts

The proposed project would directly affect approximately 3.5 acres of oak woodland containing an estimated 160 oaks greater than 6 inches in diameter at breast height. Approximately 10.3 acres of grasslands located within the areas of new right-of-way would also be directly affected by construction activities.

Avoidance, Minimization and/or Mitigation Measures

Unavoidable loss of oak woodlands and grasslands would be compensated by a combination of replacement plantings onsite and/or preservation of existing areas of similar habitats within the county or an approved mitigation bank. Some of the grassland habitat could be recovered by seeding cut and fill slopes with native and naturalized grasses that currently grow in the area.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the main law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. “Waters of the United States” include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce.

Wetlands are defined as “. . . those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (30 CFR 328.3). To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used: the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

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

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located

in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. The Department of Fish and Game 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 Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

Affected Environment

There are 1.43 acres of waters of the United States in the project area, including wetlands. Jurisdictional wetlands and other waters of the United States in the project area were divided into two types: vernal pools and swales (wetlands) and seasonal streams (non-wetland waters of the United States).

Vernal Pools and Swales

Vernal pools occur throughout the project area, but are concentrated between Ospital Road and Rosemarie Drive. Two seasonal swales were also found in the project area—one near the San Joaquin/Calaveras County line, the second near Warren Road.

Vernal pools were delineated during the dry season (August 2001) when no ponding was present and again in the spring (April 2002) during the blooming period of most vernal pool plants. Indicators of hydrophytic vegetation, hydric soils, and wetland hydrology were present at all vernal pool sample points. The hydrology and soils of the vernal pools in the project area are typical of vernal pools throughout the Central Valley.

Typical vernal pool plant species observed included Mediterranean barley (*Hordeum marinum*), coyote thistle (*Eryngium vaseyi*), curly dock (*Rumex crispus*), and annual beard grass (*Polypogon monspeliensis*). Animal species observed in some of the pools in the project vicinity included vernal pool fairy shrimp (*Branchinecta lynchi*) and California linderiella (*Linderiella occidentalis*). Additionally, amphibians such as the California tiger salamander (*Ambystoma californiense*) and western spadefoot toad (*Spea hammondi*) use vernal pool habitats for breeding and larval development. These animal species are discussed in Section 2.3.4 Animal Species and Section 2.3.5 Threatened and Endangered Species.

Vegetation within the two seasonal swales includes coyote thistle, popcorn flower (*Plagiobothrys stipitatus*), spikerush (*Eleocharis* sp.), Italian ryegrass (*Lolium multiflorum*), woolly marbles (*Psilocarphus* sp.), annual bluegrass (*Poa annua*), and foxtail barley (*Hordeum murinum*). Both seasonal swales are fed by storm water runoff culverts that bisect State Route 26. The swale near the San Joaquin/Calaveras county line is very narrow and drains to a swale outside the highway right-of-way. The swales were dry during the August 2001 and April 2002 surveys.

Seasonal Streams

Two seasonal streams—Stone Corral Creek and Indian Creek—are located within the project area. Bridges at these two streams were widened by Calaveras County in 1998 and would not be replaced as part of the proposed project; therefore, these stream channels would not be directly affected by the proposed project.

Impacts

Table 2.1 summarizes the wetlands that would be affected by the proposed project according to the type of impact. It is estimated that 0.21 acre of vernal pool wetlands and 0.033 acre of a seasonal swale would be permanently affected. Permanent impacts to this 0.243 acre of jurisdictional waters would qualify for a Nationwide Permit #23 issued by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

Temporary (construction) impacts within the proposed right-of-way would equal 0.31 acre of vernal pool wetlands and 0.12 acre of seasonal streams. An additional 0.76 acre of vernal pool wetlands within 250 feet of the project area may be affected indirectly because of its hydrologic link to vernal pool wetlands in the project area. These wetlands would fall under the jurisdiction of the U.S. Fish and Wildlife Service

because they provide potential habitat for listed vernal pool species (see Section 2.3.5 Threatened and Endangered Species).

Table 2.1 Affected Wetlands by Type of Impact

Type of Impact	Vernal Pools/Swale	Seasonal Streams	Total Acreage
Permanent (fill)	0.243 acre	0 acres	0.243 acre
Temporary (construction)	0.31 acre	0.12 acre	0.43 acre
Indirect (hydrologic connectivity)	0.76 acre	0 acres	0.76 acre

Consultation with the Department of Fish and Game would be required for indirect impacts to the two seasonal streams (Stone Corral Creek and Indian Creek). A Streambed Alteration Agreement under Section 1602 of the Department of Fish and Game Code would be required.

Avoidance, Minimization and/or Mitigation Measures

The widening and realignment of the highway have been designed to minimize and avoid impacts to wetlands and other waters within the project area. Compensation for loss of wetlands and other waters of the United States would be included in the proposed mitigation for potential loss of listed vernal pool species habitat. Proposed mitigation measures for vernal pool fairy shrimp would include offsite creation and preservation of vernal pool wetland habitat.

The Biological Opinion issued by the U.S. Fish and Wildlife Service February 15, 2006 (Appendix I) determined that Caltrans would purchase 2.4 acres of wetted vernal pools at an approved Service compensation area to support vernal pool fairy shrimp.

In addition to the offsite compensation, Caltrans would implement standard Best Management Practices to further avoid and minimize impacts to vernal pool wetlands and other waters of the United States. The following Best Management Practices would be implemented:

- All wetlands in the construction right-of-way that are not within the proposed cut and fill limits would be fenced with a combination of high-visibility fencing and

silt fencing. The vernal pools and swales perimeter would be clearly marked to prevent inadvertent encroachment and disturbance during construction. After significant rains, the silt fence would be monitored to evaluate its effectiveness and verify that the water quality of adjacent vernal pools and swales is maintained. All fencing would be maintained for the duration of construction.

- Upon project completion, all areas subject to temporary ground disturbances, including the equipment and materials storage areas and construction right-of-way, would be replanted. These areas would be seeded with a Caltrans-approved erosion control seed mix that would be applied immediately after construction activities are completed. Prior to seeding, disturbed areas would be lightly disked to relieve compaction. Replanted areas would be monitored for two years to ensure the vegetation was adequately established.
- No equipment refueling would be allowed within 100 feet of wetlands or streams.
- Vehicle access would be limited to the construction right-of-way.
- All construction and revegetation activities would be periodically monitored by a Caltrans biologist or the resident engineer to evaluate compliance with the Best Management Practices.

The following additional Best Management Practices were included in the Biological Opinion issued by the U.S. Fish and Wildlife Service (Appendix I):

- Parking of equipment, equipment maintenance, and other project-related activities would occur at a designated staging area. The staging area location would be pre-approved by a Caltrans biologist.

- A qualified Service-approved biologist shall be onsite or on-call during all activities that could result in the take of listed species. The qualification of the biologist(s) shall be presented to the Service for review and approval at least 60 calendar days prior to any groundbreaking at the project site. The biologist(s) shall be given authority to stop any work that may result in the take of listed species. If the biologist(s) exercises this authority, the Service and California Department of Fish and Game shall be notified by telephone and electronic mail within one working day.
- An employee education program shall be conducted for the contractors, their employees, and any other personnel involved in the project to explain endangered species concerns.
- To the extent possible, nighttime construction should be minimized.
- Construction crews would be informed during the education program that, to the extent possible, travel within the marked project site would be restricted to established roadbeds.

2.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Game share regulatory responsibility for the protection of special-status plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines. “Special-status” is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. This section of the document discusses all the other special-status plant species, including Department of Fish and Game fully protected species and species of special concern, Fish and Wildlife Service candidate species, and non-listed California Native Plant Society rare and endangered plants.

Although there is no established protocol that describes mitigation for impacts to oak trees, California Senate Resolution No. 17 directs all state agencies to preserve and protect native oak woodlands to the greatest extent possible. Additionally, Senate Bill

1334 (approved September 24, 2004) establishes a process that counties are required to follow to mitigate for the loss of oak woodlands.

The regulatory requirements for the Federal Endangered Species Act can be found at United States Code 16, Section 1531, et. seq. See also 50 CFR Part 402. The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et. seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 21000-21177.

Affected Environment

The project area contains habitat suitable for many sensitive vernal pool plants. The potential for the occurrence of special-status plant species was evaluated based on a search of the California Native Plant Society database and California Natural Diversity Database and a review of pertinent literature.

Botanical surveys were conducted during the appropriate flowering periods of the year. All plant species observed were recorded; no special-status species were found during focused surveys.

The dominant tree species in the project area is the blue oak (*Quercus douglasii*). Species that occur in smaller numbers are the interior live oak (*Quercus wislizenii*), foothill pine (*Pinus sabiniana*), and California buckeye (*Aesculus californica*).

Impacts

The proposed project would remove approximately 57 blue oaks and 103 interior live oaks with a diameter at breast height of greater than 6 inches.

Avoidance, Minimization and/or Mitigation Measures

Replacement oak plantings would occur onsite, through a mitigation bank, or a combination of the two. Mitigation ratios would be determined in coordination with the California Department of Fish and Game and Calaveras County. The following recommendations would apply to onsite oak replacement plantings:

- Plantings would be from local stock and installed at the onset of the rainy season.
- Browse protection would be installed around all plantings to protect them from wildlife.

- Plantings would be monitored and maintained for five years after planting or until the performance criterion is met.
- The performance criterion is 60% survival of all plantings at the end of the monitoring period.
- If survival drops below 60% percent during the monitoring period, Caltrans would replace plantings to bring survival above this level.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The United States Fish and Wildlife Service, the National Marine Fisheries Service and the California Department of Fish and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5. All other special-status animal species are discussed here, including Department of Fish and Game fully protected species and species of special concern, and U.S. Fish and Wildlife Service or National Marine 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 1601–1603 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

Affected Environment

California linderiella (*Linderiella occidentalis*) is a California endemic fairy shrimp species that is listed as a federal species of concern. The California linderiella was found in one vernal pool within the project area.

The western spadefoot toad (*Scaphiopus hammondi*), a federal and state species of concern, was not found during surveys, but has been known to occur near the project area and may use the existing vernal pools within the project area as breeding habitat.

Although no active nests were found during surveys, raptors and other migratory birds may potentially nest in oaks and other large trees within the project area.

Impacts

Excavation or placement of fill in vernal pools could result in direct mortality of California linderiella or its resting eggs (known as cysts) and mortality of adult western spadefoot toads and/or their larvae and eggs. A total of 0.21 acre of vernal pools would be directly and permanently affected. Approximately 0.31 acre would be directly affected by temporary construction activities. Approximately 0.76 acre of vernal pools within 250 feet of the project area would be indirectly affected because they are connected to pools within the project area.

Avoidance, Minimization and/or Mitigation Measures

Construction within 0.6 mile of potential western spadefoot toad breeding habitat would occur during the dry season (June to October) when larvae and breeding adult spadefoot toads are not present. Construction during the dry season would also minimize impacts to California linderiella. Compensation and minimization measures required for impacts to vernal pool wetlands and listed vernal pool species (see Section 2.3.5 Threatened and Endangered Species) would also benefit the western spadefoot toad and California linderiella.

Pre-construction surveys would be conducted for raptors and other migratory birds and their nests. Trees suitable for nesting within 300 feet of the construction area would be surveyed by a qualified biologist for active nests at least 30 days before construction or any removal of vegetation. If active nests were found, a construction buffer would be established until the young have fledged the nests. Alternatively, construction activities that may affect nesting birds can be completed between September 1 and February 15 to avoid the nesting season altogether.

2.3.5 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: United States Code, Section 1531, et seq. See also 50 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, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of the Federal Endangered Species Act defines “take” as “. . . to 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, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act 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 is the agency responsible for implementing the California Endangered Species Act. 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.” The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the Department of Fish and Game. For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the Department of Fish and Game may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Affected Environment

Appendix G contains a list of threatened and endangered species with the potential to occur in the project area. Only three of these species were found or have a high potential for being found within the proposed project area. They are described below. A “may affect/likely to adversely affect” determination was made for these species for the purposes of formal consultation with the U.S. Fish and Wildlife Service.

Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is federally listed as threatened. The species is widely distributed through the grasslands of California from Shasta County south to Riverside County and is found in seasonal wetlands known as vernal pools. Vernal pool fairy shrimp were found in three vernal pools within the proposed project area.

Vernal Pool Tadpole Shrimp

The vernal pool tadpole shrimp (*Lepidurus packardii*) is federally listed as endangered. The species is found in vernal pools and swales within unplowed grasslands. No vernal pool tadpole shrimp were seen during wet season surveys. However, suitable habitat exists among all the vernal pools present within the project limits.

California Tiger Salamander

The California tiger salamander (*Ambystoma californiense*) is federally listed as threatened. The species ranges from Sonoma County south to Santa Barbara County, and east into the foothills of the Sierra Nevada. California tiger salamanders generally use freshwater seasonal pools for breeding habitat, and they inhabit small mammal burrows in upland areas to remain dormant through the summer. Although no tiger salamanders were found during surveys, their presence is inferred due to the proximity of known occurrences and suitable upland habitat within the project area.

Impacts

Excavation or placement of fill material within vernal pools in the project area could result in direct mortality of vernal pool fairy shrimp and vernal pool tadpole shrimp or their resting eggs known as cysts. A total of 0.21 acre of vernal pools within the cut and fill limits would be directly affected. An additional 0.31 acre would be directly affected by other construction-related activities.

Indirect impacts to vernal pool species could occur in suitable habitats within 250 feet of the project area. A survey and evaluation of this zone determined that 0.76 acre would be indirectly affected by the proposed project.

Avoidance, Minimization and/or Mitigation Measures

Construction within 0.6 mile of potential vernal pool fairy shrimp, vernal pool tadpole shrimp, and California tiger salamander breeding habitat would be timed to occur during the dry season (June to October) when larvae and breeding adult salamanders are not present.

The Biological Opinion issued by the U.S. Fish and Wildlife Service February 15, 2006 (Appendix I) determined that Caltrans would purchase 2.4 acres of wetted vernal pools at an approved Service compensation area to support vernal pool fairy shrimp. The Biological Opinion also stated that Caltrans would purchase 26.52 acres of upland habitat to compensate for direct effects to 8.84 acres of California tiger salamander habitat at an approved Service compensation area.

2.4 Construction Impacts

Temporary construction impacts include dust. Dust control measures under Section 10 of the Standard Specifications would apply to the proposed project. Air pollutants caused by construction may be addressed by applying Caltrans Standard Specifications, Section 7-1.01F. Additionally, a health and safety plan for lead that complies with state and federal Occupational Safety and Health Administration regulations must be in place before any ground-disturbing work takes place.

Traffic control would be required during construction. A Traffic Management Plan would be developed using one-way traffic when traffic is light. No detours are anticipated.



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 to determine the scope of environmental documentation, the level of analysis, 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, including project development team meetings, interagency coordination meetings, and meetings with property owners during environmental studies.

The following agencies or groups were consulted during the environmental study phase:

- Formal consultation was initiated with the U.S. Fish and Wildlife Service for vernal pool fairy shrimp and vernal pool tadpole shrimp on December 26, 2002. California tiger salamander was added to the formal consultation on January 21, 2005. The U.S. Fish and Wildlife Service issued a Biological Opinion on February 15, 2006, concluding the formal consultation per Section 7 of the U.S. Endangered Species Act.
- The California Department of Fish and Game was consulted during aquatic surveys in January and March 2001.
- The U.S. Army Corps of Engineers concurred with the wetlands delineation on May 28, 2003.
- Concurrence from the State Historic Preservation Officer for the identification and evaluation of cultural resources was requested on December 21, 2004. A concurrence letter was received from the State Historic Preservation Officer on April 28, 2005 (see Appendix F). Approval of a Programmatic Agreement by the State Historic Preservation Officer and the Federal Highway Administration was received on September 8, 2006 (see Appendix J).
- Representatives from the Northern Valley Yokut Tribe, Tuolumne Band of Me-Wuk Indians, Calaveras Band of Miwuk Indians, Miwok Indian Community of the Wilton Rancheria, Sierra Native American Council, California Valley Miwok Tribe, Ione Band of Miwok Indians, and Sheep Ranch of Me-Wuk Indians have been notified and consulted from 2001 to 2004. Native American monitors have also observed archaeological excavations in the project area.

- The Native American Heritage Commission was contacted November 6, 1998 and again in the spring of 2000. A response was received on May 23, 2000 stating that no cultural resources were present according to the Sacred Land File.
- The Calaveras County Historical Society was notified by letter, dated May 18, 2000, and consulted on August 27, 2002.
- The San Joaquin County Historical Society and San Joaquin County Museum were consulted by letter (dated May 18, 2000).

Public Comment Period

The Initial Study with Proposed Mitigated Negative Declaration was circulated for public review and comment from June 29, 2005 to August 10, 2005. Public notices were published in the *Stockton Record*, *Valley Springs Daily News*, and *Calaveras Enterprise*. Comments received and responses to comments made on the circulation of the Initial Study are located in Appendix H, which has been added.

Chapter 4 **List of Preparers**

The following Caltrans Central Region staff contributed to the preparation of this document:

Brian R. Gassner, Associate Environmental Planner (Archaeology). B.A. Anthropology, Northern Arizona University. 10 years archaeological field studies experience; 8 years California archaeological experience. Contribution: project archaeologist.

Peter Hansen, Engineering Geologist. B.S., Geology, California State University, Fresno; 1 year experience in hazardous waste assessment, 5 years experience in paleontological resource assessment. Contribution: Prepared and coordinated the Paleontological Resource Assessment.

Cassandra Hensher, Associate Environmental Planner (Archaeology). M.A., Anthropology (Archaeology), University of California, Santa Barbara; 15 years experience in California archaeology. Contribution: Cultural resources reviewer and project archaeologist.

Bill Horge, Associate Environmental Planner. B.A., General Chemistry, California State University, Fullerton; 4.5 years experience performing air, noise, and water quality studies. Contribution: Performed air quality assessment, noise impact assessment, and water quality assessment.

David E. Hyatt, Senior Environmental Planner. B.A., Environmental Biology, California State University, Fresno; more than 16 years in environmental analysis. Contribution: Environmental Manager.

Timothy Keefe, Associate Environmental Planner, Archaeology. B.A., Anthropology, University of Massachusetts, Amherst; 18 years archaeological field studies experience; 15 years California archaeological experience. Contribution: Prepared Historic Property Survey Report, coordinated archaeological field studies.

Zachary K. Parker, Associate Environmental Planner (Biologist). B.S., Environmental Biology, Humboldt State University; 7 years experience as an environmental planner and wildlife biologist. Contribution: Biological surveys and

preparation and review of Natural Environment Study and Biological Assessment.

Michael Robinson, Associate Environmental Planner. M.A., Geography, California State University, Northridge; A.B.D., Geography, University of California, Berkeley; 22 years experience in environmental impact assessment and planning. Contribution: Prepared and oversaw hazardous waste studies.

Patricia L. Teczon, Associate Transportation Engineer (Specialist), Professional Engineer in Civil Engineering. B.S., Civil Engineering, University of the Pacific; 21 years experience in project development and design. Contribution: Responsible for development of plans, specifications and estimates.

James von Dohlen, R.L.A. 2480, Associate Landscape Architect. B.S., Environmental Design (Landscape Architecture), California State Polytechnic University, Pomona; 16 years experience in environmental impact assessment. Contribution: Prepared Visual Impact Report and Mitigation for Visual Impacts for the Initial Study.

Charles Walbridge, Associate Environmental Planner. B.S., Biological Science (Ecology), California State University, Fresno; 6.5 years experience in environmental impact assessment. Contribution: Prepared and coordinated the Initial Study.

Laurie Waters, Associate Environmental Planner, Architectural History. B.A., History, University of California, Davis; 7 years experience in preparing Cultural Resource Studies. Contribution: Prepared Archaeological Survey Report and Historic Resources Evaluation Report.

Appendix A CEQA Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

The California Environmental Quality Act requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate no impacts. A mark in the “no impact” column of the checklist reflects this determination. Any needed explanation of that determination is provided at the beginning of Chapter 2.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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AESTHETICS - Would the project:

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

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

- | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

- | | | | | |
|---------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 concentration?

e) Create objectionable odors affecting a substantial number of people?

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, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

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?

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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COMMUNITY RESOURCES - Would the project:

a) Cause disruption of orderly planned development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Be inconsistent with a Coastal Zone Management Plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Affect lifestyles or neighborhood character or stability?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Physically divide an established community?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Affect property values or the local tax base?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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i) Result in alterations to waterborne, rail, or air traffic?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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j) Support large commercial or residential development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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k) Affect wild or scenic rivers or natural landmarks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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CULTURAL RESOURCES - Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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?

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?

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 wastewater disposal systems where sewers are not available for the disposal of wastewater?

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

HYDROLOGY AND WATER QUALITY - Would the project:

- | | | | | |
|-------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|-------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Otherwise substantially degrade water quality?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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j) Inundation by seiche, tsunami, or mudflow?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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LAND USE AND PLANNING - Would the project:

a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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b) Conflict with any applicable habitat conservation plan or natural community conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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MINERAL RESOURCES - Would the project:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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NOISE - Would the project:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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POPULATION AND HOUSING - Would the project:

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Police protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Schools?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Parks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Other public facilities?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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TRANSPORTATION/TRAFFIC - Would the project:

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

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

UTILITY AND SERVICE SYSTEMS - Would the project:

- | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Comply with federal, state, and local statutes and regulations related to solid waste?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Appendix B Farmland Conversion Impact Rating (Form-AD 1006)

U.S. Department of Agriculture						
FARMLAND CONVERSION IMPACT RATING						
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request 4/14/05			
Name Of Project Savage Way Rehabilitation		Federal Agency Involved Federal Highway Administration				
Proposed Land Use Transportation		County And State San Joaquin and Calaveras, CA				
PART II (To be completed by NRCS)			Date Request Received By NRCS 4/14/05			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated 7444	Average Farm Size 536
Major Crop(s) Walnuts, Grapes, Olives		Farmable Land In Govt. Jurisdiction Acres: 245116	% 37	Amount Of Farmland As Defined In FPPA Acres: N/A %		
Name Of Land Evaluation System Used California System		Name Of Local Site Assessment System N/A		Date Land Evaluation Returned By NRCS 4/21/05		
PART III (To be completed by Federal Agency)			Alternative Site Rating			
			Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly			30.7			
B. Total Acres To Be Converted Indirectly			0.0			
C. Total Acres In Site			30.7	0.0	0.0	0.0
PART IV (To be completed by NRCS) Land Evaluation Information						
A. Total Acres Prime And Unique Farmland			6.0			
B. Total Acres Statewide And Local Important Farmland			7.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted			0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value			4.8			
PART V (To be completed by NRCS) Land Evaluation Criterion						
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)			52	0	0	0
PART VI (To be completed by Federal Agency)						
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))			Maximum Points			
1. Area In Nonurban Use			15	15		
2. Perimeter In Nonurban Use			10	10		
3. Percent Of Site Being Farmed			20	20		
4. Protection Provided By State And Local Government			20	20		
5. Distance From Urban Builtup Area			0	0		
6. Distance To Urban Support Services			0	0		
7. Size Of Present Farm Unit Compared To Average			10	0		
8. Creation Of Nonfarmable Farmland			25	2		
9. Availability Of Farm Support Services			5	5		
10. On-Farm Investments			20	20		
11. Effects Of Conversion On Farm Support Services			25	0		
12. Compatibility With Existing Agricultural Use			10	0		
TOTAL SITE ASSESSMENT POINTS			160	92	0	0
PART VII (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)			100	52	0	0
Total Site Assessment (From Part VI above or a local site assessment)			160	92	0	0
TOTAL POINTS (Total of above 2 lines)			260	144	0	0
Site Selected:		Date Of Selection		Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Reason For Selection:						

(See Instructions on reverse side)

This form was electronically produced by National Production Services Staff

Form AD-1006 (10-83)



Appendix C Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

January 14, 2005

TITLE VI POLICY STATEMENT

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


WILL KEMPTON
Director

"Caltrans improves mobility across California"



Appendix D Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

The California Department of Transportation (Caltrans) will provide relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of Caltrans' acquisition of real property for public use. Caltrans will assist residential displacees in obtaining comparable decent, safe and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees will be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include supplying information concerning federal and state assisted housing programs, and any other known services being offered by public and private agencies in the area.

Residential Relocation Payments Program

The Relocation Payment program will assist eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for, or incidental to, purchasing or renting a replacement dwelling, and actual reasonable expenses incurred in moving to a new location within 50 miles of displacee's property. Any actual moving costs in excess of 50 miles are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

Moving Costs

Any displaced person who was "lawfully" in occupancy of the acquired property regardless of the length of occupancy in the property acquired will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable

costs involved in moving themselves and personal property up to a maximum of 50 miles, a moving service authorization, or a fixed payment based on a fixed moving cost schedule which is determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expenses payments, fully eligible homeowners may be entitled to payments for increased costs of purchasing replacement housing.

Homeowners who have owned and occupied their property for 180 days prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment equal to the difference between Caltrans' offer to purchase their property and the price of a comparable replacement dwelling, and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. Also the interest differential must be based upon the "lesser of" either the loan on the displacement property or the loan on the replacement property. The maximum combination of these three supplemental payments that the owner-occupants can receive is \$22,500. If the calculated total entitlement (without the moving payments) is in excess of \$22,500, the displacee may qualify for the Last Resort Housing described below.

Rental Supplement

Tenants who have occupied the property to be acquired by Caltrans for 90 days or more and owner-occupants who have occupied the property 90 to 180 days prior to the date of the first written offer to purchase may qualify to receive a rental differential payment. This payment is made when Caltrans determines that the cost to rent a comparable and "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the eligible occupant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitation noted below under the "Down Payment" section (see below). The maximum amount of payment to any tenant of 90 days or more and any owner-occupant of 90 to 179 days, in addition to moving expenses, will be \$5,250. If the calculated total entitlement for rental supplement exceeds \$5,250, the displacee may qualify for the Last Resort Housing Program described below.

The rental supplement of \$7,500 or less will be paid in a lump sum, unless the displacee requests that it be paid in installments. The displaced person must rent and occupy a “decent, safe and sanitary” replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the Caltrans-acquired property, whichever is later.

Down Payment

Displacees eligible to receive a rental differential payment may elect to apply it to a down payment for the purchase of a comparable replacement dwelling. The down payment and incidental expenses cannot exceed the maximum payment of \$5,250, unless the Last Resort Housing Program is indicated. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24.404) contain the policy and procedure for implementing the Last Resort Housing Program on federal aid projects. To maintain uniformity in the program, Caltrans has also adopted these federal guidelines on non-federal-aid projects. Except for the amounts of payments and the methods in making them, last resort housing benefits are the same as those benefits for standard relocation as explained above. Last resort housing has been designed primarily to cover situations where available comparable replacement housing, or when their anticipated replacement housing payments, exceed the \$2,520 and \$22,500 limits of the standard relocation procedures. In certain exceptional situations, last resort housing may also be used for tenants of less than 90 days.

After the first written offer to acquire the property has been made, Caltrans will, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation.
- Number of people to be displaced and the distribution of adults and children according to age and sex.
- Location of school and employment.

- Special arrangements to accommodate any handicapped member of the family.
- Financial ability to relocate into comparable replacement dwelling, which will house all members of the family decently.

The above explanation is general in nature and is not intended to be a complete explanation of relocation regulations. Any questions concerning relocation should be addressed to Caltrans. Any persons to be displaced will be assigned a relocation advisor who will work closely with each displacee to see that all payments and benefits are fully used, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments.

Additional Information

No relocation payment received will be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable “decent, safe and sanitary” replacement residence, open to all persons regardless of race, color, religion, sex or national origin, is available or has been made available to them by the state.

Any person, business, farm or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or Caltrans’ Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal counsel at his/her expense. Information about the appeal procedure is available from Caltrans’ Relocation Advisors.

The information above is not intended to be a complete statement of all of Caltrans’ laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted immediately

after the first written offer to purchase, and also given a more detailed explanation of Caltrans' relocation programs.

Important Notice

To avoid loss of possible benefits, no individual, family, business, farm or non-profit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor at:

California Department of Transportation
District 10
1976 E. Charter Way
P.O. Box 2048
Stockton, CA 95205



Appendix E Minimization and Mitigation Summary

Relocation

All individuals displaced from the residence at Penrod Road would be eligible for relocation assistance through the Caltrans Relocation Assistance Program (see Appendix D) in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

Biology

Threatened and Endangered Species

Construction within 0.6 mile of potential California tiger salamander, vernal pool fairy shrimp, and vernal pool tadpole shrimp breeding habitat would be timed to occur during the dry season (June to October) when larvae and breeding adult salamanders are not present. Caltrans would acquire mitigation bank credits to compensate for direct and indirect loss of habitat potentially occupied by vernal pool species.

The Biological Opinion issued by the U.S. Fish and Wildlife Service on February 15, 2006 (Appendix I) determined that Caltrans would purchase 2.4 acres of wetted vernal pools at an approved Service compensation area to support vernal pool fairy shrimp.

The Biological Opinion also requires Caltrans to purchase 26.52 acres of upland habitat to compensate for direct effects to 8.84 acres of salamander habitat at an approved Service compensation area (3:1 ratio).

Species of Concern

Construction within 0.6 mile of potential western spadefoot toad breeding habitat would be timed to occur during the dry season (June to October) when larvae and breeding adult spadefoot toads are not present. Construction during the dry season would also minimize impacts to California linderiella. Compensation required for impacts to vernal pool wetlands and listed vernal pool species (above) would also benefit the western spadefoot toad and California linderiella.

Migratory Birds

Pre-construction surveys would be conducted for raptors and other migratory birds and their nests. Trees suitable for nesting within 300 feet of the construction area would be surveyed by a qualified biologist for active nests at least 30 days before

construction or any removal of vegetation. If active nests were found, a construction buffer would be established until the young have fledged the nests. Alternatively, construction activities that may affect nesting birds can be completed between September 1 and February 15 to avoid the nesting season altogether.

Oaks

Replacement oak plantings could occur onsite, through a mitigation bank, or a combination of the two. Mitigation ratios would be determined in coordination with the California Department of Fish and Game and Calaveras County.

Wetlands and Other Waters of the United States

The widening and realignment of the highway have been designed to minimize and avoid impacts to wetlands and other waters within the project area. Compensation for loss of wetlands and other waters of the United States would be included in the proposed mitigation for potential loss of listed vernal pool species habitat. Proposed mitigation measures for vernal pool fairy shrimp would include offsite creation and preservation of vernal pool wetland habitat.

In addition to the offsite compensation, Caltrans would implement standard Best Management Practices to further avoid and minimize impacts to vernal pool wetlands and other waters of the United States. The following Best Management Practices would be implemented:

- All wetlands in the construction right-of-way that are not within the proposed cut and fill limits would be fenced with a combination of high-visibility fencing and silt fencing. The vernal pools and swales perimeter would be clearly marked to prevent inadvertent encroachment and disturbance during construction. After significant rains, the silt fence would be monitored to evaluate its effectiveness and verify that the water quality of adjacent vernal pools and swales is maintained. All fencing would be maintained for the duration of construction.
- Upon project completion, all areas subject to temporary ground disturbances, including the equipment and materials storage areas and construction right-of-way, would be replanted. These areas would be seeded with a Caltrans-approved erosion control seed mix that would be applied immediately after construction activities are completed. Prior to seeding, disturbed areas would be lightly disked to relieve compaction. Replanted areas would be monitored for two years to ensure the vegetation was adequately established.
- No equipment refueling would be allowed within 100 feet of wetlands or streams.

- Vehicle access would be limited to the construction right-of-way.
- All construction and revegetation activities would be periodically monitored by a Caltrans biologist or the resident engineer to evaluate compliance with the Best Management Practices.

The following additional Best Management Practices were included in the Biological Opinion issued by the U.S. Fish and Wildlife Service (Appendix I):

- Parking of equipment, equipment maintenance, and other project-related activities would occur at a designated staging area. The staging area location would be pre-approved by a Caltrans biologist.
- A qualified Service-approved biologist shall be on-site or on-call during all activities that could result in the take of listed species. The qualification of the biologist(s) shall be presented to the Service for review and approval at least 60 calendar days prior to any groundbreaking at the project site. The biologist(s) shall be given authority to stop any work that may result in the take of listed species. If the biologist(s) exercises this authority, the Service and California Department of Fish and Game shall be notified by telephone and electronic mail within one working day.
- An employee education program shall be conducted for the contractors, their employees, and any other personnel involved in the project to explain endangered species concerns.
- To the extent possible, nighttime construction should be minimized.
- Construction crews would be informed during the education program that, to the extent possible, travel within the marked project site would be restricted to established roadbeds.

Cultural Resources

The following provisions apply to archaeological sites CA-CAL-1245, CA-CAL-1616, and CA-CAL-1983 in order to avoid potential effects:

- Portions of the sites outside the area of direct impact must be designated as environmentally sensitive areas, and fences must be placed along the edge of the area of direct impact near the site to ensure that construction of the project would not disturb archaeological deposits in the environmentally sensitive area.

- A professional archaeologist who meets the Caltrans Professionally Qualified Staff and/or Secretary of the Interior's Standards in the discipline of archaeology must conduct or supervise the monitoring of the implementation of the project where such implementation would disturb natural ground.

In addition to these provisions, site CA-CAL-1983 required a Memorandum of Agreement and Treatment Plan for the untested portions of the site underneath a house (Appendix J). When the house site can be tested, if nothing is found that meets the National Register of Historic Places eligibility criteria, then the above provisions would be applied to the site and Caltrans' compliance with Section 106 of the National Historic Preservation Act would be complete. If, however, deposits that meet the eligibility criteria were uncovered, they would have to be recovered.

Paleontology

Paleontological monitoring and salvage would be required where excavation occurs in the Mehrten, Valley Springs, and/or Modesto-Riverbank sedimentary formations. If fossils were uncovered during excavation work, then a salvage of these fossils would be required. A paleontological mitigation plan would be required and a nonstandard special provision included in the construction contract.

Visual

The following elements would be considered in the landscape plan:

- Using native trees and shrubs to replant excavation slopes, embankment slopes and other disturbed areas.
- Including native grass species in the erosion control mix.
- Constructing slopes flatter than 1:2 when possible to provide optimum conditions for the application of revegetation materials. Rounding slopes to blend the tops and bottoms of embankments with existing contours.
- Avoiding large trees when possible.
- Avoiding exposing roots of trees adjacent to the project area.
- Establishing environmentally sensitive areas to protect vegetation.
- Treating exposed rock to give the surfaces a weathered effect.

Appendix F SHPO Concurrence Letter

STATE OF CALIFORNIA - THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942836
SACRAMENTO, CA 94296-0000
916-663-6624 Fax 916-663-9824
oahp@dfp.parks.ca.gov



April 28, 2005

In Reply Refer To: FWHA050406A

Richard S. Levy
Central Sierra Environmental Branch
Department of Transportation District 10
P.O. Box 2048
Stockton, CA 95201

Re: File 10-SJ/CAL-26 Historic Property Survey Report for State Route 26 Rehabilitation Project, from Post Mile 20.3 to 20.5 (KP 32.7/33.0) in San Joaquin County and Post Miles 00/3.0 (KP 0.0/4.9) in Calaveras County, California.

Dear Mr. Levy:

Thank you for consulting with me about the subject undertaking in accordance with the Programmatic Agreement (PA) 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 Federal-Aid Highway Program in California.

As per Stipulation VIII of the PA, the California Department of Transportation (Caltrans) has determined the Area of Potential Effects (APE) and has completed identification and evaluation of historic properties within the APE. Caltrans is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, on eligibility of the historic properties identified within the APE for the National Register of Historic Places (NRHP). After review of the letter and documentation submitted in support of this undertaking, I have the following comments:

I concur that the following historic properties identified in the APE and evaluated in the Historic Property Survey Report (HPSR) are not eligible for the NRHP:

- CA-CAL-1984
- 9236 State Route 26 (Caciardi Property)
- 9441 State Route 26 (Stone Corral Church)

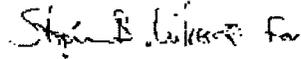
I concur that the following historic properties identified in the APE and evaluated in the HPSR are eligible for the NRHP:

- CA-CAL-1245
- CA-CAL-1616
- CA-CAL-1983

I concur that the archeologically tested portions of CA-CAL-1245, CA-CAL-1616, and CA-CAL-1983 within the Area of Direct Impact do not contribute to the significance of those sites as addressed in their eligibility to the NRHP.

Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule at phone 916-654-4614 or email wsoul@ohp.parks.ca.gov.

Sincerely,



Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

Appendix G Threatened and Endangered Species List

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale	Effect
PLANTS						
<i>Arctostaphylos myrtifolia</i>	Ione manzanita	T	Acidic, nutrient-poor, coarse soils, primarily in chaparral on the Ione formation; occurs primarily in Amador County, but also in Calaveras County.	A	No suitable habitat	No Effect
MAMMALS						
<i>Sylvilagus bachmani riparius</i>	Riparian brush rabbit	E	Valley riparian forests, brushy riparian vegetation	A	Extirpated from the area	No Effect
BIRDS						
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	Nests and roosts in large-diameter trees or snags near large water bodies where prey is abundant	A	No suitable habitat	No Effect
REPTILES						
<i>Thamnophis gigas</i>	Giant garter snake	T	Prefers freshwater marsh and low gradient streams; has adapted to drainage canals and irrigation ditches.	A	No suitable habitat	No Effect
AMPHIBIANS						
<i>Rana aurora draytonii</i>	California red-legged frog	T	Pools in marshes, streams, ponds, with emergent vegetation, and typically without predatory fish; requires adequate hibernacula such as small mammal burrows and moist leaf litter.	A	No suitable habitat	No Effect
<i>Ambystoma californiense</i>	California tiger salamander	T	Annual grasslands and grassy understory of valley-foothill hardwood habitats; needs underground refuges; needs vernal pools or other seasonal water sources for breeding.	P	Known to occur in the project vicinity	May affect, likely to adversely affect

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale	Effect
FISH						
<i>Oncorhynchus mykiss</i>	Central Valley steelhead	T	Pacific Ocean; spawns in coastal streams and rivers, over gravel beds.	A	No suitable habitat	No Effect
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run chinook salmon	T	Pacific Ocean; spawns in large, permanent coastal streams and rivers, over gravel beds.	A	No suitable habitat	No Effect
<i>Hypomesus transpacificus</i>	Delta smelt	T	Low-mid reaches of San Joaquin-Sacramento Delta	A	No suitable habitat	No Effect
<i>Oncorhynchus tshawytscha</i>	Winter-run chinook salmon	E	Pacific Ocean; spawns in large, permanent coastal streams and rivers, over gravel beds.	A	No suitable habitat	No Effect
INVERTEBRATES						
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	T	Elderberry shrubs	A	No suitable habitat	No Effect
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	T	Vernal pools. Inhabits small, clearwater sandstone depression pools and grassed swale, earth slump, or basalt-flow depression pools.	P	Known to occur in the project vicinity	May affect, likely to adversely affect
<i>Lepidurus packardi</i>	Vernal pool tadpole shrimp	E	Seasonal pools in unplowed grassland with old alluvial soils underlain by hardpan or in sandstone depressions; water in the pools has very low alkalinity and conductivity.	P	Potential to occur in the project vicinity	May affect, likely to adversely affect

Notes:

^aFederal Status Codes:

E=Endangered. Species in danger of extinction throughout all or a significant portion of its range.

T=Threatened. Species likely to become endangered within the foreseeable future.

Appendix H Public Comments and Responses to Public Comments

The Initial Study with Proposed Negative Declaration was circulated for public review and comment from June 29, 2005 to August 10, 2005. Copies of the document were sent to the State Clearinghouse for distribution to various agencies, and Caltrans mailed copies directly to other agencies and interested parties.

A public notice was published in the *Stockton Record*, the *Calaveras Enterprise*, and the *Valley Springs Daily News* to inform the public that the document was available for comment and that there was an opportunity to request a public hearing. All affected property owners, public agencies, and other interested parties were sent a letter notifying them of the availability of the document and the opportunity to request a public hearing.

This appendix presents all of the written comments received on the document during the public review period. A Caltrans response to each comment is provided immediately following the comment.

State Clearinghouse Letter, Page 1



Arnold
Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Sean Walsh
Director

August 2, 2005

David Hyatt
Department of Transportation, District 6
2015 E. Shields Avenue, Suite 100
Fresno, CA 93778-2616

Subject: Savage Way Rehabilitation 10-SJ-26-KP 24.6/25.6 (PM 15.3/15.9)
SCH#: 2005062173

Dear David Hyatt:

The State Clearinghouse submitted the above named Negative Declaration to selected state agencies for review. The review period closed on August 1, 2005, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

State Clearinghouse Letter, Page 2

Document Details Report
State Clearinghouse Data Base

SCH# 2005062173
Project Title Savage Way Rehabilitation 10-SJ-26-KP 24.6/25.6 (PM 15.3/15.9)
Lead Agency Caltrans #6

Type **Neg** Negative Declaration

Description The California Department of Transportation (Caltrans) and Federal Highway Administration propose to improve a 3.25-mile segment of State Route 26 in San Joaquin and Calaveras counties. The project would rehabilitate pavement, widen lanes to 12 feet and shoulders to 8 feet, and correct several non-standard horizontal and vertical curves.

Lead Agency Contact

Name David Hyatt
Agency Department of Transportation, District 6
Phone (559) 243-8312 **Fax**
email
Address 2015 E. Shields Avenue, Suite 100
City Fresno **State** CA **Zip** 93778-2616

Project Location

County Calaveras, San Joaquin
City Stockton
Region
Cross Streets Wimer/Ospital Road (project begins); Savage Way (project ends)
Parcel No.

Township	Range	Section	Base

Proximity to:

Highways 26
Airports
Railways
Waterways Indian Creek
Schools
Land Use Agriculture, low-density residential

Project Issues Aesthetic/Visual; Agricultural Land; Archaeologic-Historic; Noise; Other Issues; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Parks and Recreation; Native American Heritage Commission; Office of Historic Preservation; Department of Fish and Game, Region 1; Department of Water Resources; California Highway Patrol; Air Resources Board, Transportation Projects; State Lands Commission

Date Received 07/01/2005 **Start of Review** 07/01/2005 **End of Review** 08/01/2005

Note: Blanks in data fields result from insufficient information provided by lead agency.

State Clearinghouse Letter, Caltrans Response

Comment noted.

Calaveras County Department of Public Works Letter, Page 1

AUG-15-2005 13:29 FROM: STYD PROJECT MGT 2099487666 TO: 915592438220 P.002-003



CALAVERAS COUNTY
Department of Public Works

Rob Houghton, P.E., Director

2005 AUG 8 AM 11 04

891 Mountain Ranch Road
San Andreas, CA 95249-9709
publicworks@co.calaveras.ca.us
www.ccsolidwaste.org

Solid Waste ♦ 209-754-6403
FAX 209-754-6725

Administration / County Roads
209-754-6402 ♦ FAX 209-754-6664

Surveyor ♦ 209-754-8418
FAX 209-754-6725

August 4, 2005

Mr. Jorzua Akuva, Project Manager
Department of Transportation
1976 East Charter Way
P.O. Box 2048
Stockton, CA 95205

Subject: Savage Way Rehabilitation 10-SJ/CAL-26, Response to Initial Study

Dear Mr. Akuva:

Thank you for taking the time to speak with me on this date regarding this project. This letter is intended to respond to the Initial Study with Proposed Mitigated Negative Declaration as prepared by Caltrans dated June 2005.

Calaveras County has comments regarding four intersections along this project as follows:

1. Ospital Road intersection with SR 26 in San Joaquin County. Calaveras County requests Caltrans include the realignment of this intersection to conform to current standards.
2. Warren Road intersection with SR 26. The County strongly urges Caltrans to include a left-turn pocket from the highway onto Warren Road. This intersection lacks storage for turning vehicles relative to the two-way traffic volumes along this segment of the highway. The County views this intersection to be very similar in need as both the proposed Milton Road and Burson Road intersection improvements.
3. Milton Road intersection with SR 26. The County supports the realignment of this intersection and inclusion of a left-turn pocket at this location.
4. Burson Road intersection with SR 26. The County supports the realignment of this intersection and the inclusion of a left-turn pocket at this location.

In addition to the project elements described above, I also request that the County be invited to all PDT meetings and be provided copies of the construction plans at the 30%, 60% and 100% completion. Calaveras County recognizes the importance of the State Highway System both

Calaveras County Department of Public Works Letter, Page 2

AUG-15-2005 13:29 FROM:STH PROJECT MGT

2099487666

TO: 915592438220

P.003 003

Savage Way Rehabilitation 10-SJ/CAL-26, Initial Study

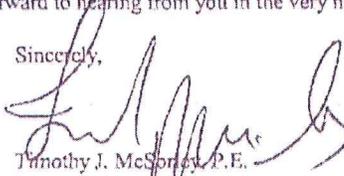
Page 2 of 2

within the County and beyond as an integral component of the Regional Transportation System and cooperation on both of our parts is mutually beneficial to the traveling public.

One additional issue that should be addressed in the environmental document is the impact on oak trees. The document addresses impacts oaks six inches at breast height. However, new State law requires impacts to oaks five inches and above be mitigated.

Thank you very much for your consideration in these matters. If I can be of further assistance, do not hesitate to contact this office. I look forward to hearing from you in the very near future.

Sincerely,



Timothy J. McSorley, P.E.
Deputy Director
R.C.E. #44857

TJM/tw

Cc: Supervisor Erickson
Supervisor Claudino
Dennis Agar, Deputy Director Caltrans PPM
Calaveras County Planning

R:\In\agency\Caltrans\Savage Way Rehab_10-SJ-CAL-26_Initial Study Responses LTR.doc

**Calaveras County Department of Public Works Letter, Caltrans Response,
Page 1**

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

Arnold Schwarzenegger
ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
P.O. BOX 2048 STOCKTON, CA 95201
(1976 E. CHARTER WAY/1976 E. DR. MARTIN
LUTHER KING JR. BLVD. 95205)
TTY: California Relay Service (800) 735-2929
PHONE: (209) 941-1958
FAX: (209) 948-7666



*Flex your power!
Be energy efficient!*

August 17, 2005

Timothy J. McSorley, Deputy Director
Calaveras County Department of Public Works
891 Mountain Ranch Road
San Andreas, CA 95249-9709

Re: Salvage Way Rehabilitation 10-SJ/CAL-26, Response to Initial Study

Dear Mr. McSorley:

Thank you for your letter dated August 4, 2005, regarding the Salvage Way Rehabilitation project. In your response to the Initial Study with Proposed Mitigated Negative Declaration, you expressed your concerns about the design of intersections along this project in Calaveras County.

The following are your concerns and my responses to them:

1. Ospital Road intersection with State Route 26 (SR 26) in San Joaquin County. Calaveras County requests California Department of Transportation (Caltrans) to include the realignment of this intersection to conform to current standards.

The realignment of the Ospital Road intersection is outside the scope of this State Highway Operation and Protection Program (SHOPP) project. In order to reduce the existing skew angle of 39 degrees to 75 degrees, Wimer Road and Opsital Road would require extensive realignment and relocation of the intersection. The traffic volumes on these minor legs are very low. Only one accident took place at this intersection in the three-year period beginning December 1, 2001. Cost is also an issue. The estimated cost to make the intersection standard is about \$630,000. The funding for this SHOPP project is already programmed.

2. Warren Road intersection with SR 26. The County strongly urges Caltrans to include a left-turn pocket from the highway onto Warren Road. This intersection lacks storage for turning vehicles relative to the two-way traffic volumes along this segment of the highway. The County views this intersection to be very similar in need as both the proposed Milton Road and Burson Road intersection improvements.

Caltrans records do not indicate an accident problem. There has been only one solo accident in the last three years at this location. This accident was due to tire failure.

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**Calaveras County Department of Public Works Letter, Caltrans Response,
Page 2**

Timothy J. McSorley
August 17, 2005
Page 2

Left turn pockets were provided at Milton Road intersection with SR 26 and Burson Road intersection with SR 26 because accident rates were relatively high. Due to lack of significant accident history at the Warren Road intersection with SR 26, a left-turn pocket is not warranted and will not be provided in this project.

3. Invitation to PDT meetings.

The main purpose of this project is to bring the existing pavement to a state of good repair. Projects like this one that are contained in the SHOPP program are internal to Caltrans. As such, local agency officials are generally not part of the formal project development team (PDT). If there are other specific issues you want to discuss, I would suggest a separate meeting with you.

4. Impacts to oaks six inches at breast height. However, new State law requires impacts to oaks five inches and above be mitigated.

Senate Bill (SB) 1334 requires that oak woodland conversions be subject to CEQA and to be mitigated. It also requires all 58 counties in California to adopt oak woodland management plans and ordinances that include minimum mitigation standards. Calaveras County has not yet adopted such an ordinance; however, Caltrans is currently working with the County of Calaveras to develop appropriate mitigation recommendations for impacts to oak woodlands.

Impacts to oaks associated with the proposed Savage Way Rehab Project will be mitigated according to the requirements of Senate Bill 1334 and recommendations of Calaveras County. The original Oak Tree surveys for the Savage Way Project were completed prior to SB 1334.

I hope all your concerns have been addressed. If you have other concerns or questions, please call me at (209) 941-1958.

Sincerely,



IORZUA AKUVA, PE, PMP
Project Manager

cc: Supervisor Erikson
Supervisor Claudino
Dennis Agar, Deputy Director, PPM
Calaveras County Planning

"Caltrans improves mobility across California"

INTERNAL MEMORANDUM SAVAGE WAY REHABILITATION RESPONSE
8/23/05

San Joaquin County Council of Governments Letter



SAN JOAQUIN COUNCIL OF GOVERNMENTS

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CITIES OF
ESCALON,
COLLEGE,
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MANTECA,
REDDING,
STOCKTON,
TRACY,
AND
THE COUNTY OF
SAN JOAQUIN

August 2, 2005

Attention: Mr. Charles Waldbridge
Caltrans District 6
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726

RE: SJCOG Comments on SR-26 Savage Way Rehabilitation Initial Study

Dear Mr. Waldbridge,

Thank you for the opportunity to comment on the State Route 26 Savage Way Rehabilitation Project Initial Study. The San Joaquin Council of Governments (SJCOG) reviewed the study for Caltrans District 6 and provides the following comments:

SJCOG supports the improvements as stated in the study. SJCOG would also encourage Caltrans to consider future improvements throughout the SR-26 corridor in San Joaquin County.

SJCOG appreciates the opportunity to comment on the SR-26 Savage Way Rehabilitation Initial Study and looks forward to working with Caltrans on improving state highway mobility.

If you have any questions on these comments, please contact me at (209) 468-3913.

Sincerely,

Douglas Ito
Senior Regional Planner

San Joaquin County Council of Governments Letter, Caltrans Response

Comment noted.

Appendix I Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In reply refer to:
1-1-03-F-0053

FEB 15 2006

Mr. Gene K. Fong
Federal Highway Administration
U.S. Department of Transportation
650 Capitol Mall Room 4-100
Sacramento, California 95814

Subject: Biological Opinion on State Route 26 (Savage Way) in San Joaquin and Calaveras Counties, California

Dear Mr. Fong:

This is the U.S. Fish and Wildlife Service's (Service) biological opinion on State Route (SR) 26 in San Joaquin and Calaveras Counties, California. Your December 26, 2002, request for formal consultation was received in this Field Office on December 30, 2002. At issue are the effects of this proposed project on the endangered vernal pool tadpole shrimp (*Lepidurus packardii*), threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and the threatened California tiger salamander (*Ambystoma californiense*)(salamander). No designated Critical Habitat for vernal pool species is within the project area. However, designated Critical Habitat for the salamander is present within the project area. This biological opinion was prepared in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act).

This biological opinion is based on: (1) *Biological Assessment – State Route 26 from Wimer/Ospital Road (San Joaquin County) To Savage Way (Calaveras County)* dated September 2002 (biological assessment), that was prepared by the California Department of Transportation; (2) and other information available to the Service.

Consultation History

December 2002: The Service received the biological assessment and letter requesting formal Section 7 consultation with the Service.

January 30, 2003: Brian Peterson of the Service sent a letter to the California Department of Transportation stating that all information required to initiate consultation was included with the letter or accessible for reference.



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January, 2005: The Service received a letter from the Federal Highways Administration stating that the State Route 26 project may adversely modify proposed critical habitat and is likely to adversely affect the California tiger salamander (*Ambystoma californiense*). Additionally, it stated their request for section 7 consultation include the salamander and associated critical habitat with the current section 7 consultation and requested a conference opinion for effects to the salamander's proposed critical habitat.

February 3, 2005: Brian Peterson contacted Caltrans biologist Zachary Parker by telephone and asked for an electronic copy of the biological assessment. Also, a site visit was discussed.

February 3, 2005: The biological assessment was received by Brian Peterson by electronic mail.

February 8, 2005: Brian Peterson contacted Zachary Parker by telephone and arranged to meet at the project site on February 10, 2005.

February 10, 2005: Brian Peterson met Zachary Parker at the proposed project site and inspected the area. Digital photographs were taken by Caltrans.

July 25, 2005: The Service issued a letter to Caltrans requesting additional information on project effects and compensation for the salamander.

September 27, 2005: The Federal Highways Administration issues a letter to the Service regarding salamander concerns.

Description of the Proposed Action

The California Department of Transportation and the Federal Highway Administration are proposing to rehabilitate pavement and meet current roadway standards by widening and realigning existing Route 26 from Wimer/Ospital Road in San Joaquin County to Savage Way in Calaveras County. The purpose of the project is to improve safety for motorists by increasing visibility and eliminating sight restrictions. The total length of the project is 3.26 miles, with 0.2 miles of the project located in San Joaquin County and 3.06 miles in Calaveras County. The proposed route would operate as a two-lane conventional highway with twelve-foot lanes and eight-foot shoulders.

Construction of the proposed SR 26 project will directly affect a total of 1.28 acres of vernal pools. These pools are habitat for both the salamander and vernal pool fairy shrimp. Caltrans estimates 8.84 acres of salamander upland habitat will be affected by the project.

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Proposed Avoidance and Minimization Measures Listed Species

According to the biological assessment, the California Department of Transportation will implement the following actions:

1. Best management practices during construction will be implemented. Parking of equipment, project access, supply logistics, equipment maintenance, and other project-related activities will occur at a designated staging area. The staging area location will be pre-approved by a Caltrans biologist.
2. A qualified biologist shall be on-site or on-call during all activities that could result in the take of listed species. The qualification of the biologist(s) shall be presented to the Service for review and approval at least 60 calendar days prior to any groundbreaking at the project site. The biologist(s) shall be given the authority to stop any work that may result in the take of listed species. If the biologist(s) exercises this authority, the Service and the California Department of Fish and Game shall be notified by telephone and electronic mail within one (1) working day. The Service contact is the Deputy Assistant Field Supervisor, Endangered Species Program at the Sacramento Fish and Wildlife Office at telephone 916/414-6600.
3. An employee education program shall be conducted, consisting of a brief presentation by persons knowledgeable in vernal pools, California tiger salamander biology and legislative protection to explain endangered species concerns to contractors, their employees, and any other personnel involved in the project. The program should include the following: a description of the species and their habitat needs; a report of the occurrence of these species in the project area; an explanation of the status of these species and their protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the above-mentioned people and anyone else who may enter the project site. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
4. The limits of the construction area will be flagged, if not already marked by right of way, or other, fencing, and all activity will be confined within the marked area. All access to and from the project area will be clearly marked in the field with appropriate flagging and signs. Prior to commencing construction activities, the contractor will determine construction vehicle parking and all access.
5. To the extent possible, nighttime construction should be minimized. Construction crews will be informed during the education program meeting that, to the extent possible, travel within the marked project site will be restricted to established roadbeds. Established

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roadbeds include all pre-existing and project-constructed unimproved, as well as, improved roads.

Avoidance and Protection Measures – Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp

1. Unavoidable loss of habitats potentially supporting vernal pool fairy shrimp and vernal pool tadpole shrimp would be mitigated according to the ratios defined in the programmatic Section 7 consultation between USFWS and the Sacramento District of the ACOE. This consultation defines the following compensation ratios: Preservation of vernal pool habitat at a 2:1 ratio; and creation of vernal pool habitat at a 1:1 ratio.

Avoidance and Minimization Measures - California Tiger Salamander

1. Construction within 1 kilometer (0.6 mile) of potential California tiger salamander breeding habitat will be timed to occur during the dry season (June to October) when larvae and breeding adult salamanders are not present.
2. Caltrans will purchase 26.52 acres of upland habitat to compensate for direct effects to 8.84 acres of salamander habitat at an approved Service compensation area (3:1 ratio).
3. Caltrans will purchase 2.40 acres of wetted vernal pools for effects to the salamander habitat at an approved Service compensation area. This vernal pool compensation is to support both vernal pool fairy shrimp and salamanders.

Status of the Species

Vernal Pool Tadpole Shrimp and Vernal Pool Fairy Shrimp

The vernal pool tadpole shrimp and fairy shrimp were listed as endangered and threatened, respectively, on September 19, 1994 (59 FR 48136). Critical habitat for these species was designated on August 6, 2003 (68 FR 46683), and include two primary constituent elements: 1) vernal pools, swales, and other ephemeral wetland features of appropriate sizes and depths that typically become inundated during winter rains and hold water for sufficient lengths of time necessary for the 15 vernal pool species to complete their life cycle; 2) the geographic, topographic, and edaphic features that support aggregations or systems of hydrologically interconnected pools, swales, and other ephemeral wetlands and depressions within a matrix of surrounding uplands that together form hydrologically and ecologically functional units called vernal pool complexes. A total of 839,460 acres (344,004 hectares), divided into 35 units, has been designated for the vernal pool fairy shrimp; 459,505 acres (176,736 hectares), divided into 18 units, has been designated for the vernal pool tadpole shrimp.

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Vernal pool tadpole shrimp. The vernal pool tadpole shrimp has dorsal compound eyes, a large shield-like carapace that covers most of its body, and a pair of long cercopods at the end of its last abdominal segment (Linder 1952; Longhurst 1955; Pennak 1989). It is primarily a benthic animal that swims with its legs down. Its diet consists of organic detritus and living organisms, such as fairy shrimp and other invertebrates (Pennak 1989). The females deposit their eggs on vegetation and other objects on the pool bottom. Tadpole shrimp eggs are known as cysts during the summer, when they lie dormant in the dry pool sediments (Lanaway 1974; Ahl 1991).

The life history of the vernal pool tadpole shrimp is linked to the environmental characteristics of its vernal pool habitat. After winter rains fill the pools, the populations are re-established from dormant cysts. A portion of the cysts hatch immediately and the rest remain dormant in the soil to hatch during later rainy seasons (Ahl 1991). The vernal pool tadpole shrimp is a relatively long-lived species (Ahl 1991). Adults are often present and reproductive until the pools dry up in the spring (Ahl 1991; Simovich *et al.* 1992).

The vernal pool tadpole shrimp is known from 19 populations in the Central Valley, ranging from east of Redding in Shasta County south to northern Tulare County, and from a single vernal pool complex located in the San Francisco Bay National Wildlife Refuge in Alameda County. It inhabits vernal pools containing clear to highly turbid water, ranging in size from 5 square meters (54 square feet) in the Mather Air Force Base area of Sacramento County, to the 36-hectare (89-acre) Olcott Lake at Jepson Prairie in Solano County.

Vernal pool fairy shrimp. Vernal pool fairy shrimp have delicate elongate bodies, large stalked compound eyes, no carapace, and 11 pairs of swimming legs. The swim or glide gracefully upside-down by means of complex, wavelike beating movements. Fairy shrimp feed on algae, bacteria, protozoa, rotifers, and detritus. The females carry eggs in an oval or elongate ventral brood sac. The eggs are either dropped to the pool bottom or remain in the brood sac until the female dies and sinks. The dormant cysts are capable of withstanding heat, cold, and prolonged desiccation. When the pools refill in the same or subsequent seasons, some, but not all, of the cysts may hatch. The cyst bank in the soil may therefore be comprised of cysts from several years of breeding (Donald 1983). The early stages of the fairy shrimp develop rapidly into adults. The vernal pool fairy shrimp can mature quickly, allowing populations to persist in short-lived shallow pools (Simovich *et al.* 1992).

The vernal pool fairy shrimp is known from 32 populations extending from the Stillwater Plain in Shasta County through most of the length of the Central Valley to Pinnacles in San Benito County (Eng *et al.* 1990; Fugate 1992; Sugnet and Associates 1993). Five additional, disjunct populations exist: one near Soda Lake in San Luis Obispo County; one in the mountain grasslands of northern Santa Barbara County; one on the Santa Rosa Plateau in Riverside County; one near Rancho California in Riverside County; and one on the Agate Desert near Medford, Oregon. Three of these isolated populations each contain only a single pool known to be occupied by the vernal pool fairy shrimp. The vernal pool fairy shrimp inhabits vernal pools with clear to tea-colored water, most commonly in grass- or mud-bottomed swales, basalt flow depression pools in unplowed grasslands, or even sandstone rock outcrops or alkaline vernal pools.

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Threats to Vernal Pool Species. A Service analysis of a report by Holland (1978) estimated that between 60 and 85 percent of the area within the Central Valley of California that once supported vernal pools had been destroyed by 1973. In the ensuing 30 years, threats to this habitat type have continued and resulted in a substantial amount of vernal pool habitat being converted for human uses in spite of Federal regulations implemented to protect wetlands. For example, the Corps Sacramento District Office has authorized the filling of 189 hectares (467 acres) of wetlands between 1987 and 1992 pursuant to Nationwide Permit 26 (Service 1992). The Service estimates that a majority of these wetlands losses within the Central Valley involved vernal pools, the endemic habitat for the vernal pool fairy shrimp and the vernal pool tadpole shrimp.

The Corps has several thousand vernal pools under its jurisdiction (Coe 1988), which includes most of the known vernal pool fairy shrimp occurrences. It is estimated that within 20 years human activities will destroy 60 to 70 percent of the remaining vernal pools (Coe 1988). In addition to direct habitat loss, vernal pools also have been and continue to be highly fragmented throughout their ranges due to conversion of natural habitat for urban and agricultural uses. This fragmentation results in small isolated vernal pool fairy shrimp and tadpole shrimp populations. Ecological theory predicts that such populations will be highly susceptible to extirpation due to chance events, inbreeding depression, or additional environmental disturbance (Gilpin and Soulé 1986; Goodman 1987). If an extirpation event occurs in a population that has been fragmented, the opportunities for recolonization would be greatly reduced due to physical (geographic) isolation from potential source populations.

The primary historic dispersal method for the vernal pool fairy and tadpole shrimps likely was large-scale flooding resulting from winter and spring rains that allowed the animals to colonize different individual vernal pools and other vernal pool complexes (J. King, pers. comm., 1995). Waterfowl and shorebirds may now be the primary dispersal agents for the vernal pool shrimps. The eggs of this crustacean are either ingested (Swanson *et al.* 1974; Driver 1981; Ahl 1991) and/or adhere to the legs and feathers, where they are transported to new habitats. Dispersal during flooding is currently non-functional due to the construction of dams, levees, and other flood control measures, and widespread urbanization within significant portions of the range of this species.

The vernal pool fairy shrimp and tadpole shrimp are threatened by a variety of other human-caused activities. Their habitats have been lost through direct destruction and modification due to filling, grading, disking, leveling, and other activities. In addition, vernal pools have been affected by a variety of anthropogenic modifications to upland habitats and watersheds. These activities, primarily urban development, water supply/flood control projects, land conversion for agriculture, off-road vehicle use, certain mosquito abatement measures, and pesticide/herbicide use can lead to disturbance of natural flood regimes, changes in water table depth, alterations of the timing and duration of vernal pool inundation, introduction of non-native plants and animals, and water pollution. These indirect actions can result in adverse effects to vernal pool species.

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California Tiger Salamander

On September 21, 2000, the Service listed the Santa Barbara Distinct Population Segment (DPS) as endangered (65 FR 57242). The Service listed the Sonoma County DPS as endangered on March 19, 2003 (68 FR 13498). On August 4, 2004, the Service listed the California tiger salamander as threatened throughout its range (69 FR 47211), thereby changing the status of the Santa Barbara and Sonoma County DPSs from endangered to threatened.

Critical habitat was proposed on August 10, 2004 (69 FR 48569), totaling 382,666 acres (154,860 hectares), divided into 47 units, and spanning 20 counties. Within the southern San Joaquin Valley, 32,625 acres (13,203 hectares) of critical habitat has been proposed. Primary constituent elements include: 1) standing bodies of fresh water that typically become inundated during winter rains, and hold water for a sufficient length of time necessary for the species to complete the aquatic portion of its life cycle; 2) barrier-free upland habitats adjacent to breeding ponds that contain small mammal burrows; 3) upland areas between occupied locations and areas with small mammal burrows that allow for dispersal among such sites; 4) the geographic, topographic, and edaphic features that support aggregations or systems of hydrologically interconnected pools, swales, and other ephemeral wetlands and depressions within a matrix of surrounding uplands.

The California tiger salamander is a large, stocky, terrestrial salamander with a broad, rounded snout. Adults may reach a total length of 8.2 inches. California tiger salamanders exhibit sexual dimorphism; males tend to be larger than females. The coloration of the California tiger salamander is white or yellowish markings against black. As adults, California tiger salamanders tend to have creamy yellow to white spotting on the sides with much less on the dorsal surface of the animal, whereas other tiger salamander species have brighter yellow spotting that is heaviest on the top of the animals.

Historically, the California tiger salamander inhabited low elevation grassland and oak savanna plant communities of the Central Valley, and adjacent foothills, and the inner coast ranges in California (Storer 1925; Shaffer *et al.* 1993) from sea level up to about 1500 feet. Along the coast ranges, the species occurred from the Santa Rosa area of Sonoma County south to the vicinity of Buellton in Santa Barbara County. In the Central Valley and surrounding foothills, the species occurred from northern Yolo County southward to northwestern Kern County and northern Tulare County.

California tiger salamanders require both wetland and adjacent upland habitat to complete their life cycle (Shaffer *et al.* 1993). Subadult and adult California tiger salamanders spend the dry summer and fall months of the year in the burrows of small mammals, such as California ground squirrels and Botta's pocket gopher (*Thomomys bottae*) (Storer 1925; Loreda and Van Vuren 1996; Petranks 1998; Trenham 1998a). During this period, California tiger salamanders eat very little (Shaffer *et al.* 1993). Once fall or winter rains begin, the salamanders emerge from the upland sites on rainy nights to feed and to migrate to the breeding ponds (Stebbins 1985, 1989;

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Shaffer *et al.* 1993). Adult salamanders mate in the breeding ponds, after which the females lay their eggs in the water (Twitty 1941; Shaffer *et al.* 1993; Petranka 1998). Historically, the California tiger salamander utilized vernal pools, but the animals also currently breed in livestock stockponds. Females attach their eggs singly, or in rare circumstances, in groups of two to four, to twigs, grass stems, vegetation, or debris (Storer 1925, Twitty 1941). In ponds with no or limited vegetation, they may be attached to objects, such as rocks and boards on the bottom (Jennings and Hayes 1994). After breeding, adults leave the pool and return to the small mammal burrows (Loredo *et al.* 1996; Trenham 1998a), although they may continue to come out nightly for approximately the next two weeks to feed (Shaffer *et al.* 1993). In drought years, the seasonal pools may not form and the adults cannot breed (Barry and Shaffer 1994).

Salamander eggs hatch in 10 to 14 days with newly hatched salamanders (larvae) ranging from 0.45 to 0.56 inch in total length (Petranka 1998). The larvae are aquatic. They are yellowish gray in color and have broad flat heads, possess large, feathery external gills, and broad dorsal fins that extend well onto their back. The larvae feed on zooplankton, small crustaceans, and aquatic insects for about six weeks after hatching, after which they switch to larger prey (J. Anderson 1968). Larger larvae have been known to consume smaller tadpoles of Pacific treefrogs (*Pseudacris regilla*) and California red-legged frogs (*Rana aurora*) (J. Anderson 1968; P. Anderson 1968). The larvae are among the top aquatic predators in the seasonal pool ecosystems. They often rest on the bottom in shallow water, but also may be found at different layers in the water column in deeper water. The young salamanders are wary and, when approached by potential predators, will dart into vegetation on the bottom of the pool (Storer 1925).

The larval stage of the California tiger salamander usually lasts three to six months, as most seasonal ponds and pools dry up during the summer (Petranka 1998). Amphibian larvae must grow to a critical minimum body size before they can metamorphose (change into a different physical form) to the terrestrial stage (Wilbur and Collins 1973). Individuals collected near Stockton in the Central Valley during April varied from 1.88 to 2.32 inches in length (Storer 1925). Feaver (1971) found that larvae metamorphosed and left the breeding pools 60 to 94 days after the eggs had been laid, with larvae developing faster in smaller, more rapidly drying pools. The longer the ponding duration, the larger the larvae and metamorphosed juveniles are able to grow, and the more likely they are to survive and reproduce (Pechmann *et al.* 1989; Semlitsch *et al.* 1988; Morey 1998; Trenham 1998b). The larvae will perish if a site dries before metamorphosis is complete (P. Anderson 1968; Feaver 1971). Pechmann *et al.* (1989) found a strong positive correlation with ponding duration and total number of metamorphosing juveniles in five salamander species. In Madera County, Feaver (1971) found that only 11 of 30 pools sampled supported larval California tiger salamanders, and five of these dried before metamorphosis could occur. Therefore, out of the original 30 pools, only six (20 percent) provided suitable conditions for successful reproduction that year. Size at metamorphosis is positively correlated with stored body fat and survival of juvenile amphibians, and negatively correlated with age at first reproduction (Semlitsch *et al.* 1988; Scott 1994; Morey 1998)

In the late spring or early summer, before the ponds dry completely, metamorphosed juveniles leave them and enter upland habitat. This emigration occurs in both wet and dry conditions

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(Loredo and Van Vuren 1996; Loredo *et al.* 1996). Unlike their winter migration, the wet conditions that California tiger salamanders prefer do not generally occur during the months when their breeding ponds begin to dry. As a result, juveniles may be forced to leave their ponds on rainless nights. Under these conditions, they may move only short distances to find temporary upland sites for the dry summer months, waiting until the next winter's rains to move further into suitable upland refugia. Once juvenile California tiger salamanders leave their birth ponds for upland refugia, they typically do not return to ponds to breed for an average of 4 to 5 years. However, they remain active in the uplands, coming to the surface during rainfall events to disperse or forage.

The upland component of California tiger salamander habitat typically consists of grassland savannah. Within these upland habitats, adult California tiger salamanders spend the greater part of their lives in the underground burrows of California ground squirrels and valley pocket gophers (Barry and Shaffer 1994). Camel crickets and other invertebrates within these burrows provide food for California tiger salamanders, as well as protection from the sun and wind associated with the dry California climate that can cause desiccation (drying out) of amphibian skin. Although California tiger salamanders are members of a family of "burrowing" salamanders, California tiger salamanders are not known to create their own burrows in the wild, likely due to the hardness of soils in the California ecosystems in which they are found. Because they live underground in the burrows of mammals, they are rarely encountered even where abundant. The burrows may be active or inactive, but because they collapse within 18 months if not maintained, an active population of burrowing mammals is necessary to sustain sufficient underground refugia for the species (Loredo *et al.* 1996). California tiger salamanders also may utilize leaf litter or desiccation cracks in the soil.

Dispersal and migration movements made by California tiger salamanders can be grouped into two main categories: (1) breeding migration; and (2) interpond dispersal. Breeding migration is the movement of salamanders to and from a pond from the surrounding upland habitat. After metamorphosis, juveniles move away from breeding ponds into the surrounding uplands, where they live continuously for several years. At a study site in Monterey County, it was found that upon reaching sexual maturity, most individuals returned to their natal/ birth pond to breed, while 20 percent dispersed to other ponds (Trenham *et al.* 2000). Following breeding, adult California tiger salamanders return to upland habitats, where they may live for one or more years before breeding again (Trenham *et al.* 2000). California tiger salamanders are known to travel large distances from breeding ponds into upland habitats. Maximum distances moved are generally difficult to establish for any species, but California tiger salamanders in Santa Barbara County have been recorded to disperse 1.3 miles from breeding ponds (Sweet 1998). California tiger salamanders are known to travel between breeding ponds; one study found that 20 to 25 percent of the individuals captured at one pond were recaptured later at ponds approximately 1,900 and 2,200 feet away (Trenham *et al.* 2000). In addition to traveling long distances during migration to or dispersal from ponds, California tiger salamanders may reside in burrows that are far from ponds. At one site in Contra Costa County, hundreds of California tiger salamanders have been captured three years in a row in upland habitat approximately 0.75 mile from the nearest breeding pond (Orloff 2003).

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Lifetime reproductive success for California and other tiger salamanders is low. Trenham *et al.* (2000) found the average female bred 1.4 times and produced 8.5 young that survived to metamorphosis per reproductive effort. This resulted in roughly 11 metamorphic offspring over the lifetime of a female. While individuals may survive for more than ten years, many breed only once, and in some populations, less than 5 percent of marked juveniles survive to become breeding adults (Trenham 1998b). With such low recruitment, isolated populations are susceptible to unusual, randomly occurring natural events as well as human-caused factors that reduce breeding success and individual survival. Factors that repeatedly lower breeding success in isolated pools can quickly extirpate a population.

California tiger salamanders are imperiled by a variety of human activities. Current factors associated with declining populations of the salamander include continued degradation and loss of habitat due to agriculture and urbanization, non-native plants, hybridization with non-native tiger salamanders, and introduced predators. Fragmentation of existing habitat and the continued colonization of existing habitat by non-native tiger salamanders may represent the most significant current threats to California tiger salamanders, although populations are likely threatened by more than one factor. Isolation and fragmentation of habitats within many watersheds have precluded dispersal between sub-populations and jeopardized the viability of metapopulations (broadly defined as multiple subpopulations that occasionally exchange individuals through dispersal, and are capable of colonizing or "rescuing" extinct habitat patches).

Although no systematic, range-wide studies have been conducted, it is known that significant numbers of California tiger salamanders are killed by vehicular traffic while crossing roads (Hansen and Tremper 1993). For example, during a 1-hour period on a road bordering Lake Lagunita on the Stanford University campus, 45 California tiger salamanders were collected, 28 of which had been killed by cars (Twitty 1941). Overall breeding population losses of California tiger salamanders due to road kills have been estimated to be between 25 and 72 percent (Twitty 1941; Launer and Fee 1996). Mortality may be increased by associated roadway curbs and berms as low as nine to 12 cm (3.5 to 5 in), which allow California tiger salamanders access to roadways but prevent their exit from them (Launer and Fee 1996; Sweet 1998).

In a recent study along a 1.05 km (0.7 mi) high-vehicular-use (21,450 vehicles per day) section of the Trans-Canadian Highway in Alberta, Canada, Clevenger *et al.* (2001) recorded 183 road-killed tiger salamanders (*Ambystoma tigrinum*) in 30 days, and concluded it was likely that very little of the local population had survived. In California, vehicular-use levels along various State, interstate, and secondary roads commonly far exceed the level of use reported in the Alberta study. Vehicular usage on California roads is also increasing rapidly and directly with human population and urban expansion. During November 2002, California's estimated total vehicular travel on State highway system roads alone was 23 billion km (14.27 billion mi) (this figure and subsequent vehicular-use data from California Department of Transportation's Internet website, January 2, 2003). From 1972 to 2001, State highway system total vehicular usage rose steadily from 108.6 km to 270 km (67.11 to 167.81 billion mi) annually. For the 23 California counties in which the California tiger salamander may occur, State highway system total annual vehicular usage in 1999, 2000, and 2001 was 53.27, 55.85, and 57.21 billion miles (86, 90, and 92.1 billion

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km), respectively. The steady increase of vehicular use is thus continuing. We believe such figures illustrate (1) the general growth in vehicular usage that has been, and is still, occurring in many parts of the California tiger salamander's range, and (2) that additional increments of road-kill losses, which are already a potentially serious problem for the species, are likely occurring.

There are recent records of the vernal pool tadpole shrimp and the vernal pool fairy shrimp in the action area (CNDDDB 2002). Therefore, given the biology and ecology of the animal, the presence of suitable habitat in and adjacent to the project, as well as the recent records, the vernal pool tadpole shrimp and the vernal pool fairy shrimp are highly likely to inhabit the action area. In addition, the Biological Assessment states the applicant is assuming the presence of these two species in the action area.

Vernal Pool Fairy Shrimp Critical Habitat

Critical habitat for the vernal pool fairy shrimp was designated on August 6, 2003 (68 **FR** 46684). In determining which areas to designate as critical habitat, the Service considers those physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations and protections (50 CFR 424.14). This proposed project is not located within any designated critical habitat units for the vernal pool fairy shrimp.

California Tiger Salamander Critical Habitat

Critical habitat for the California tiger salamander was designated on August 23, 2005 (U.S. Fish and Wildlife Service 2004b). The Service divided the current range of the Central population into four regions: (1) Central Valley; (2) Southern San Joaquin Valley; (3) East Bay; and (4) Central Coast.

The Service determined that conserving the California tiger salamander over the long-term requires a five-pronged approach: (1) Maintaining the current genetic structure across the species range; (2) maintaining the current geographical, elevational, and ecological distribution; (3) protecting the hydrology and water quality of breeding pools and ponds; (4) retaining or providing for connectivity between locations for genetic exchange and recolonization; (5) protecting sufficient barrier-free upland habitat around each breeding location to allow for sufficient survival and recruitment to maintain a breeding population over the long-term (U.S. Fish and Wildlife Service 2004).

The Service believes that areas proposed for critical habitat may require certain management considerations or protections due to the following threats: (1) Activities that introduce or promote the occurrence of bullfrogs and fish; (2) Activities that could disturb aquatic habitats during the breeding season; (3) Activities that impair the water quality of aquatic breeding habitats; (4) Activities that would reduce small mammal populations to the point that there is insufficient underground Central population refugia used for foraging, protection from predators, and shelter from the elements; (5) Activities that create barriers impassible for salamanders or road crossings that increase mortality in upland habitat between extant occurrences in breeding

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habitat; (6) Activities on adjacent uplands that disrupt vernal pool complexes' ability to support California tiger salamander breeding function; (7) Activities that introduce non-native tiger salamanders in areas where the California tiger salamander is threatened with hybridization (U.S. Fish and Wildlife Service 2004).

In determining which areas to designate as critical habitat, the Service considers those physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations and protection (50 CFR § 424.14). The Service lists the known primary constituent elements together with the proposed critical habitat description. Such physical and biological features include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The primary constituent elements for the California tiger salamander are aquatic and upland areas, including vernal pool complexes, where suitable breeding and non-breeding habitats are interspersed throughout the landscape, and are interconnected by continuous dispersal habitat. All areas proposed as critical habitat for the central population contain one or more of the primary constituent elements (U.S. Fish and Wildlife Service 2004).

Breeding Habitat. Standing bodies of fresh water, including natural and man-made (e.g. stock ponds, vernal pools, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a sufficient length of time necessary for the species to complete its life cycle (U.S. Fish and Wildlife Service 2004).

Breeding California tiger salamander are found in vernal pools, vernal pool complexes, and seasonal ponds in associated annual grasslands, oak savannah, and coastal bay scrub plant communities of the Bay Area (Santa Clara Valley), Central Coast, Central Valley, and Southern San Joaquin Valley. California tiger salamanders also have adapted to using artificial water bodies, such as stock ponds during their aquatic phase. However, stockponds are often not optimum breeding habitat because the hydroperiod is so short there is not sufficient time for larvae to metamorphose, or it is so long that predatory fish and bullfrogs can colonize the pond. Permanent wetlands can support breeding California tiger salamander if fish are not present, but extirpation of the salamander is likely to occur if fish are introduced. Periodic maintenance to remove silt from stockponds and other artificial waterbodies may also cause a temporary loss of functioning aquatic habitat. Regardless of vernal pool, pond, or seasonal wetland type, successful breeding ponds for California tiger salamander need to be inundated for a minimum of 21 weeks to allow for successful metamorphosis (U. S. Fish and Wildlife Service 2004).

Non-Breeding Habitat. California tiger salamanders spend the majority of their lives in barrier-free upland habitats adjacent to breeding ponds. Within these upland habitats, adult California tiger salamander spend part of their lives in the underground burrows of mammals, especially the burrows of the California ground squirrel and valley pocket gopher, with depths ranging from 20

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centimeters to 1 meter beneath the ground surface. Small mammals are essential in creating the underground habitat that adult California tiger salamander depend on for food, shelter, and protection from the elements and from predation. Although California tiger salamanders are members of a family of burrowing tiger salamanders, California tiger salamanders are not known to create their own burrows in the wild and require small mammal burrows for survival. The upland component of the Central population habitat typically consists of vernal pool grassland or grassland savannah with scattered oak trees. However, some occupied California tiger salamander breeding ponds exist within mixed grassland and woodland habitats, in woodlands, scrub, or chaparral habitats (U.S. Fish and Wildlife Service 2004).

Dispersal and Migration. Movements made by California tiger salamanders can be grouped into two main categories: (1) Breeding migration, and (2) interpond dispersal. Breeding migration is the movement of salamanders to and from a pond from the surrounding upland habitat. After metamorphosis, juveniles move away from breeding ponds into the surrounding uplands, where they live continuously for several years (on average, four years). Upon reaching sexual maturity, most individuals return to their natal (birth) pond to breed, while 20 percent disperse to other ponds (U. S. Fish and Wildlife Service 2004).

Essential dispersal habitats generally consist of upland areas adjacent to essential aquatic habitats which are not isolated from other essential aquatic habitats by barriers that California tiger salamanders cannot cross. Essential dispersal habitats provide connectivity among California tiger salamander suitable aquatic and upland habitats. While California tiger salamanders can bypass many obstacles, and do not require a particular type of habitat for dispersal, the habitats connecting essential aquatic and upland habitats need to be free of barriers (e.g. a physical or biological feature that prevents salamanders from dispersing beyond the feature) to function effectively (U. S. Fish and Wildlife Service 2004).

The Service proposed critical habitat that allowed for dispersal between extant occurrences within 0.7 mile of each other. This distance was selected because it provides for 99 percent of the chances that individual salamanders can move and breed between extant occurrences, and, thereby, provides for genetic exchange between individual within the region (U.S. Fish and Wildlife Service 2004).

Critical habitat for the California tiger salamander has been designated within the action area. Specifically, 0.74568 miles (1200 meters) of this project is located within Unit 5, (3,128 acres), the Indian Creek Unit. It is essential to the conservation of the salamander because it is needed to maintain the current geographical and ecological distribution of the species within the Central Valley Geographic Region. Unit 5 represents the northeastern portion of the range of the Southeastern Sacramento Valley vernal pool region. The land surrounding the proposed project area is rural. Vegetation types in the area consist of oak woodlands and annual grasslands. Northern Hardpan vernal pool complexes are present in the grassland habitat within the project area.

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Environmental Baseline

Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp

Federal, State, local, and private actions already affect the species addressed in this opinion within the action area. These actions include gas and oilfield development and pipeline installation, utility upgrades, power plant and transmission line construction, landfill operations, wastewater treatment operations, road construction and widening, sand dredging, and residential development. The Recovery Plan for Upland Species of the San Joaquin Valley discusses numerous Federal, State, and private individual or collaborative community-level conservation efforts. The majority of listed wildlife and plants in the action area have been, and continue to be affected by conversion of habitat to agricultural, industrial, and urban uses. This has eliminated many listed species from the majority of their historic ranges. The remaining natural communities are highly fragmented; many are marginal habitats in which some listed species may not persist during catastrophic events such as drought or floods (Service 1998).

Holland (1978) estimated that about two-thirds of the grasslands that once supported vernal pools in the Central Valley had been destroyed by 1973, with an associated loss of nearly 60 to 85 percent of vernal pool habitat. In subsequent years, a substantial amount of the remaining habitat for vernal pool crustaceans has been destroyed. Estimates of habitat loss range from two to three percent per year (Holland and Jain 1988). The Corps Sacramento District authorized the filling of 189 hectares (467 acres) of wetlands between 1987 and 1992 pursuant to Nationwide Permit 26 (U.S. Fish and Wildlife Service 1992).

Vernal pool tadpole shrimp and vernal pool fairy shrimp habitat has been lost through direct destruction and modification due to filling, grading, discing, leveling, and other activities. In addition, vernal pools have been imperiled by a variety of anthropogenic modifications to upland habitats and watersheds. These activities, primarily urban development, water supply/flood control projects, land conversion for agriculture, off-road vehicle use, certain mosquito abatement measures, and pesticide/herbicide use can lead to disturbance of natural flood regimes, changes in water table depth, alterations of the timing and duration of vernal pool inundation, introduction of non-native plants and animals, and water pollution. These indirect impacts can result in adverse impacts to vernal pool species. Populations of listed vernal pool crustaceans are highly fragmented throughout their ranges due to the nature of vernal pool landscapes and the destruction of natural habitat by human activities. Such fragmentation results in small, isolated populations which may be more susceptible to extinction due to random demographic, genetic, and environmental events (Gilpin and Soule 1986; Goodman 1987 a, b). Furthermore, if localized extinctions occur in fragmented populations, the opportunity for recolonization of previously occupied habitat is reduced due to the geographic isolation of potential habitats from occupied sites.

Current data indicate vernal pool grasslands are being lost in the southern San Joaquin Valley at a rate of approximately one percent per year (Holland 1998; Service records). The proposed project is located in the Southern Sierra Foothills region of San Joaquin and Calaveras County. According to Holland (1998), approximately 1,557 acres of vernal pool grasslands were lost in

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Stanislaus County over a period of ten years from 1987 to 1997, thus resulting in a cumulative loss of 1.5 percent and an annual loss of 0.2 percent. Vernal pool grasslands in this area typically support numerous pools of various sizes. Many of these pools and surrounding upland habitats are essential for the conservation and recovery of listed species. Because of the limited and disjunct distribution of vernal pools, coupled with the even more limited distribution of special-status vernal pool crustaceans, any reduction in vernal pool habitat quantity could adversely affect these species. The integrity of the vernal pool complexes in eastern San Joaquin County is seriously threatened by irrigated agriculture, and urban development.

Designated critical habitat is located nearby in the northeastern corner of San Joaquin County. This unit contains vernal pool habitats identified by Holland (1998) and San Joaquin County (1998) that support populations of vernal pool fairy shrimp (CNDDDB 2002) found within Northern Volcanic Mudflow vernal pools on the Laguna geologic formation, as well as high terrace pools on the Valley Springs formation. Unit 18, the San Joaquin unit, contains the largest vernal pool complex remaining in San Joaquin County and the Southern Sacramento Valley.

California Tiger Salamander

The vernal pool/seasonal wetland habitat within the project area that could support California tiger salamanders has been degraded by the existing SR 26. The road has created a dispersal barrier, run-off from the road diminishes water quality, and leveling/grading for road construction destroys upland habitat. There are 8.84 acres of upland habitat for the salamander in the project area: 1.97 acres of which are in Critical Habitat.

There are 11 CNDDDB records from 2002 for the California tiger salamander (CNDDDB 2002) within a 10 miles radius of the proposed project. No California tiger salamander larvae or adults were observed during the nocturnal field surveys conducted in the project area and vicinity. This project area is located in a rural area in the lower portion of the Sierra Nevada foothills and the upper margin of the Central Valley.

Effects of the Proposed Action

Vernal Pool Fairy Shrimp

Based on survey results from 2000, three vernal pools are present within the project area that support vernal pool fairy shrimp. No tadpole shrimp were found. However, since only one year of the required 2 years of surveys was conducted, vernal pool fairy shrimp and vernal pool tadpole shrimp are assumed to be present in all of the vernal pools within the project area. Excavation or placement of fill material within these pools could result in direct mortality of vernal pool fairy shrimp or their resting eggs known as cysts. A total of 0.09 hectares (0.21 acres) of vernal pools within the cut and fill limits of the proposed project will be directly and permanently impacted and approximately 0.13 hectares (0.31 acres) would be temporarily and directly impacted by construction-related activities.

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Indirect impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp will occur in suitable habitats within 76 meters (250 feet) of the project area. A thorough survey and delineation of vernal pools within 76 meters (250 feet) of the proposed right-of-way was conducted on May 13, 2000. Results of this survey showed approximately 0.34 hectares (0.84 acres) of vernal pool fairy shrimp habitat present within this zone that could potentially be indirectly impacted by the project. Hydrologic and topographic evaluation of these pools definitively determined that of the 0.34 hectares (0.84 acres) of habitat present within this zone, 0.31 hectares (0.76 acres) would be indirectly impacted.

Unavoidable loss of habitats potentially supporting vernal pool tadpole shrimp would be mitigated according to the ratios defined in the programmatic Section 7 consultation between USFWS and the Sacramento District of the ACOE. This consultation defines the following compensation ratios:

- Preservation of vernal pool habitat at a 2:1 ratio; and
- Creation of vernal pool habitat at a 1:1 ratio.

Caltrans proposes to reduce effects of the project by purchasing 2.40 acres of vernal pool habitat at a site approved by the Service.

California Tiger Salamander

The proposed SR 26 Project is likely to result in a number of adverse effects to the California tiger salamander. The proposed project will eliminate and fragment the habitat of the listed amphibian, and increase levels of mortality of the animal during its movements between the breeding ponds and upland habitat. Individuals exposed during excavations likely will be crushed and killed or injured by construction-related activities. Salamanders also could fall into the trenches, pits, or other excavations, and then they could be directly killed or be unable to escape and be killed due to desiccation, entombment, or starvation. The amphibians could be subject to increased levels of harassment resulting from lights used during night time construction. Edible trash left during or after repair activities could attract predators, such as raccoons, crows, and ravens, to the sites, who could subsequently prey on the listed amphibian. Salamanders also may become trapped if plastic mono-filament netting is used for erosion control or other purposes where they would be subject to death by predation, starvation, or desiccation (Stuart *et al.* 2001). The increased width of the road and higher levels of vehicle traffic will result in higher numbers of California tiger salamanders killed during their movements between their upland habitat and breeding ponds. Individual California tiger salamanders may be directly injured, killed, harmed, and harassed by activities that disturb breeding, migration, dispersal, and aestivation habitat.

Construction related activities are likely to cause disruption of surface movement, disruption or complete loss of reproduction, harassment from increased human activity, and permanent and temporary loss of shelter. Because these animals are nocturnal, if construction is performed at night, associated lighting likely would increase all of the above effects. Wise and Buchanan (2002) reviewed the adverse effects that may result from night time illumination on salamander species. Artificial lighting used during night time construction may increase predation on

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California tiger salamanders, if it occurs during periods of fall, winter, or spring rains, because the amphibians will lose the cover of darkness for movement. Nocturnal foraging by salamander species may be affected by artificial lighting. Wise and Buchanan (2002) reported that in one species of salamander, individuals emerged from refugia to forage within one hour after light levels dropped following sunset. During such foraging bouts, visual information was used for locating prey. Greater light levels delay emergence, resulting in less foraging time, but could have increased the ability of the salamanders to capture prey; however, they also could make the amphibians more vulnerable to predation. Many salamanders, such as the California tiger salamander, are terrestrial as adults but migrate to ponds to breed and lay eggs. The orientation of some of these terrestrial species away from and toward these ponds is influenced by the spectral characteristics of light Wise and Buchanan (2002). Artificial lights that emit unusual spectra may disrupt these migration patterns.

The addition of impermeable surfaces resulting from the realignment will be accompanied by an increase in chemical runoff, which would include gasoline and oil, as well as silt runoff, which will reduce water quality in the project site. A wider highway to cross during dispersal and migration likely will result in increased injury and mortality of California tiger salamanders, and increased fragmentation of their habitat in the action area.

The effect of habitat fragmentation on the California tiger salamander is potentially significant. Fragmentation can have two effects: (1) reduction in access to habitat as well as habitat suitability, and (2) disruption of movements, dispersal, and gene flow. The construction of roads through salamander habitat may restrict or block movement between breeding ponds and upland habitat. The likelihood of this effect will increase with larger road size, higher traffic volume, and the presence of fences or median barriers. In addition to limiting access to breeding ponds or upland habitat, roads also may reduce the suitability of habitat for the California tiger salamander by fragmentation into patches too small for effective use by the animals. As a habitat patch decreases in size, the number of California tiger salamanders the patch can support also decreases. This increases the probability that the animals will be extirpated from each habitat patch. The possibility for recolonization will depend upon the nature of the factors, e.g., roads, canals, development, etc., that are causing the fragmentation.

Fragmentation factors that effectively isolate patches and limit access also constitute barriers to California tiger salamander dispersal, and gene flow. Movements and dispersal corridors between breeding ponds and upland habitat are critical to this animal's population dynamics, particularly because the animals currently persist as metapopulations with multiple disjunct population centers. Movement and dispersal corridors likely are important for alleviating overcrowding during years when California tiger salamander abundance is high, and also they are important for facilitating the recolonization of areas where the animal has been extirpated. Movement between population centers maintains gene flow and reduced genetic isolation. Genetically isolated populations are at greater risk of deleterious genetic effects such as inbreeding, genetic drift, and founder effects.

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Roads have been documented as barriers to movements by a diversity of species, and this effect varies with road size and traffic volume. The inhibition of animal movements caused by roads produces a significant effect by fragmenting habitats and populations (Joly and Morand 1997). Roads were found to be significant barriers to gene flow among common frogs (*Rana temporaria*) in Germany and this has resulted in genetic differentiation among populations separated by roads (Reh and Seitz 1990). Similarly, significant genetic subdivision was detected in bank voles (*Clethrionomys glareolus*) populations separated by a 50-meter (164 foot) wide highway in Germany (Gerlach and Musolf 2000).

California tiger salamander mortality and injury occurs when the animals attempt to cross roads and are hit by cars, trucks, or motorcycles. The majority of strikes occur on rainy nights when the animals are moving to their breeding ponds. Thus, vehicle strikes are a direct source of mortality for the California tiger salamander. If vehicle strikes are sufficiently frequent in a given locality, this could result in reduced abundance of this animal. Especially problematic is the death of females prior to the laying of their eggs because this could result in the loss of an entire cohort, and therefore, reduced recruitment of new individuals into the population.

Vehicles constitute a consistent source of mortality for the animal, based on the frequency with which vehicle strikes occur. Although no systematic, range-wide studies have been conducted, it is known that significant numbers of California tiger salamanders are killed by vehicular traffic while crossing roads (Hansen and Tremper 1993; S. Sweet, *in litt.* 1993; Joe Medeiros, Sierra College, pers. comm. 1993). For example, during a 1-hour period on a road bordering Lake Lagunita on the Stanford University campus, 45 California tiger salamanders were collected, 28 of which had been killed by cars (Twitty 1941). More recently, during one 15-day period in 2001 at a Sonoma County location, 26 road-killed California tiger salamanders were found (D. Cook, pers. comm. 2002). Overall breeding population losses of California tiger salamanders due to road kills have been estimated to be between 25 and 72 percent (Twitty 1941; S. Sweet *in litt.* 1993; Launer and Fee *in litt.* 1996). Mortality may be increased by associated roadway curbs and berms as low as 3.5 to 5 inches, which allow California tiger salamanders access to roadways but prevent their exit from them (Launer and Fee 1996; S. Sweet *in litt.* 1998).

In a recent study along a 0.7 mile high-vehicular-use (21,450 vehicles per day) section of the Trans-Canadian Highway in Alberta, Canada, Clevenger *et al.* (2001) recorded 183 road-killed eastern tiger salamanders in 30 days and concluded it was likely that very little of the local population had survived. In California, vehicular-use levels along various State, interstate, and secondary roads commonly far exceed the level of use reported in the Alberta study. Vehicular usage on California roads is also increasing rapidly and directly with human population and urban expansion. During November 2002, California's estimated total vehicular travel on State highway system roads alone was 14.27 billion miles (this figure and subsequent vehicular-use data from California Department of Transportation's Internet website which was accessed on January 2, 2003). From 1972 to 2001, State highway system total vehicular usage rose steadily from 67.11 to 167.81 billion miles annually. For the 23 California counties in which the California tiger salamander may occur, State highway system total annual vehicular usage in 1999, 2000, and 2001 was 53.27, 55.85, and 57.21 billion miles, respectively. The steady increase of vehicular use is thus continuing. We believe such figures illustrate (1) the general

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increase in vehicular usage that has been, and is still, occurring in many parts of the California tiger salamander's range, and (2) that additional increments of road-kill losses, which are already a potentially serious problem for the species, are likely occurring.

Vehicle-related mortality has significantly affected other listed or rare species. Rudolph *et al.* (1999) estimated that road-associated mortality may have depressed populations of Louisiana pine snakes (*Pituophis ruthveni*) and timber rattlesnakes (*Crotalus horridus*) by over 50% in eastern Texas, and this mortality may be a primary factor in local extirpations of this species of rattlesnake (Rudolph *et al.* 1998). Mortality from vehicles also is contributing to the reduction in the status of the prairie garter snake (*Thamnophis radix radix*) in Ohio (Dalrymple and Reichenbach 1984), and was a limiting factor in the recovery of the endangered American crocodile (*Crocodylus acutus*) in Florida (Kushland 1998).

Similar to the endangered San Joaquin kit fox and California red-legged frog, the presence of roads could introduce chemical agents that contaminate and adversely affect the California tiger salamander and its prey; introduce or improve habitat for non-native species that compete or prey upon this listed amphibian; and also the "road zone" effect may adversely affect this listed animal.

There are 8.84 acres of upland salamander habitat that will be permanently lost. However, the proposed project would only result in the permanent loss of 1.97 acres of designated Critical Habitat in Unit 5. This is less than 0.1 % of the Unit 5 total. Most of this has previously been degraded by SR 26. Therefore, the loss is not considered significant.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

As the human population of central California increases, and land continues to be converted to municipal and industrial uses, the amount and quality of habitat suitable for the species considered in this biological opinion will decrease. Between 1970 and 2000, California's total population increased by approximately 71% while the Central Valley's population increased 200%. Of the Sacramento and San Joaquin Valleys within the Central Valley, the San Joaquin Valley had the greater population growth (California Department of Finance (CDF) 2002). Among counties in the San Joaquin Valley, Tulare experienced the least increase percentage in population at 226% from 1940 to 1995, while Stanislaus experienced the greatest increase at 453% during the same period. Also during the period 1940 to 1995, the increase in population for Fresno was 322%; for Kern and Madera: 356% each, for Kings: 227%, for Merced: 322% (CDF 2002). (Information for the valley portions of San Joaquin and Calaveras was unavailable). During the period 1988 to 1998, 82,756 acres in the San Joaquin Valley were converted to urban and built-up land uses (California Department of Conservation 2000).

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Although not each of the converted acres can be considered habitat, this trend indicates that habitat loss continues to threaten the survival and recovery of listed species.

The cumulative effects of all the future State, Tribal, local, and private actions that are reasonably certain to occur in the action area will continue to have a deleterious effect on the reproduction, numbers, and distribution of the species considered herein. The adverse cumulative effects described in this section serve to magnify the adverse effects of the proposed action and diminish any beneficial effects.

Conclusion

After reviewing the current status of the California tiger salamander, vernal pool tadpole shrimp, vernal pool fairy shrimp, the environmental baseline for the action area, the effects of the proposed SR 26, and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the California tiger salamander, vernal pool tadpole shrimp and vernal pool fairy shrimp. Critical habitat has been designated for the vernal pool fairy shrimp, however none is located in the action area; therefore, none will be affected. Critical Habitat has been designated for the California Tiger Salamander and 1.97 acres occurs within Unit 5. The proposed action is not expected to result in adverse modification to that Critical Habitat.

INCIDENTAL TAKE STATEMENT

Section 9(a)(1) of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened fish and wildlife species without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Federal Highway Administration has a continuing duty to regulate the activity covered by this incidental take statement. If the Federal Highway Administration (1) fails to require the California Department of Transportation to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain

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oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

Incidental take of the California tiger salamander will be difficult to detect because when this amphibian is not in their breeding ponds, or foraging, migrating, or conducting other surface activity, it inhabits the burrows of ground squirrels or other rodents; the burrows may be located a distance from the breeding ponds; the migrations occur on a limited period during rainy nights in the fall, winter, or spring; and the finding of an injured or dead individual is unlikely because of their small body size. Losses of this species also may be difficult to quantify due to seasonal fluctuations in their numbers or additional random environmental disturbances. Loss of habitat is a reasonable surrogate for expressing the amount or extent of take because it accurately reflects the biological effects to this species. Therefore, the Service estimates that all California tiger salamanders inhabiting 8.84 acres of habitat will be subject to take in the form of harm and harassment as a result of the proposed action. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the State Route 26 project in the form of harm, harassment, capture, injury, and death of the California tiger salamander caused by habitat loss and construction activities will become exempt from the prohibitions described under section 9 of the Act.

Incidental take of the vernal pool tadpole shrimp and vernal pool fairy shrimp will be difficult to detect because when this crustacean is not in its active adult stage, the cysts or nauplai are difficult to locate in the vernal pools and seasonal wetlands; and the finding of an injured or dead individual is unlikely because of their relatively small body size. Losses of this species also may be difficult to quantify due to seasonal fluctuations in their numbers, random environmental events, changes in water regime at their breeding ponds, or additional environmental disturbances. Therefore, the Service is estimating that all vernal pool fairy shrimp inhabiting 1.28 acres, as described in the biological assessment will be subject to incidental take. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the SR 26 in the form of harm, harassment, injury, and death of the vernal pool fairy shrimp caused by habitat loss and construction activities will become exempt from the prohibitions described under section 9 of the Act.

Effect of Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the California tiger salamander, vernal pool tadpole shrimp, and vernal pool fairy shrimp. Critical habitat for the Salamander has been designated; a portion of which is located in the action area of the project and upland habitat within this area 1.97 acres will be affected by the road modification. Critical habitat has been designated for the vernal pool fairy and tadpole shrimp, however none is located in the action area, and therefore none will be modified or destroyed.

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Reasonable and Prudent Measures

The following reasonable and prudent measures are necessary and appropriate to minimize the effects of the SR 26 project on the California tiger salamander, vernal pool tadpole shrimp and vernal pool fairy shrimp.

1. The California Department of Transportation shall implement conservation measures for the California tiger salamander, vernal pool tadpole shrimp and vernal pool fairy shrimp to minimize (1) the effects of the loss of habitat that will occur as a result of the project; (2) the potential for harassment, harm, injury, and mortality to these two listed species; and (3) the potential for inadvertent capture or inadvertent capture or entrapment of federally listed wildlife species during construction activities.
2. The California Department of Transportation shall ensure their compliance with this biological opinion.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Federal Highway Administration shall ensure the California Department of Transportation complies with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

1. The following Terms and Conditions implement Reasonable and Prudent Measure one (1):
 - A. The California Department of Transportation shall minimize the potential for harm or harassment of the California tiger salamander, vernal pool tadpole shrimp and vernal pool fairy shrimp resulting from the project related activities by implementation of the conservation measures as described in the biological assessment and the *Project Description* of this biological opinion.
 - B. The California Department of Transportation shall include Special Provisions that include the avoidance and minimisation measures of this biological opinion in the solicitation for bid information. The California Department of Transportation will educate and inform contractors involved in the project as to the requirements of the biological opinion.
 - C. As described in the September 26, 2005 letter from the Federal Highway Administration to the Service, the California Department of Transportation shall compensate for direct effects to the habitat of the vernal pool fairy shrimp by purchasing at a Service approved conservation bank, for preservation credits that are equivalent of 2.40 acres of suitable vernal pool habitat for this listed species.

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- D. As described in the September 26, 2005 letter from the Federal Highway Administration to the Service, the California Department of Transportation shall compensate for direct effects to the California tiger salamander upland habitat by purchasing 26.52 acres of upland habitat at a Service approved conservation bank.
- E. The California Department of Transportation biologist shall have oversight over implementation of all the measures described in the *Terms and Conditions* of this biological opinion, and he/she shall have the authority to stop project activities, through communication with the California Department of Transportation Resident Engineer, if any of the requirements associated with these measures are not being fulfilled. If the biologist/construction liaison has requested a stop work do to take of any of the listed species the Service and Fish and Game will be notified within one (1) day via email or telephone.
- F. Permanent and temporary construction disturbances and other types of project related disturbances to the California tiger salamander and vernal pool fairy shrimp habitat shall be minimized to the maximum extent possible. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas.
- G. Project employees shall be directed to exercise caution when commuting within the habitats of the California tiger salamander and vernal pool fairy shrimp. A 20-mile per hour speed limit will be strongly encouraged on unpaved roads within listed species habitats.
- H. No canine or feline pets or firearms (except for Federal, State, or local law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment or killing or injuring of listed species.
- I. All construction activity shall be confined within the project site, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect habitat areas outside the project site without authorization from the Service.
- J. The resident engineer or their designee shall be responsible for implementing these conservation measures and shall be the point of contact for each project.

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- K. If borrow material is going to be used for the State Route 26 project, the California Department of Transportation shall follow the procedures outlined below:
1. California Department of Transportation shall require as part of the construction contract that all contractors comply with the Act in the performance of the work necessary for project completion performed inside and outside the project right-of-way.
 2. California Department of Transportation shall require documentation from the contractor that aggregate, fill, or borrow material provided for each project was obtained in compliance with the Act. Evidence of compliance with the Act shall be demonstrated by providing the Resident Engineer (RE) any one of the following:
 - a. a letter from the Service stating use of the borrow pit area will not result in the incidental take of listed species;
 - b. an incidental take permit for contractor-related activities issued by the Service pursuant to section 10(a)(1)(B) of the Act;
 - c. a biological opinion or a letter concurring with a "not likely to adversely affect" determination issued by the Service to the Federal agency having jurisdiction over contractor-related activities;
 - d. a letter from the Service concurring with the "no effect" determination for contractor-related activities; or
 - e. Contractor submittal of information to the California Department of Transportation Resident Engineer indicating compliance with the State Mining and Reclamation Act (SMARA) and provide the County land use permits and CEQA clearance.
 - f. If a borrow site that is in compliance with the Act is not available, the California Department of Transportation will either:
 - i. identify/select a site that the Service has concurred with the "no effect" determination, or;
 - ii. request reinitiation of formal consultation on the action considered herein based on new information.
- L. As described in biological assessment and the *Project Description* of this biological opinion, compensation credits, fee title or conservation easements shall be obtained by the California Department of Transportation for 2.40 acres of habitat for the vernal pool fairy shrimp and vernal pool tadpole shrimp. The California Department of Transportation shall obtain the written approval of the Service that the parcel(s) are suitable compensation lands for the vernal pool fairy shrimp and vernal pool tadpole shrimp prior to acquiring interest in those lands. The fee title or conservation easement shall be obtained by the California Department of Transportation at least sixty (60) calendar days prior to the date of

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initial groundbreaking, or on or before a date that the Service has agreed to in writing with the California Department of Transportation.

- M. As described in biological assessment and the *Project Description* of this biological opinion, compensation credits, fee title, or conservation easements shall be obtained by the California Department of Transportation for 26.52 acres of habitat for the California tiger salamander. The California Department of Transportation shall obtain the written approval of the Service that the parcel(s) are suitable compensation lands for the California tiger salamander, and vernal pool shrimp prior to acquiring interest in those lands. The fee title or conservation easement shall be obtained by the California Department of Transportation at least sixty (60) calendar days prior to the date of initial groundbreaking, or on or before a date that the Service has agreed to in writing with the California Department of Transportation.
- N. If conservation easements are used by the California Department of Transportation, they shall include, but not be limited to, provisions and responsibilities of the project proponent and the land trust organization approved by the Service for the protection of all habitats set aside including any future transfers of the easements or fee interest that may be anticipated. The easements shall specify the purposes for which it is established (*i.e.*, measures to minimize effects to the California tiger salamander associated with the State Route 26 project). The California Department of Transportation shall provide the Service with a true copy of the recorded conservation easements within thirty (30) calendar days of its recordation. The conservation easements shall be held by a third party approved by the Service. The conservation easement shall include a list of prohibited activities that are inconsistent with the maintenance of the preserve for the listed species including, but not limited to:
1. leveling, grading, landscaping, cultivation, or any other alterations of existing topography for any purposes, including the exploration for, or development of, mineral resources;
 2. placement of any new structures on the preserve, including buildings and billboards;
 3. discharge, dumping, burning, or storing of rubbish, garbage, grass clippings, dredge material, household chemicals, or any other wastes or fill materials within the preserve;
 4. building of any roads or trails within the preserve areas;
 5. killing, removal, alteration, or replacement of any existing native vegetation except in Service-approved prescribed burning situations, or as otherwise authorized in writing by the Service;
 6. activities that may alter the hydrology of the preserve and the associated watersheds, including but not limited to: excessive pumping of groundwater, manipulation or blockage of natural drainages, inappropriate water application or placement of storm water drains, etc. unless authorized in writing by the Service;

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7. incompatible fire protection activities;
 8. use of pesticides, herbicides, or rodenticides on the preserve or within the watershed that can contaminate the preserve except as authorized in writing by the Service; and
 9. introduction of any exotic species or species not native to the area, including aquatic species, except as approved by the Service.
- O. In the event the California Department of Transportation seeks to obtain a conservation easement in lieu of fee title acquisitions for the purposes of satisfying the requirements of the terms and conditions of this biological opinion, the California Department of Transportation shall provide the language of the proposed conservation easements to the Service for prior review and approval. The conservation easements shall include language establishing a right of entry by the Service to determine compliance with the terms and conditions of this biological opinion and the terms of the conservation easements, as well as identifying the Service as a third party beneficiary with the standing to take whatever legal action is necessary to enforce the terms of this conservation easement. Should the California Department of Transportation make fee title acquisition of lands to satisfy the terms and conditions of this biological opinion, the California Department of Transportation shall encumber such lands with restrictive covenants that provide the same rights to the Service as will be established under the conservation easement described above. Such restrictive covenants shall be provided to the Service for prior review and approval before they are recorded against the conservation lands.
- P. If the California Department of Transportation plans to acquire fee title or a conservation easement for lands that are not in a Service-approved conservation bank, then at least sixty (60) calendar days prior to the date of initial ground breaking at the proposed State Route 26 project, the California Department of Transportation shall endow a Service-approved fund for monitoring and perpetual management and maintenance of the 2.40 acres for the vernal pool fairy shrimp and 26.52 acres for the California tiger salamander. The principal in the endowment must generate sufficient revenue to fully cover the costs of ongoing operations and management actions as described in the Service-approved management plan and this biological opinion, without the need to make use of the principal to adequately fund such expenditures. Specific actions funded by the endowment shall be addressed in the Service-approved management plan. The California Department of Transportation shall utilize an appropriate third party who has been approved by the Service to determine what amount of money is necessary for an endowment fund to adequately finance the monitoring and perpetual management and maintenance of the preserve for the California tiger salamander and vernal pool fairy shrimp. The California Department of Transportation shall empower the Service to access and expend such funds to implement Service-approved remedial measures in the event the responsible preserve managers fail to adequately implement the Service-approved management plan. The final determination of success or failure of the management plan shall be made solely by the Service. Prior to the date of initial

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groundbreaking at the State Route 26 project, the California Department of Transportation shall provide the Service with documentation that: (1) funds for the perpetual management and maintenance of the 2.40 acres for the vernal pool fairy shrimp and 26.52 acres for the California tiger salamander have been transferred to the appropriate third party approved by the Service; (2) the third party has accepted the funds and considers them adequate; and (3) that these funds have been deposited in an account (*i.e.*, endowment) that will provide adequate financing for the monitoring and perpetual management and maintenance of these areas for these listed species.

2. The following Terms and Conditions implement Reasonable and Prudent Measure two (2):

- A. If requested, before, during, or upon completion of ground breaking and construction activities, the California Department of Transportation shall allow access by Service and/or California Department of Fish and Game personnel to the project site to inspect project effects to the vernal pool fairy shrimp and California tiger salamander and its habitat.
- B. The California Department of Transportation shall comply with the *Reporting Requirements* of this biological opinion.

Reporting Requirements

1. Before construction starts on a project, the Service shall be provided with the final documents, including but not limited to, recorded conservation easements, PAR analyses, management plans, or proof of purchase of credits. Please see draft guidance from the Service, *Selected Review Criteria for Conservation Banks and Section 7 Off Site Compensation* dated August 4, 2004, or Service guidance that supercedes this document.
2. A post-construction report detailing compliance with the project design criteria described under the *Description of the Proposed Action* section of this biological opinion shall be provided to the Service within 30 calendar days of completion of the project.
3. The California Department of Transportation shall notify the Service via electronic mail and telephone within one (1) working day of the death or injury to a California Tiger Salamander and/or other listed species that occurs due to project related activities or is observed at the project site. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and photographs of the specific animal. In the case of an injured animal, the animal shall be cared for by a licensed veterinarian or other qualified person. In the case of a dead animal, the individual animal should be preserved, as appropriate, and held in a secure location until instructions are received from the Service regarding the disposition of the specimen or the Service takes custody of the specimen. The Service contacts are Peter Cross, Deputy Assistant Field Supervisor of the Endangered Species Division (Central Valley) at 916/414-6600, and

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Scott Heard, Resident Agent-in-Charge of the Service's Law Enforcement Division at 916/414-6660. The California Department of Fish and Game contact is Mr. Ron Schlorff at 916/654-4262.

4. Any contractor or employee who, during routine operations and maintenance activities inadvertently kills or injures a State listed wildlife species shall immediately report the incident to her or his supervisor or representative. The supervisor or representative must contact the California Department of Fish and Game immediately in the case of a dead or injured State listed wildlife species. The California Department of Fish and Game contact for immediate assistance is State Dispatch at (916) 445-0045.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Sightings of any sensitive animal species should be reported to the California Natural Diversity Database of the California Department of Fish and Game. A copy of the reporting form and a topographic map clearly marked with the location the animals were observed also should be provided to the Service.
2. The California Department of Transportation should incorporate culverts, tunnels, or bridges on highways and other roadways that allow safe passage by California tiger salamanders, and other listed animals, and wildlife. The California Department of Transportation should include photographs, plans, and other information in their biological assessments if they incorporate "wildlife friendly" crossings into their projects.
3. The California Department of Transportation should consider establishing functioning preservation and creation conservation banking systems to further the conservation of the California tiger salamander, listed crustacean species, and other appropriate species. Such banking systems also could possibly be utilized for other required mitigation (i.e., seasonal wetlands, riparian habitats, etc.) where appropriate.
4. Sightings of any listed or sensitive animal species should be reported to the California Natural Diversity Database of the California Department of Fish and Game. A copy of the reporting form and a topographic map clearly marked with the location the animals were observed also should be provided to the Service.

In order for the Service to be kept informed of conservation actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, we request notification of the implementation of any of the conservation recommendations.

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REINITIATION NOTICE

This concludes formal consultation on the State Route 26 project. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions concerning this biological opinion on the State Route 26 project, please contact Brian Peterson or Susan Jones at the letterhead address or at telephone 916/414-6630.

Sincerely,



for Ken Sanchez
Acting Field Supervisor

cc:

Mahfoud A. Licha, Federal Highway Administration, Sacramento, California
Carrie Bowen, Jennifer Taylor, Terry Marshall, Zachary Parker, California Department of
Transportation, Fresno, California
Annette Tenneboe, Clarence Mayott, California Department of Fish and Game, Fresno,
California



Appendix J Programmatic Agreement

**PROGRAMMATIC AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION
AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE STATE ROUTE 26 REHABILITATION PROJECT
IN SAN JOAQUIN AND CALAVERAS COUNTIES, CALIFORNIA**

WHEREAS, the Federal Highway Administration (FHWA) finds that the State Route 26 Rehabilitation Project between Savage Way and Wimer Road in Calaveras and San Joaquin counties (Undertaking) may adversely affect archaeological sites CA-CAL-1245, CA-CAL-1616, and CA-CAL-1983, which the FHWA considers eligible for inclusion in the National Register of Historic Places (National Register) for the purpose of the present consultation; and

WHEREAS, there are portions of CA-CAL-1983 in the Undertaking's area of direct impact (ADI) to which the FHWA has not been able to gain access to develop determinations of National Register eligibility, and this circumstance precludes the possibility of fully determining the effects of the Undertaking prior to its approval; and

WHEREAS, the FHWA has consulted with the SHPO pursuant to the 1 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 Federal-Aid Highway Program In California* (Federal-Aid Highway PA), and, where the Federal-Aid Highway PA so directs, in accordance with 36 CFR Part 800, the regulation implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470f), as amended, regarding the Undertaking's potential to affect historic properties, has, pursuant to stipulation XII of the Federal-Aid Highway PA, and, subsequently, 36 CFR §§ 800.4(b)(2) and 800.14(b)(3), decided to prepare a programmatic agreement, and, pursuant to 36 CFR § 800.6(a)(1)(i)(C), has notified the Advisory Council on Historic Preservation (ACHP) that a programmatic agreement will be prepared; and

WHEREAS, the FHWA has thoroughly considered alternatives to the Undertaking, has determined that the statutory and regulatory constraints on the design of the Undertaking preclude the possibility of avoiding a potential adverse effect to archaeological site CA-CAL-1983 during the Undertaking's implementation, and has further determined that it will more definitively assess the property's National Register eligibility, and, if the property is ultimately determined to be historic, resolve the Undertaking's adverse effect on it through the execution and implementation of this PA; and

WHEREAS, The California Department of Transportation (Caltrans) has participated in the consultation and has been invited to concur in this PA; and

WHEREAS, Caltrans, on behalf of the FHWA, has initiated consultation with the Calaveras Band of Miwok Indians and the Northern Valley Yokuts Tribe (Tribes) regarding the Undertaking and its adverse effect on historic properties, has invited the Tribes to concur in this PA, will continue to consult with the Tribes, and will afford the Tribes, should the Tribes so desire, the further opportunity to more directly and actively participate in the implementation of the Undertaking itself and this PA; and

NOW, THEREFORE, the FHWA and the SHPO agree that, upon the FHWA's decision to proceed with the Undertaking, the FHWA shall ensure that the Undertaking is implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties and further agree that these stipulations shall govern the Undertaking and all of its parts until this PA expires or is terminated

State Route 26 Rehabilitation (Savage Way)
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STIPULATIONS

The FHWA shall ensure that the following measures are carried out:

I. AREA OF POTENTIAL EFFECTS

- A. The area of potential effects (APE) for the Undertaking is depicted in an unnumbered figure of 14 sheets in the 23 December 2004 *Historic Property Survey Report for the Proposed Highway 26 Rehabilitation Project on California State Highway 26 from Post Mile 20.3 to 20.5 (KP 32.7/33.0) in San Joaquin County and Post Miles 0.0/3.0 (KP 0.0/4.9) in Calaveras County, California* (HPSR)(attachment A to this PA).
- B. If modifications to the Undertaking, subsequent to the execution of this PA, necessitate the revision of either the APE, as depicted in the HPSR, or the ADI, as depicted in figure 3 of the September 2005 *ESA/Monitoring/Late Discovery Plan for the State Route 26 Rehabilitation Project, San Joaquin and Calaveras Counties, California* (ESA Action Plan)(attachment B to this PA), Caltrans will consult with the FHWA and the SHPO to facilitate mutual agreement on the subject revisions. If Caltrans, the FHWA, and the SHPO reach mutual agreement on the proposed revisions, then Caltrans will submit a final map of the revisions, consistent with the requirements of stipulations VIII A and XVI A of the Federal-Aid Highway PA, no later than 30 days following such agreement. If Caltrans, the FHWA, and the SHPO cannot reach such agreement, then the parties shall resolve the dispute in accordance with stipulation VIII D of this PA.

II. FINAL IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

The FHWA has chosen, pursuant to stipulation XII of the Federal-Aid Highway PA and 36 CFR § 800 4(b)(2), to complete the final identification and evaluation of historic properties in the Undertaking's APE subsequent to the agency's approval of the Undertaking. The primary reason for this choice is that a landowner did not grant the FHWA access to portions of CA-CAL-1983 that fall in the Undertaking's ADI (see "untested portion of site," attachment B). The FHWA shall, upon its decision to proceed with the Undertaking and when it eventually gains access to the subject portions of CA-CAL-1983, complete its effort to identify and evaluate those portions of the site through the implementation of the Identification and Evaluation Plan, which will be appended to this PA as attachment C. If the result of the implementation of the Identification and Evaluation Plan is that the FHWA determines that the subject portions of CA-CAL-1983 do not meet the Criteria for Evaluation at 36 CFR § 60.4 and, consequently, would not contribute to the National Register eligibility of the site as a whole, should CA-CAL-1983 ever be found to be so eligible, and the SHPO concurs, then those portions of CA-CAL-1983 shall be given no further consideration under this PA. If, alternately, the FHWA and the SHPO determine, through consensus, that the subject portions do meet the Criteria for Evaluation and, consequently, that CA-CAL-1983 is eligible for inclusion in the National Register, then the FHWA shall treat those deposits in accordance with the provisions of stipulation III.B below to resolve the Undertaking's adverse effect on the historic property.

- A. The Identification and Evaluation Plan shall, at a minimum, provide for or include
 - (1) a systematic surface inspection of the untested portions of CA-CAL-1983 in the Undertaking's ADI to document the surface manifestations of the site in those areas and to provide a more objective basis for the subsequent placement of identification and evaluation phase excavation units,
 - (2) a consideration of the use of different geophysical methods to help identify potential features and architectural ruins on the site and to provide a further objective basis for the subsequent placement of excavation units,
 - (3) the excavation of backhoe trenches to quickly reveal the stratigraphy of the subject portions of CA-CAL-1983,

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- (4) the completion of the prior Extended Phase I program of shovel probes in the Undertaking's ADI (Shapiro, Whiteman, and Jackson¹) to conclude the identification of the vertical and horizontal distribution of archaeological materials on the portions of CA-CAL-1983 in the ADI,
- (5) the excavation of five control units (CU) to more accurately assess the composition and variation in the material culture assemblages of CA-CAL-1983, and the integrity of the depositional contexts for those assemblages as supporting evidence for the evaluation of the National Register significance of the subject portions of the site,
- (6) the documentation and analysis of the backhoe trench and CU profiles by a geoarchaeologist to evaluate the depositional integrity of the subject site portions pursuant to a protocol that defines explicit criteria for assessing such integrity,
- (7) the archaeologically-monitored, mechanical excavation of no greater than 10 percent of the subject portions of CA-CAL-1983, if the implementation of procedures (1) through (6) above do not clearly indicate a National Register significance for those deposits, and
- (8) a laboratory methodology that structures the material analyses for the site in a manner that facilitates the observation of any intrasite variability that may be present in the distribution of site assemblages.

- B. Any PA party may propose an amendment to the Identification and Evaluation Plan. Such amendment will not require amendment of this PA. Disputes regarding amendments proposed hereunder shall be addressed through further consultation among the PA parties, and the time frame for such consultation shall be reasonably established by the FHWA. If the dispute is resolved within this time frame, the PA parties shall proceed in accordance with the terms of that resolution. If the dispute is not resolved within this time frame, the FHWA shall render a final decision regarding the dispute and the PA parties shall proceed in accordance with the terms of that decision.

III. TREATMENT OF HISTORIC PROPERTIES

- A. ESTABLISHMENT AND ENFORCEMENT OF ENVIRONMENTALLY SENSITIVE AREAS. The FHWA shall ensure that the adverse effect of the Undertaking on the portions of CA-CAL-1983 outside of the Undertaking's ADI are avoided by establishing said portions as an Environmentally Sensitive Area (ESA), and that the potential to adversely affect CA-CAL-1245 and CA-CAL-1616 is avoided by establishing an ESA for each site. Each ESA shall be thoroughly described on the final construction plans for the Undertaking. Any construction activity within 50 feet of an ESA shall be monitored by an archaeologist meeting the Secretary's of the Interior Standards in accordance with stipulation VII.A.1 of this agreement and a Native American monitor. Parties responsible for ensuring the placement of the ESAs will be Caltrans' PQS, Caltrans' Project Manager, and Caltrans' Resident Engineer. ESA placement will occur prior to the onset of any activity in direct or indirect support of the Undertaking's implementation. No construction activity or related ground disturbance will take place within an ESA, nor will any part of these areas be used for storing or staging of equipment or materials. The ESA Action Plan for CA-CAL-1983, CA-CAL-1245, and CA-CAL-1616 is attachment B to this PA.
- B. TREATMENT FOR ADVERSE EFFECT ON CA-CAL-1983. If the FHWA and the SHPO determine, under the process in stipulation II.A of this PA above, that archaeological site CA-CAL-1983 is an historic property, then the FHWA shall ensure that Caltrans prepares a final version of the September 2005 *Data Recovery Plan for Archaeological Site CA-CAL-1983, State Route 26 Rehabilitation Project (Savage Way to Wimer Road), San Joaquin and Calaveras Counties California (DRP)* that will take into account the adverse effect of the Undertaking on CA-CAL-1983, and address any discoveries or

¹ Shapiro, Whiteman, and Jackson, *Extended Phase I Investigation at the Penrod Sites CA-CAL-1983 and CA-CAL-1984 for the Highway 26 Rehabilitation Project at Savage Way in San Joaquin and Calaveras Counties, California*, (Prepared for the California Department of Transportation, Central Sierra Environmental Management Branch, Stockton, 2004) 18.

unanticipated effects that may result from the Undertaking's implementation. The final version of the DRP will be the successor to the September 2005 draft of the plan and will be appended to this PA as attachment D. The final version of the DRP will, at a minimum,

- (1) specify the research issues and questions to be addressed through the recovery of archaeological data;
- (2) explain why it is in the public interest to address those research issues;
- (3) explain how data from CA-CAL-1983 will address those research issues and questions;
- (4) commit to the excavation, at a minimum, of twelve 1 x 1 m CUs with the intent of recovering data from two to three m³ of the cultural deposits from the untested portions of CA-CAL-1983 in the Undertaking's ADI;
- (5) specify the methods to be used in fieldwork and analysis, and explain how these methods are relevant to the research issues and questions;
- (6) specify the methods to be used in data management and data dissemination;
- (7) indicate how recovered materials and records will be disposed, taking into account the expressed wishes of the consulting Tribes;
- (8) include a schedule for providing the consulting Tribes with periodic updates on the implementation of the DRP;
- (9) include a schedule for completing a final data recovery and discovery report and specify when and to whom this report will be distributed;
- (10) include a curation agreement that ensures all materials and records subject to curation are maintained in accordance with 36 CFR 79. Materials recovered from privately owned lands, other than Native American human remains and grave-associated materials, that are to be returned to their owners, will be maintained in accordance with 36 CFR 79 until their analysis is completed;

C. Any PA party may propose amendments to the DRP. Such amendment will not require amendment of this PA. Disputes regarding amendments proposed hereunder shall be addressed through further consultation among the PA parties, and a reasonable time frame for such consultation shall be established by the FHWA. If the dispute is resolved within this time frame, the PA parties shall proceed in accordance with the terms of that resolution. If the dispute is not resolved within this time frame, the FHWA shall render a final decision regarding the dispute and the PA parties shall proceed in accordance with the terms of that decision.

D. The FHWA will not authorize the execution of any Undertaking activity that may effect (36 CFR § 800.16(i)) historic properties in the Undertaking's APE until the requirements set forth in paragraphs A and B of this stipulation have been met.

IV. REPORTING REQUIREMENTS AND RELATED REVIEWS

A. The FHWA shall submit a draft of the Identification and Evaluation Plan and Data Recovery Plan to the SHPO and the Tribes no later than 90 days following the execution of this PA. These parties shall have 30 days from the receipt of this draft to comment. Failure of these parties to respond within this time frame shall not preclude the FHWA from finalizing the draft Identification and Evaluation Plan. Before finalizing the draft plans, the FHWA will provide the SHPO and the Tribes with documentation indicating whether and how any comments from these parties will be incorporated into the final Identification and Evaluation Plan and Data Recovery Plan. Unless the

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SHPO or the Tribes object to this documentation within 15 days following receipt, the FHWA may finalize the plans, as it deems appropriate, distribute copies to the SHPO and the Tribes, and thereafter proceed to implement the final Identification and Evaluation Plan and Data Recovery Plan.

- B. Within thirty (30) days of the FHWA determining that all fieldwork required by stipulations II and III is complete, the FHWA will ensure preparation and concurrent distribution, to the PA parties and the Tribes, for review and comment, of a brief letter report summarizing the fieldwork and preliminary results.
- C. Within twelve (12) months of the FHWA determining that all fieldwork required by stipulation II and III B is complete, the FHWA will ensure preparation and concurrent distribution, to the PA parties and the Tribes, for review and comment, of a draft technical report documenting the results of implementing and completing the DRP. The PA parties and the Tribes will be afforded 30 days following receipt of the draft technical report to submit written comments to the FHWA. Failure of these parties to respond within this time frame shall not preclude the FHWA from authorizing revisions to the draft technical report, as the FHWA deems appropriate. The FHWA will provide the other PA parties and the Tribes written documentation indicating whether and how the draft technical report will incorporate any of the comments received from the other PA parties and the Tribes. Unless any PA party or the Tribes object to this documentation in writing to the FHWA within 30 days following receipt, the FHWA may modify the draft technical report as the FHWA deems appropriate. Thereafter, the FHWA may issue the technical report in final form and distribute this document in accordance with paragraph D of this stipulation.
- D. Copies of the final technical report documenting the results of the DRP implementation will be distributed by the FHWA to the other PA parties, to the Tribes, and to the Central California Information Center of the California Historical Resources Information System housed at CSU Stanislaus.

V. NATIVE AMERICAN CONSULTATION

The FHWA has consulted with the Calaveras Band of Miwok Indians and the Northern Valley Yokuts Tribe (Tribes) regarding the proposed Undertaking and its effects on historic properties, will continue to consult with them, and will afford them, should they so desire, the opportunity to participate in the implementation of the PA and of the Undertaking. Should either Tribe desire, individually, to participate as an PA party as herein set forth, the FHWA will make an effort to reach a consensus with each such Tribe regarding the manner in which that Tribe may participate in the implementation of this PA and the Undertaking, and regarding any time frames or other matters that may govern the nature, scope, and frequency of such participation.

VI. TREATMENT OF HUMAN REMAINS

The PA parties agree that human remains and related items discovered during implementation of the terms of the PA and of the Undertaking will be treated in accordance with the requirements of § 7050.5(b) of the California Health and Safety Code. If, pursuant to § 7050.5(c) of the Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of § 5097.98(a)-(d) of the California Public Resources Code.

VII. DISCOVERIES AND UNANTICIPATED EFFECTS

If the FHWA determines, during implementation of the DRP or after construction of the Undertaking has commenced, that either the implementation of the DRP or the Undertaking will affect a previously unidentified property that may be eligible for the National Register, or affect a known historic property in an unanticipated manner, the FHWA will address the discovery or unanticipated effect in accordance with 36

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CFR § 800.13(b)(3). The FHWA at its discretion may hereunder and pursuant to 36 CFR § 800.13(c) assume any discovered property to be eligible for the National Register

VIII. ADMINISTRATIVE PROVISIONS

A. STANDARDS

1. **Professional Qualifications.** All activities prescribed by stipulations I, II, III, IV and VI of this PA shall be carried out under the authority of the FHWA by or under the direct supervision of a person or persons meeting at a minimum the Secretary of the Interior's *Professional Qualifications Standards* (48 FR 44738-39) (PQS) in the appropriate disciplines. However, nothing in this stipulation may be interpreted to preclude the FHWA or any agent or contractor thereof from using the properly supervised persons who do not meet the (PQS).
2. **Documentation Standards.** Written documentation of activities prescribed by stipulations III, IV, VI, and VII of this PA shall conform to the *Secretary of the Interior's Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740)), as well as to applicable standards and guidelines established by the SHPO.
3. **Curation Standards.** The FHWA shall ensure that, to the extent permitted under §§ 5097.98 and 5097.991 of the California Public Resources Code, the materials and records resulting from the historic preservation work prescribed by this PA are curated in accordance with 36 CFR Part 79. The FHWA will assure that, to the extent permitted by applicable law and regulation, the views of the tribe(s) and Most Likely Descendant(s) are taken into consideration when decisions are made about the disposition of Native American archaeological materials and records other than Native American human remains or items related to such remains.

B. CONFIDENTIALITY

The PA parties acknowledge that historic properties covered by this PA are subject to the provisions of Section 304 of the NHPA and Section 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archaeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this PA are consistent with said sections.

C. RESOLVING OBJECTIONS

1. Should any PA party object to the manner in which the terms of this PA are implemented, to any action carried out or proposed with respect to implementation of the PA (other than the Undertaking itself), or to any documentation prepared in accordance with and subject to the terms of this PA, the FHWA shall immediately notify the other PA parties of the objection and consult with the objecting party and the other parties to this PA for no more than fourteen days to resolve the objection. The FHWA shall reasonably determine when this consultation will commence and may extend this consultation period. If the objection is resolved through such consultation, the action in dispute may proceed in accordance with the terms of that resolution. If, after initiating such consultation, the FHWA determines that the objection cannot be resolved through consultation, then the FHWA shall forward all documentation relevant to the objection to the ACHP, including the FHWA's proposed response to the objection, with the expectation that the ACHP will, within thirty days after receipt of such documentation:
 - a. advise the FHWA that the ACHP concurs in the FHWA's proposed response to the objection, whereupon the FHWA will respond to the objection accordingly. The objection shall thereby be resolved; or

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- b. provide the FHWA with recommendations, which the FHWA will take into account in reaching a final decision regarding its response to the objection. The objection shall thereby be resolved; or
 - c. notify the FHWA that the objection will be referred for comment pursuant to 36 CFR §800.7(a)(4), and proceed to refer the objection and comment. The FHWA shall take the resulting comments into account in accordance with 36 CFR § 800.7(c)(4) and Section 110(1) of the NHPA. The objection shall thereby be resolved
2. Should the ACHP not exercise one of the following options within thirty days after receipt of all pertinent documentation, the FHWA may assume the ACHP's concurrence in its proposed response to the objection. The objection shall thereby be resolved.
 3. The FHWA shall take into account any ACHP recommendation or comment provided in accordance with section C.1 of this stipulation with reference only to the subject of the objection. The FHWA's responsibility to carry out all actions under this PA that are not the subject of the objection will remain unchanged.
 4. At any time during implementation of the measures stipulated in this PA, should an objection pertaining to such implementation be raised by a member of the public, the FHWA shall notify the PA parties in writing of the objection and take the objection into consideration. The FHWA shall consult with the objecting party and, if the objecting party so requests, with the other PA parties for no more than fifteen days. Within ten days following closure of this consultation period, the FHWA will render a decision regarding the objection and notify all consulting parties of its decision in writing. The objection will thereby be resolved. In reaching its decision, the FHWA will take into account any comments from the consulting parties regarding the objection, including the objecting party. The FHWA's decision regarding the resolution of the objection will be final.
 5. The FHWA shall provide all PA parties, the ACHP, when the ACHP has issued comments hereunder, and any parties that have objected pursuant to section C. 4 of this stipulation with a copy of its final written decision regarding any objection addressed pursuant to this stipulation.
 6. The FHWA may authorize any action subject to objection under section C of this stipulation to proceed after the objection has been resolved in accordance with the terms of section C.I.

D. AMENDMENTS

1. Any PA party may propose that this PA be amended, whereupon the PA parties will consult for no more than 30 days to consider such amendment. The FHWA may extend this consultation period. The amendment process shall comply with 36 CFR Part 800.6(c)(1) and 800.6(c)(7). This PA may be amended only upon the written agreement of the signatory parties. If it is not amended, either signatory party, in accordance with section E of this stipulation, may terminate this PA.
2. Attachments to this PA may be amended through consultation as prescribed in section B of stipulation II or section C of stipulation III, as appropriate, without amending the PA proper

E. TERMINATION

1. If this PA is not amended as provided for in section D.1 of this stipulation, or if either signatory party proposes termination of this PA for other reasons, the signatory party proposing termination shall, in writing, notify the other PA parties explaining the reasons for proposing termination, and consult with the other PA parties for at least 30 days to seek alternatives to

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termination. Such consultation shall not be required if the FHWA proposes termination because the Undertaking no longer meets the definition set forth in 36 CFR § 800.16(y).

2. Should such consultation result in an agreement on an alternative to termination, then the PA parties shall proceed in accordance with the terms of that agreement.
3. Should such consultation fail, the signatory party proposing termination may terminate this PA by promptly notifying the other PA parties in writing. Termination hereunder shall render this PA without further force and effect.
4. If this PA is terminated hereunder, and if the FHWA determines that the Undertaking will nonetheless proceed, then the FHWA shall either consult in accordance with 36 CFR § 800.6 to develop a new PA, or request the comments of the ACHP, pursuant to 36 CFR Part 800.

F. DURATION OF THE PA

1. Unless terminated pursuant to section E of this stipulation, or an amended PA supersedes it, this PA will be in effect following execution by the signatory parties until the FHWA, in consultation with the other parties, determines that all of its stipulations have been satisfactorily fulfilled. This PA will terminate and have no further force or effect on the day that the FHWA notifies the other PA parties in writing of its determination that all stipulations of this PA have been satisfactorily fulfilled.
2. The terms of this PA shall be satisfactorily fulfilled within five years following the date of execution by the signatory parties. If the FHWA determines that this requirement cannot be met, the PA parties will consult to reconsider its terms. Reconsideration may include continuation of the PA as originally executed, amendment of the PA, or termination. In the event of termination, the FHWA will comply with section E.4 of this stipulation if it determines that the Undertaking will proceed notwithstanding termination of this PA.
3. If the Undertaking has not been implemented within five years following execution of this PA by the signatory parties, this PA shall automatically terminate and have no further force or effect. In such event, the FHWA shall notify the other PA parties in writing and, if it chooses to continue with the Undertaking, shall reinstate review of the Undertaking in accordance with 36 CFR Part 800.

G. EFFECTIVE DATE

This PA will take effect on the date that it has been executed by the FHWA and the SHPO.

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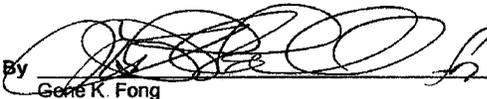
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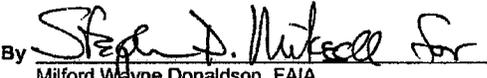
EXECUTION of this PA by the FHWA and the SHPO, its transmittal by the FHWA to the FHWA in accordance with 36 CFR § 800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36 CFR § 800.6(c), that this PA is an agreement with the ACHP for purposes of Section 110(1) of the NHPA and shall further evidence that the FHWA afforded the ACHP an opportunity to comment on the Undertaking and its effects on historic properties, and that the FHWA has taken into account the effect of the Undertaking on historic properties.

SIGNATORY PARTIES:

Federal Highway Administration

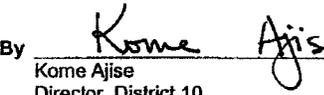
By  Date Sept 6, 2006
Gene K. Fong
Division Administrator
California Division

California State Historic Preservation Officer

By  Date 9/8/06
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

CONCURRING SIGNATORY:

California Department of Transportation

By  Date 9/13/06
Kome Ajise
Director, District 10

Calaveras Band of Mi-wuk

By _____ Date _____
Charles Wilson
Tribal Chairperson

Northern Valley Yokuts Tribe

By _____ Date _____
Katherine Erolinda Perez

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List of Technical Studies that are Bound Separately

Relocation Impact Memorandum

Air Quality Report

Noise Study Report

Water Quality Report

Natural Environment Study

Location Hydraulic Study

Historic Property Survey Report

Hazardous Waste Initial Site Assessment

Visual Impact Assessment

Paleontology Study

Route 26 Assessment Report on Paleontological Sensitivity