

Interstate 680 Northbound Pavement Rehabilitation Project

ALAMEDA COUNTY, CALIFORNIA
CALTRANS, DISTRICT 4
INTERSTATE 680 – ALA PM 0.0-4.0
EA 3G600; Project ID 04-1200-0139
STATE CLEARINGHOUSE # 2015112051

Initial Study with Mitigated Negative Declaration



Prepared by the
California Department of Transportation

March 2016



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INITIAL STUDY WITH MITIGATED NEGATIVE DECLARATION

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| 04 – ALA – 680 | ALA 680 – 0.0/4.0 | EA 3G600 |
| Dist.-Co.-Rte. | P.M/P.M. | E.A. |

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| Project Title: | Interstate 680 Northbound Pavement Rehabilitation Project |
| Lead agency name and address: | California Department of Transportation 111 Grand Ave., Oakland, CA 94612 |
| Contact person and phone number: | Ron Kiaania, Project Manager (510) 286-4193 |
| Project Location: | Fremont, Alameda County California |
| General plan description: | Transportation |
| Zoning: | Transportation |
| Other public agencies whose approval is required (e.g., environmental permits); CEQA Responsible Agencies are denoted with a *: | <ul style="list-style-type: none"> • Biological Opinion from the U.S. Fish and Wildlife Service • Lake and Streambed Alteration Agreement from California Department of Fish and Wildlife* • Clean Water Act 404 Permit from the U.S. Army Corps of Engineers • Clean Water Act 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board* • California Transportation Commission* • Incidental Take Permit from the California Department of Fish and Wildlife* |

Additional copies of this document, as well as the technical studies this document relies on, are available for review at the District Office, 111 Grand Ave., Oakland, CA 94612.

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|  Stefan Galvez-Abadia Chief, Office of Environmental Analysis District 4 California Department of Transportation | 03/02/2016 Date |
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Project Information

Setting

The California Department of Transportation (Caltrans) proposes to rehabilitate the freeway mainline and on/off-ramps on the northbound segment of Interstate 680 (I-680) approximately between Scott Creek Road (just north of PM 0.0) and Auto Mall Parkway (PM 4.0) in the City of Fremont (see Project Location Map). Northbound I-680 consists of three mixed flows lanes that are 12 feet wide each. The northbound and southbound sides of the freeway within the project limits are separated by a double thrie beam barrier. The northbound shoulder between Mission Boulevard and Auto Mall Parkway is 10 feet wide but only 5 feet of it is currently paved. All other shoulders within the project limits are 10 feet wide and completely paved. The portion of I-680 within the project limits is a full access-controlled freeway with residential and commercial land uses on both sides of the freeway.

Project Goal

Caltrans proposes to rehabilitate the freeway mainline and on/off-ramps between Scott Creek Road and Auto Mall Parkway by resurfacing the existing flexible and rigid pavement, and upgrading additional features within the project limits to meet current standards. These features would include the installation of rumble strips, replacement or installation of new guardrail, concrete barriers, crash cushions, Hot Mix Asphalt (HMA) dikes, concrete curbs, sidewalks, and pedestrian curb ramps. Additional rehabilitation activities would include the replacement or installation of drainage facilities, overhead signs, roadside signs, Traffic Monitoring Stations (TMSs) lighting, and replacement of existing concrete approach slabs at several bridge locations.

The purpose of the proposed project is to preserve and extend the roadway service life. The pavement condition survey (PCS) for this section of the freeway has an overall Pavement Management System (PMS) priority number 5, which characterizes the pavement as having minor to moderate distress and poor ride quality.

Project Description

Pavement Resurfacing

The proposed project would resurface the existing flexible pavement between State Route 262 (Mission Boulevard) and Scott Creek Road from Edge of Pavement to Edge of Pavement (EP) using the cold-plane method. This process consists of an Asphalt Concrete (AC) grinding machine with a conveyor belt that would grind the existing pavement and a roller to spread out the newly poured AC. The existing roadway section from EP to EP in this section would be removed up to a depth of 0.25 feet and replaced with a new composite Hot Mix Asphalt (HMA) layer ranging between 0.6-1 feet deep. Existing potholes and severely deteriorated asphalt would be removed as part of the pavement resurfacing operation. Rumble strips would be

installed on the outer edges of both the inside lane and outside lanes by using a hot roller method to press them into the AC.

The proposed project would resurface the existing rigid pavement between Mission Boulevard and Auto Mall Parkway using the crack, seat, and overlay method. This method would require a backhoe with a hammer attached to it to crack the existing pavement in preparation for the new overlay. Deteriorated Portland Cement Concrete (PCC) slabs would be removed by saw-cutting the pavement to a depth of 1.5 feet. A crack and seat machine would pass through, dropping its hammer on the existing pavement slabs where the new pavement is intended to be placed. Rapid Set Concrete would be used to replace the existing pavement. All pavement grindings and broken concrete material would be hauled off-site to the appropriate disposal facility.

Gore pavement would be replaced between the ramps and mainline and would involve one foot of excavation for the new pavement. In addition to this, the existing concrete approach slabs at bridge approaches would also be replaced as part of this project.

Traffic Monitoring Stations

The existing Traffic Monitoring Stations (TMSs) within the project limits would be replaced as part of the project. A TMS is a count loop device that is installed in the pavement that detect vehicles passing over the roadway above. The inductive loop detectors within the existing traveled lanes would be replaced as part of preserving the existing TMSs. The loop detectors would be placed within the paved surfaces to a depth of no more than two inches. There are nine locations along the mainline of the freeway within the project limits where loop detectors would be replaced.

Traffic Lighting

New traffic lighting would be installed between Mission Boulevard and Auto Mall Parkway. Approximately 50 new lights would be installed along the outside portion of northbound I-680 and would be spaced approximately 180 feet apart. The lights would be installed on piles five feet deep and would have a 2.5 feet by 2.5 feet foundation. Approximately 12,800 linear feet of trenching for new electrical conduits would be needed for the new traffic lighting. The new electrical conduit would be installed within the existing paved shoulder in a trench that would be 3 feet deep and 1 foot wide. Approximately 72 pull boxes would be needed for the new electrical conduits. The new pull boxes would be used to pull cable through the conduit. The proposed pull boxes would have a maximum depth of 3 feet and would have a footprint of two feet by three feet. The new pull boxes and trench would be installed within the existing shoulder of the freeway using a backhoe. New electrical lines that are intended to cross the freeway would be installed using jacking pits for a directional bore. New electrical lines would cross the freeway in approximately four locations. Installing these new lines would require digging jacking pits to drop the directional bore into. These four jacking pits would be approximately six feet deep and six feet wide each for the directional bore.

Asphalt-Concrete Dikes

Existing Asphalt-Concrete (AC) dikes would be replaced within the project limits to meet current standards. AC dike replacement work would involve removing the existing AC pavement

sections to a depth of no more than 0.3 feet. Approximately 20,850 linear feet of AC dikes would be replaced.

Guardrails

Existing Metal Beam Guardrails (MBGRs) within the project limits would be replaced with the new standard Midwest Guardrail System (MGS). An auger with a six inch drill would be used to drill new holes for the wooden posts to a maximum depth of seven feet. A thin layer of vegetation control (minor concrete) would be installed underneath the new MGS to reduce the need for manual weed control. The new vegetation control would be three inches thick and would be about five feet wide.

Concrete Barriers

New concrete barriers would be constructed between loop ramps and diagonal ramps. Due to the different elevation of the ramps on either side, a concrete barrier slab would be needed to add stability. The depth of the concrete barrier slab would be three feet deep. Crash cushions would be attached to the ends of the new barriers.

Overhead Signs

Seven existing overhead signs within the project limits would be replaced. The preexisting signs would be removed from the existing pile foundation and the pile would be left in place. The new overhead signs would be installed on a new cast-in-drilled-hole (CIDH) pile that would be six feet long. To install the new overhead sign, an auger would be used to drill to an approximate depth of 25 feet for the new piles. A rebar cage would then be dropped into the newly drilled pile, concrete would be poured in, and a sign structure would be erected. The sign panel would be placed last on top of the sign structure.

Pedestrian Facilities

American Disabilities Act (ADA) curb ramps and sidewalks would be replaced or installed to meet current standards.

Drainage Facilities

The newly increased pavement thickness would require existing drainage inlets to be adjusted to match the new finished grade. Installation and/or replacement of the guardrails, concrete barriers, crash cushions, Hot Mix Asphalt (HMA) dikes, and overhead signs would also require modification of existing drainage inlet structures and pipes. Existing drainage facilities that are damaged, deteriorated, or do not meet current standards would also be replaced. The depth of the buried pipes would be the diameter of the new pipe, plus a maximum cover of three feet.

The trench for the new pipe would be four feet wide (two feet wide on both sides of the pipe) plus the diameter of the pipe itself. The drainage facilities to be modified or upgraded within the project limits vary in diameter size and material such as Alternative Pipe Culvert (APC), Corrugated Steel Pipe (CSP), and Reinforced Concrete Pipe (RCP).

Final determination of pipe size would be determined during final design of the project. A backhoe would be used to dig the trenches for the new pipe structures. A temporary

construction work area would be needed to for the installation of the new drainage facilities. All work would occur within the existing State right-of-way (R/W). The temporary work area would be 24 feet wide (12 feet from the centerline of the pipe of on both sides) and 12 feet long from the end of the pipe.

Traffic Control

Construction work is anticipated to take place primarily at night and would take approximately 200 working days to complete. Lane closures on the mainline and ramp closures would be needed for traffic control during construction. Detours would be used to direct traffic to the next available interchange. Local and county roads would not be used for detours.

Staging

Construction equipment and staging would occur within the existing right-of-way (R/W). The southeast quadrant of the Auto Mall Parkway/Durham Road interchange and the east side of the Scott Creek Road diagonal loop ramp have been identified as potential staging area locations for the project.

Environmental Setting

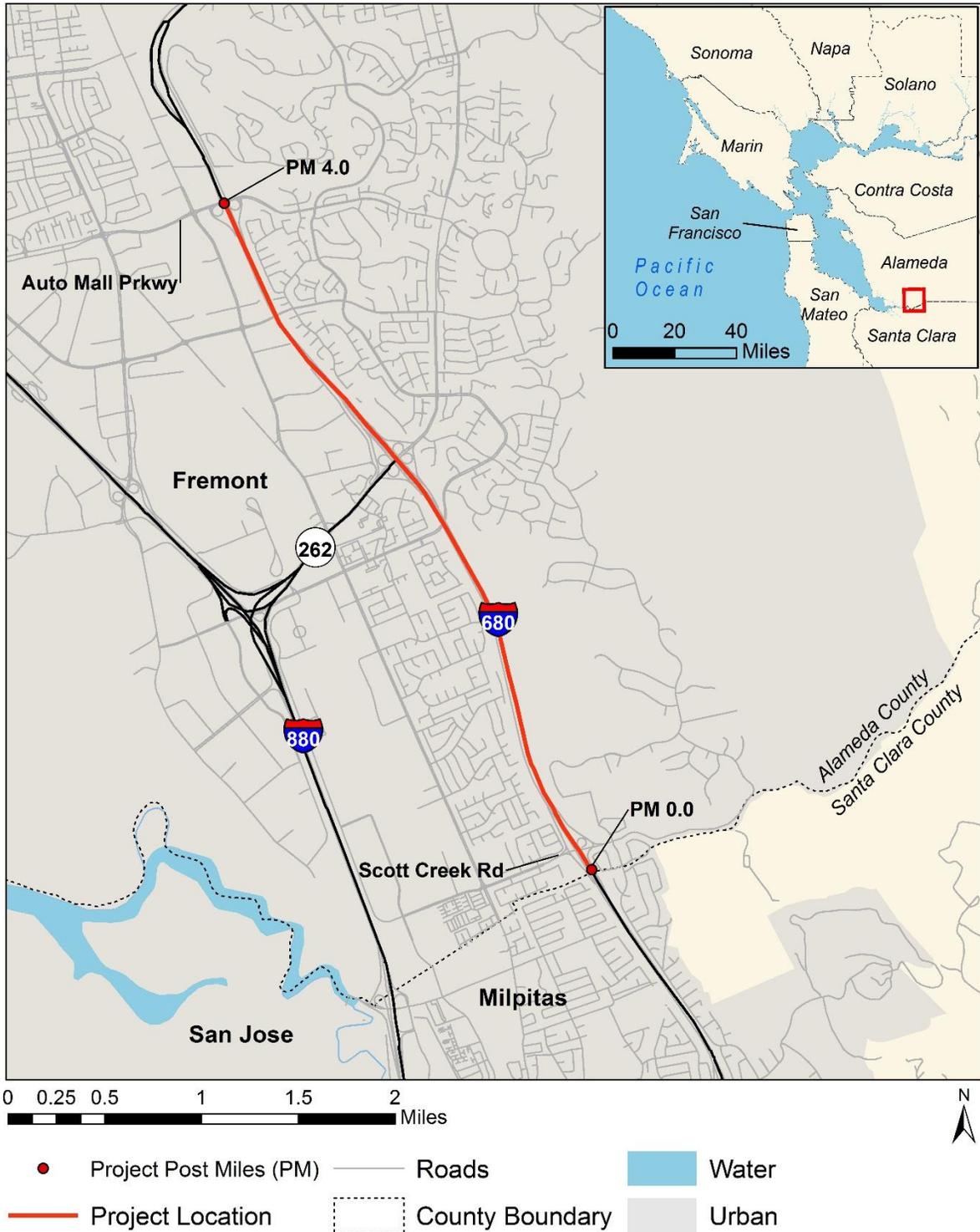
The area adjacent to either side of the project is highly urbanized/landscaped as it passes through the City of Fremont. The habitats within the project limits are confined by the built environment on either side of the Caltrans R/W with little to no connectivity with non-urbanized environments. The existing habitats within the project area are disturbed grasslands with some freshwater marsh and creeks that flow through culverts under I-680. Most habitats are dominated by non-native plant species and some have been modified through landscaping.

Consistency with Existing Zoning Plans

The site of the proposed project runs northward through the southern half of the City of Fremont, CA and is completely within the city limits of Fremont and the county limits of Alameda County. The areas adjacent to the project are zoned for residential, commercial, industrial, and open space. The project complies with the stated goals, guidelines, and recommendations of both the county's plans and the city's plans.

Project Location Map

Interstate 680 Northbound Pavement Rehabilitation Project
City of Fremont, California



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MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate the freeway mainline and on/off-ramps on northbound Interstate 680 (I-680) between Auto Mall Parkway and Scott Creek Road near the City of Fremont by resurfacing the existing pavement from edge of pavement to edge of pavement to preserve and extend the service life of the roadway. The project would also upgrade and replace various additional features including rumble strips, guardrails, concrete barriers and crash cushions, hot mix asphalt dikes, concrete curbs, pedestrian sidewalks and curb ramps, drainage systems, signs, traffic monitoring stations, lighting and signals, and some bridge approach slabs.

Determination

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

Impacts to state and federally listed species will be reduced to a less than significant level based on habitat restoration efforts on- and off-site of the project for freshwater marsh and grasslands habitats. Caltrans will also implement a project specific Paleontological Mitigation Plan to reduce impacts to fossil resources to a less than significant level.

The project would have no effect on Greenhouse gas emissions, land use/planning, population/housing, transportation/traffic, agriculture and forestry, hazards and hazardous materials, mineral resources, public services, air quality, geology/soils, recreation, and mandatory findings of significance.

In addition, the project would have less than significant effects to aesthetics, utilities/service systems, hydrology/water quality, and noise.

With the following mitigation measures incorporated, the project would have less than significant effects to biological resources and cultural/paleontological resources:

Grassland and freshwater marsh habitat on- and off-site restoration for California red-legged frog, California tiger salamander, and Alameda whipsnake.

Paleontological Mitigation Plan for paleontological resources within the Irvington Gravels.



Melanie Brent
Deputy District Director
District 4
California Department of Transportation



Date

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A. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 11 for additional information.

| | | | | | |
|-------------------------------------|--------------------------|-------------------------------------|---------------------------------|-------------------------------------|------------------------------------|
| <input checked="" type="checkbox"/> | Aesthetics | <input type="checkbox"/> | Agriculture and Forestry | <input type="checkbox"/> | Air Quality |
| <input checked="" type="checkbox"/> | Biological Resources | <input checked="" type="checkbox"/> | Cultural Resources | <input type="checkbox"/> | Geology/Soils |
| <input type="checkbox"/> | Greenhouse Gas Emissions | <input type="checkbox"/> | Hazards and Hazardous Materials | <input checked="" type="checkbox"/> | Hydrology/Water Quality |
| <input type="checkbox"/> | Land Use/Planning | <input type="checkbox"/> | Mineral Resources | <input checked="" type="checkbox"/> | Noise |
| <input type="checkbox"/> | Population/Housing | <input type="checkbox"/> | Public Services | <input type="checkbox"/> | Recreation |
| <input type="checkbox"/> | Transportation/Traffic | <input checked="" type="checkbox"/> | Utilities/Service Systems | <input type="checkbox"/> | Mandatory Findings of Significance |

B. DETERMINATION

On the basis of this initial evaluation:

| | |
|-------------------------------------|--|
| <input type="checkbox"/> | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| <input checked="" type="checkbox"/> | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| <input type="checkbox"/> | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| <input type="checkbox"/> | I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| <input type="checkbox"/> | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required |

| | |
|---------------------------------|--------------|
| Signature: <i>Melanie Brent</i> | Date: 3/4/16 |
| Printed Name: Melanie Brent | For: |

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CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance. Please note that content-based changes to the text from the draft environmental document to the final environmental document will be noted with a line in the right hand margin when the document is finalized.

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| I. AESTHETICS: Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The design would be consistent with the visual quality of the highway corridor, and no scenic resources would be adversely affected by the proposed project. There would not be a substantial removal of vegetation. The additional lighting included in the proposed project will not increase the amount of nighttime lighting substantially above what is already present due to the dense residential, industrial, and commercial areas.

Avoidance or minimization measures have been identified and can lessen visual impacts of the project. The primary means of minimizing potential project impacts to visual resources involves replanting the State R/W within the project limits. All disturbed areas would be revegetated following construction. Any functional landscaping and irrigations systems that are damaged or removed would be replaced or repaired.

| | | | |
|--------------------------------------|--|------------------------------------|--------------|
| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------------|--|------------------------------------|--------------|

II. AGRICULTURE AND FOREST

RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project. and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

No agricultural lands will be directly or indirectly affected by the project.

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|--------------------------------|---------------------------------------|------------------------------|-----------|
| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------|---------------------------------------|------------------------------|-----------|

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

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project proposes to rehabilitate the existing paved roadway and will not increase, or otherwise change, the amount or type of traffic on the freeway. Therefore, the project will not affect air quality.

| | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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IV. BIOLOGICAL RESOURCES: Would the project

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|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project site is in largely disturbed residential and industrial areas of the City of Fremont. Sensitive habitats that are within Caltrans' R/W of the project area are grassland, freshwater marsh, seasonal wetlands, and creek channels. Work on the existing drainage system has the potential to impact grassland and freshwater marsh areas and may impact creek habitat. Most of the work on the roadway will be restricted to the area immediately adjacent to the already paved surface of the active travel-way and shoulders. The area within the southeast quadrant of the Auto Mall Parkway/Durham Road Interchange and the east side of Scott Creek Road diagonal loop ramp has been identified as a suitable area for construction staging.

The vegetation within Caltrans' R/W is dominated by grassland with few wetland and creek areas. The remainder of the landscape is urbanized/landscaped with structures, lawns, landfill, and other maintained features with horticultural plantings.

The grassland habitat is mostly composed of non-native dominated species, with less than 10% relative cover being California Native grasses and forbs. A plant survey performed for this project found that this grassland group included the following species plant species: wild oats grasslands (*Avena [barbata, fatua]* Semi-Natural Herbaceous Stands), annual bromes grasslands (*Bromus [diandrus, hordeaceus]* – *Brachypodium distachyon* Semi-Natural Herbaceous Stands), upland mustards (*Brassica [nigra]* and Other Mustards Semi-Natural Herbaceous Stands), yellow star-thistle fields (*Centaurea [solstitialis, melitensis]* Semi-Natural Herbaceous Stands), poison hemlock or fennel patches (*Conium maculatum-Foeniculum vulgare* Semi-Natural Herbaceous

Stands), and harding grass swards (*Phalaris aquatica* Semi-Natural Herbaceous Stands). There will be 1.85 acres of temporary habitat impact and 0.15 acres of permanent habitat impact for a total of 2 acres of total impact to grassland habitat.

The freshwater marsh habitat within the area is composed of narrowleaf cattail (*Typha angustifolia*), southern cattail (*T. domingensis*), and broadleaf cattail (*T. latifolia*). There will be 0.008 acres of temporary habitat impact and 0.0006 acres of permanent habitat impact for a total of 0.009 acres of total impact to freshwater marsh habitat.

A protocol-level rare plants survey was conducted according to the botanical survey guidelines of the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and the California Native Plants Society (CNPS). For this project, rare plants include those that are included in CNPS' Inventory of Rare and Endangered Plants and/or are federally listed. There were no rare plants observed within the project area and they are not expected to occur.

A wetlands delineation investigation was conducted to determine where potentially jurisdictional waters of the US may occur within the project area, following the methods described in the Army Corps of Engineers' Wetlands Delineation Manual (USACE 1987) and supplemented with guidance as directed by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). The investigation identified 0.155 acres of potential waters of the U.S. that occur within the project area and wetland features that total 0.084 acres.

The project area is known to support protected wildlife, including federally listed species, migratory birds, and state species, and special status species of concern. Federally listed threatened animal species that will or have the potential to be impacted by the project include the California red-legged frog (*Rana draytonii*, CRLF), also a state species of special concern; California tiger salamander (*Ambystoma californiense*, CTS) also a state threatened species; and Alameda whipsnake (*Masticophis lateralis eurxanthus*, AWS), also a state threatened species. The Western burrowing owl (*Athene cuniculara hypogea*, WBO), a state species of special concern, may also be affected by the project.

Impacts to Biological Resources

Impacts to biological resources associated with this project include: grassland and freshwater marshland vegetation removal, work on drainage features, grubbing of the project site, construction staging activities, construction-related noise, compaction, and potential sedimentation downstream. Caltrans does not anticipate this project will negatively affect areas outside the project footprint. The discussion below highlights the impacts to special-status animals, marshlands, and waters within the project area. It also highlights the avoidance and minimization measures (AMMs) that will be implemented to minimize impacts to special-status species and to protect the surrounding environment from project-related impacts. Additionally, the complete list of proposed AMMs can be found in Appendix E.

Special-status Animals within the Project Area

Special-status animal species given further consideration with this project include the CTS, CRLF, AWS, WBO, and migratory birds.

Pursuant to Section 7 of the Endangered Species Act, Caltrans has obtained a Biological Opinion from the USFWS for CTS, CRLF, and AWS. Caltrans will obtain an Incidental Take Permit from the CDFW for CTS and AWS.

There are five documented occurrences of CTS within the species' known 1.3 mile dispersal range of the project area. The most recent was in 2004. However, there is no designated critical habitat for CTS within the project area and there are no documented occurrences of the species within the project area. CTS requires both upland grass habitat and breeding ponds. There are no suitable breeding ponds in the project area. There are some areas of the grasslands within

the project area that are suitable for upland habitat, primarily between South Mission Boulevard (State Route 262) and Scott Creek Road. This is considered marginal habitat due to the high levels of roadside disturbance. There are no dispersal corridors for CTS within the project area due to the urbanization of the lands immediately adjacent to one, or both sides of I-680 in the project area. Habitat impacts are considered to have a minor potential to adversely impact the behavior patterns of some individuals of the species.

Pursuant to Section 7 of FESA, Caltrans concluded that this project may affect, and is likely to adversely affect, CTS. The proposed project will likely result in direct impacts on the CTS within the project area and may result in the harassment, harm, injury, or mortality of individuals during construction activities, including initial site preparation, during use of heavy equipment for excavation and backfill, during handling of stockpiles and store materials, and during construction of project elements. The potential for take of CTS will be reduced to the greatest extent practicable through the implementation of the AMMs listed in Appendix E. Proposed AMMS include biological monitors present during construction, worker environmental awareness training, pre-construction surveys, prevention of wildlife entrapment measures, wildlife exclusion fencing, proper materials storage, and prohibiting the use of monofilament plastic.

California red-legged frog has eight known occurrences within five miles of the project area, one of which is within a mile of the project. This occurrence was in Agua Caliente Creek, which runs under the project area as a covered culvert. Surveys for CRLF were conducted in 2012 as part of another project along an overlapping stretch of the project area. These surveys were conducted according to the most recent USFWS survey protocol (USFWS 2005b). There were no instances of CRLF found during these surveys. They have the potential to occur in grassland, freshwater marsh, and creek channel habitats within the project area between South Mission Boulevard and Scott Creek Road. The paved surface of I-680 and the urbanized landscape surrounding the Caltrans R/W create landscape barriers that do not allow dispersal corridors for the CRLF within the project area. This also removes essential habitat elements for the species within the project area.

Pursuant to Section 7 of FESA, Caltrans concluded that this project may affect, is likely to adversely affect, the CRLF. The proposed project will likely result in direct and indirect impacts on the CRLF and its habitat within the project footprint and may result in the harm and harassment of individuals during construction activities. Habitat impacts will occur with the placement of fill material and other construction activities on grassland, which may provide potential upland and foraging habitat. Culvert replacement or installation will impact a total of 0.009 acre of freshwater marsh, which may provide potential foraging, aquatic dispersal, and/or resting sites. The potential for take of CRLF will be reduced to the greatest extent practicable through the implementation of the AMMs listed in Appendix E. Proposed AMMS include biological monitors present during construction, worker environmental awareness training, pre-construction surveys, prevention of wildlife entrapment measures, wildlife exclusion fencing, proper materials storage, and prohibiting the use of monofilament plastic.

There have been two recorded occurrences of AWS within 5 miles of the project area. While there is no scrub habitat within the project area, the grassland habitat may be used by individuals for dispersal into other areas that are more suitable. The grasslands in the project area are considered marginal quality due to the high disturbance caused from the roadway and surrounding urbanized areas. AWS are not expected to occur in areas with landscaping or other forms of urbanization. Due to the high levels of urban development and high traffic roadways in the surrounding areas, no dispersal corridors for AWS exist within the project area and there is no critical habitat for AWS in the project area. However, critical habitat for the species does exist 2.5 miles east of the project area. Due to the high mobility of the species, there is a potential for AWS to exist in the grasslands within the project area.

Pursuant to Section 7 of FESA, Caltrans concluded that this project may affect, is likely to adversely affect, the AWS. The proposed project will likely result in direct and indirect impacts on

the AWS and its habitat within the project footprint and may result in the harm and harassment of individuals during construction activities. Habitat impacts will occur with the placement of fill material and other construction activities on grassland, which may provide potential upland, foraging, and dispersal habitat. The potential for take of AWS will be reduced to the greatest extent practicable through the implementation of the AMMs listed in Appendix E. Proposed AMMS include biological monitors present during construction, worker environmental awareness training, pre-construction surveys, prevention of wildlife entrapment measures, wildlife exclusion fencing, proper materials storage, and prohibiting the use of monofilament plastic.

Western burrowing owl can be found in open, flat or sloped grasslands but require burrows for nesting and wintering. This species typically nests in the burrows created by burrowing mammals, such as California ground squirrels, but they will nest in open pipes, concrete rubble piles, and small dry culverts. There are 5 occurrences of WBO miles within 1 mile of the project area, all to the west of I-680 and just south of Auto Mall Parkway Interchange. The grassland habitat within the project area is generally too thick to be suitable habitat for burrowing owls, though there is a low potential for some individuals to occasionally forage within the area. Overall, WBO are not known to currently use the project area. However, if owls are discovered, Caltrans will contact the CDFW and Wildlife for further guidance.

Direct impacts to Western burrowing owls are not anticipated as a result of this project. Preconstruction surveys can avoid the direct impacts of occupied burrows. WBO may be indirectly affected by noise, light, and visual disturbance. However, these effects are likely to be negligible considering the highly disturbed existing conditions of the surrounding urban area. Some of the habitat mitigation that Caltrans will be providing for CTS, CRLF, and AWS will also enhance suitable habitat that WBO has in common with these other species.

While the proposed project is likely to adversely affect the CTS, CRLF, AWS and could potentially affect the WBO, planned AMMs will minimize most of these potential adverse effects and a full list can be found in Appendix E. Through consultation with the USFWS, Caltrans proposes the following mitigation for federally listed species in order to reduce potential adverse impacts to less than significant with mitigation through efforts such as onsite habitat restoration, off-site habitat restoration, and/or the purchase of species credits through a USFWS and CDFW approved mitigation bank. The exact amounts for each species can be found in Appendix E. The final mitigation actions may be subject to change during the consultation and permitting process.

The habitat present along the stretch of I-680 where the project occurs provides marginal quality habitat for nesting migratory birds. However, the non-paved surfaces of the area can be used by one or more bird species for nesting. The majority of migratory birds are protected by the Migratory Bird Treaty Act (MBTA). Several common bird species have been observed within the project area. Measures have been incorporated into this project to avoid the take of migratory birds and their nests (Appendix E). Temporary loss or disturbance of habitats that are used by nesting birds may temporarily displace nesting bird species. However, no mortality of migratory birds is anticipated with the implementation of proposed AMMS.

Wetlands and Waters

This proposed project may impact wetlands and waters under the jurisdiction of the U.S. Army Corps of Engineers and the San Francisco Bay Regional Water Quality Control Board. The anticipated impacts would be 0.008 acre of temporary and 0.006 acre of permanent impacts due to the proposed drainage work on a culvert that abuts a small wetland feature.

Caltrans will consult with the U.S. Army Corps of Engineers during the permitting process on how best to mitigate for wetland impacts. Onsite, offsite, or a combination of both options may be pursued. If offsite mitigation is required, Caltrans proposes to mitigate at a 1:1 ratio of mitigation credits at a U.S. Army Corps of Engineers-approved mitigation bank for any permanent impacts.

Invasive Species

Caltrans recognizes the potential for construction activities to result in the introduction of non-native species to a project area. Standard AMMs will be proposed to control the spread of invasive species.

Native Plant Species Protection

Under the requirements of the Native Plant Protection Act (NPPA), Caltrans is required to conserve endangered and rare native plants (California Fish and Game Code Sections 1900-1913). Caltrans has conducted a botanical survey and found no endangered and rare native plants in the project area. There are no effects to endangered or rare native plants expected from this project.

Avoidance and Minimization

Caltrans will restore all disturbed areas on site, including wetland areas around the culvert impacted by the drainage work. Upland grass areas impacted during the project will be reseeded with a native seed mix. Offsite restoration efforts will be explored during the permitting and design phase of this project but are not needed to avoid significant impacts to wetlands and waters of the U.S. or protected wildlife and plant species.

Avoidance and minimization measures that will be implemented during this project to reduce impacts to the local environment, include: worker environmental awareness training, the delineation of work areas with high-visibility fencing to prevent construction equipment encroachment into sensitive areas, minimizing night-time work, only removing the minimum amount of vegetation necessary to complete the project, water quality best management practices, etc.

Additional specific requirements for special-status species or habitat restoration will be addressed in permitting. All avoidance and minimization measures will be incorporated into the bid package and the construction contract.

This discussion highlights the AMMs, a complete list of proposed AMMs can be found in Appendix E.

| | | | |
|--------------------------------|---------------------------------------|------------------------------|-----------|
| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------|---------------------------------------|------------------------------|-----------|

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

No historic structures have been identified in the immediate vicinity of the project. The proposed project would require some ground disturbance activities, both on the surface and in the ground. Trenching would require shallow digging. However, the installation of overhead sign poles would require 25 foot deep holes for the pile foundations of the poles in a few locations.

There is one known archaeological site within the project's Area of Potential Effects established by a Caltrans Professionally Qualified Staff (PQS). This site has been identified and the limits are well documented. Impacts to this site would be avoided by installing environmentally sensitive area (ESA) fencing around the circumference of this site and prohibiting access to the site during construction in accordance with an ESA Action Plan that will be prepared by a Caltrans PQS member.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered during construction, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the Caltrans District 4 Office of Cultural Resources so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

A section of the project site also contains part of the Irvington Gravels formation which is known to contain North American land mammal fossils from the beginning of the Quaternary Period (~1.8 million years ago) to 240,000 years ago. Only the installation of overhead signs has the potential to affect the fossil bearing formation since other project features are in previously disturbed areas.

The Irvington Gravels are considered to be a unique paleontological resource. Impacts to the Gravels will be reduced to less than significant with mitigation through implementation of avoidance measures. A project-specific Paleontological Mitigation Plan will be prepared by a qualified paleontologist and a paleontologist will be present onsite during construction to educate construction workers on identification of fossil resources and monitor construction activities.

If fossil resources are discovered during construction, all earth-moving activities within and around the immediate discovery area will be halted until the paleontological monitor can assess the nature and significance of the find. See Appendix E for further information on Avoidance and Minimization Measures for paleontological resources.

| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------|---------------------------------------|------------------------------|-----------|
|--------------------------------|---------------------------------------|------------------------------|-----------|

VI. GEOLOGY AND SOILS: Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project contains no components which would contribute to soil or slope instability. All slopes will be stabilized using standard Caltrans erosion-control BMPs.

| | | | |
|--------------------------------|---------------------------------------|------------------------------|-----------|
| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------|---------------------------------------|------------------------------|-----------|

VII. GREENHOUSE GAS EMISSIONS:

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. See http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/The_Department_Climate_Action_Program.pdf

Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane). In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and "Adaptation." "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)¹.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.²

¹ http://climatechange.transportation.org/ghg_mitigation/

² http://www.fhwa.dot.gov/environment/climate_change/mitigation/

Regulatory Setting

State

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

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

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

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

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

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

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Federal

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis. ³ FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions. U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.⁴

The U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama’s 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO₂ emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

³ To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

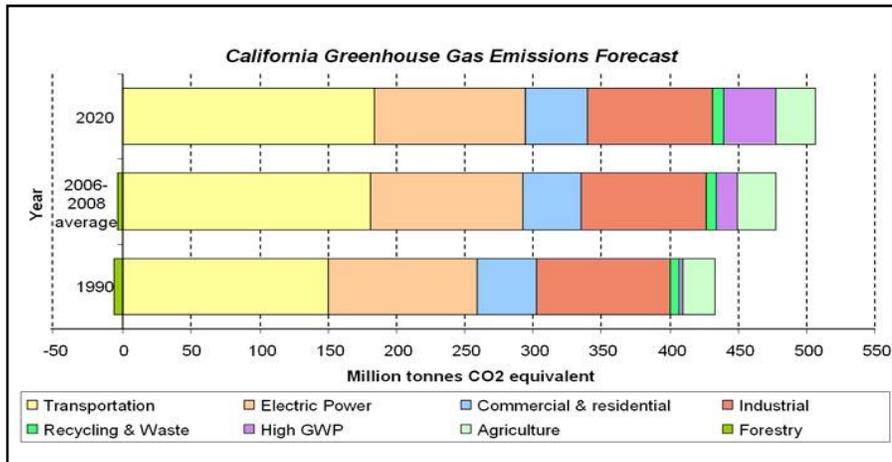
⁴ <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.⁵ In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

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

Figure 1 California Greenhouse Gas Forecast



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

Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.⁶

The purpose of this project is to rehabilitate the pavement of the NB section of I-680 through repaving and will not result in additional lanes or a change in the pattern or types of traffic that

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

⁶ Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/The_Department_Climate_Action_Program.pdf

use this roadway. By keeping the existing lane configuration and on/off-ramps that connect to the main line, the project will not result in an increase in car use or a change in truck traffic above the existing levels and thus will not result in an increase in CO₂ emissions due to this project. As discussed below, construction emissions will be unavoidable, but there will likely be long-term GHG benefits associated reduced maintenance and improved operation through smoother pavement surfaces.

Construction Emissions

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

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

Although construction emissions are unavoidable and are expected to be minimal, the proposed project will not increase capacity and is not expected to result in additional operational CO₂ emissions. However, it is Caltrans’ determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project’s direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

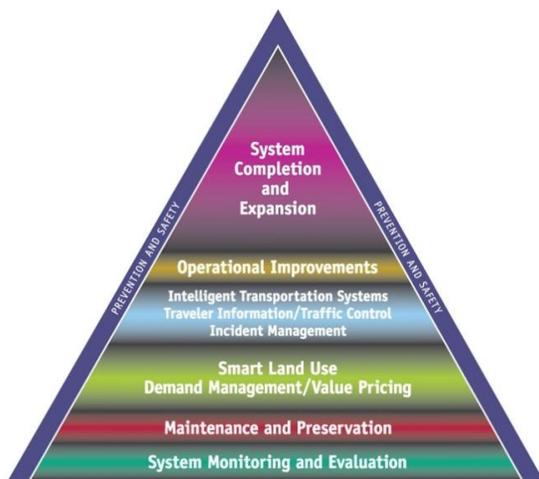


Figure 2: Mobility Pyramid

Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger’s Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in GHG emissions, while accommodating growth in population and the economy. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in Figure 2: The Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities, but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting ongoing research

efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

Caltrans is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391(Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs.

Table 1 summarizes Caltrans and statewide efforts that Caltrans is implementing to reduce GHG emissions. More detailed information about each strategy is included in the [Climate Action Program at Caltrans](#) (December 2006).

| Table 1 Climate Change/CO ₂ Reduction Strategies | | | | | | |
|---|--|-------------------------------------|--|--|--|---------------------------|
| Strategy | Program | Partnership | | Method/Process | Estimated CO ₂ Savings Million Metric Tons (MMT) | |
| | | Lead | Agency | | 2010 | 2020 |
| Smart Land Use | Intergovernmental Review (IGR) | Caltrans | Local governments | Review and seek to mitigate development proposals | Not Estimated | Not Estimated |
| | Planning Grants | Caltrans | Local and regional agencies & other stakeholders | Competitive selection process | Not Estimated | Not Estimated |
| | Regional Plans and Blueprint Planning | Regional Agencies | Caltrans | Regional plans and application process | 0.975 | 7.8 |
| Operational Improvements & Intelligent Transportation System (ITS) Deployment | Strategic Growth Plan | Caltrans | Regions | State ITS; Congestion Management Plan | 0.07 | 2.17 |
| Mainstream Energy & GHG into Plans and Projects | Office of Policy Analysis & Research; Division of Environmental Analysis | Interdepartmental effort | | Policy establishment, guidelines, technical assistance | Not Estimated | Not Estimated |
| Educational & Information Program | Office of Policy Analysis & Research | Interdepartmental, CalEPA, ARB, CEC | | Analytical report, data collection, publication, workshops, outreach | Not Estimated | Not Estimated |
| Fleet Greening & Fuel Diversification | Division of Equipment | Department of General Services | | Fleet Replacement B20 B100 | 0.0045 | 0.0065 0.045 0.0225 |
| Non-vehicular Conservation Measures | Energy Conservation Program | Green Action Team | | Energy Conservation Opportunities | 0.117 | 0.34 |
| Portland Cement | Office of Rigid Pavement | Cement and Construction Industries | | 2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix | 1.2 0.36 | 4.2 3.6 |
| Goods Movement | Office of Goods Movement | Cal EPA, ARB, BT&H, MPOs | | Goods Movement Action Plan | Not Estimated | Not Estimated |
| Total | | | | | 2.72 | 18.18 |

Climate Change (June 22, 2012): is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)⁷ provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

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

- 1) According to Caltrans' Standard Specifications, the contractor must comply with all of the Bay Area Air Quality Management District rules, ordinances, and regulations regarding air quality restrictions.

⁷ http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml

2) Compliance with Title 13, California Code of Regulations §2449(d)(3)-Adopted by the Air Resources Board on June 15, 2008, this regulation would restrict idling of construction vehicles to no longer than 5 consecutive minutes. The Contractor must comply with this regulation in order to reduce harmful emissions from diesel-powered construction vehicles.

3) To the extent that it is feasible for the project, the use of reclaimed water may be used to reduce GHG emissions produced during construction. Currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces greenhouse gas emissions from electricity production.

Adaptation Strategies

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

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011⁸, outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks .

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

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

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

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were

⁸ <http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation>

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

involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report¹⁰ to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

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

In 2010, interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

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

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

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

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

¹⁰ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at http://www.nap.edu/catalog.php?record_id=13389.

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

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <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 materials, 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 wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The unpaved areas of the project that would be excavated would be have an investigation conducted during the design phase of the project to determine if there are any contaminants in the soil. Results of the site investigation would dictate the appropriate procedures to be included as part of the project’s final design. Ground water sampling will also be conducted if it is determined that CIDH piles are necessary for the project design. Thermoplastic striping and excess construction materials would be removed and disposed of in compliance with standard Caltrans procedures.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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IX. HYDROLOGY AND WATER

QUALITY: Would the project:

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

In order to accomplish the proposed scope, varying activities during construction are of particular water quality concern, including, but not limited to, the following: pavement grinding and removal; pavement placement; concrete operations; foundation drilling and excavation; utility trenching; material handling and storage; sediment control. In order to manage such activities, temporary construction site Best Management Practices (BMPs) will be deployed as part of the project Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will be developed by the contractor and approved by Caltrans, pursuant to Caltrans 2010 Standard Specifications Section 13-3. As the project proposes to upgrade and/or replace existing drainage systems, temporary creek diversion(s) may have to be deployed, to create a dry working environment for contractor personnel and equipment. This will be assessed further, as the project progresses further in development.

In the post-construction condition, as the project scope proposes an increase of impervious surface of approximately 0.32 acre, an increased rate of run-off is expected compared to the existing condition. The quantity of new impervious surface is insignificant when compared to the area of each respective tributary shed. As a 401 certification will be required, a condition for permanent stormwater treatment should be anticipated. This condition may be equivalent to the summation of the new and reworked (or redeveloped) impervious surfaces, also termed as “net new impervious surface”. At this time, the net new impervious surface is equivalent to the quantity of new impervious surface, or 0.32 acre. This will be refined as the project is further developed. Any proposed permanent stormwater treatment BMPs will be biofiltration/bioretenion-type measures, and will be sited as to avoid any sensitive resources.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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X. LAND USE AND PLANNING: Would the project:

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

This project complies with the stated goals, guidelines, and recommendations of the City of Fremont’s plans, including recommendations for view preservation, and the minimization of visual degradation of natural landforms.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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XI. MINERAL RESOURCES: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

There are no documented mineral resources within the project area. Therefore, the project would not have any impact to mineral resources.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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XII. NOISE: Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project would not introduce permanent new noise impacts or increase ambient noise levels. Construction noise would be temporary and would be within acceptable levels for construction activity. There are nearby residential areas on the east side of the project area. Construction activities will be performed with special provisions to avoid and minimize effects from construction noise generated during this time. Construction activities that may cause an increase in the ambient noise level of the surrounding area are: construction vehicles traveling on- and off-site, operation of the crack and seat machine, pavement grinding, drilling for pile foundations, and boring holes beneath the freeway.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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XIII. POPULATION AND HOUSING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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"/> |
| 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"/> |

All project construction activities would be conducted within the State right-of-way (R/W). The proposed project would not consist of any freeway expansion resulting in increased capacity. As such, no displacements would occur.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- | | | | | |
|-----------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

To maintain the flow of traffic during construction, Caltrans will prepare a Traffic Management Plan (TMP) that would ensure accessibility through the project area for vehicles associated with essential services.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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XV. RECREATION:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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"/> |

The project does not include any recreational areas, nor will it limit the access to any recreational areas.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------|---------------------------------------|------------------------------|-----------|

XVI. TRANSPORTATION/TRAFFIC: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Interstate 680 (I-680) is a fully controlled-access freeway, thus there are no existing pedestrian or bicycling facilities on this section of I-680. However, there are pedestrian facilities on some of the on- and off-ramps within the project limits that will receive treatment. The project would upgrade existing pedestrian curb ramps, sidewalks, and pedestrian signals at on/off-ramp locations within the project limits. These upgrades would enhance pedestrian access and safety within the project limits where appropriate. The new curb ramps and sidewalks would be constructed to meet current American Disabilities Act (ADA) standards. New pedestrian signals would also be installed as part of the pedestrian facilities enhancements. Therefore, the project would enhance pedestrian access and performance rather than conflict with any bicycle or pedestrian policies.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------------|--|------------------------------------|--------------|

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

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

The project proposes alterations and upgrades to existing drainage facilities and will add 0.32 acre of additional impervious area. Additional treatment for increased runoff from this new impervious area would be provided by biofiltration/bioretenion-type measures, which are a component of this project that will be designed in the next phase of project development. The total volume of additional runoff flowing away from the project area would not cause increases that would result in impacts to the connecting drainage systems, and improvements to local drainage should reduce local flooding issues.

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| Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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

Caltrans' application of best management practices; the re-establishment of ditches and vegetation in kind, incorporation of minimization measures into project construction, and habitat restoration on- and off-site would ensure that there would be no residual impacts from this project that can contribute to long term cumulative impacts.

Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency 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, and the public and agency comment period for the draft environmental document. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

Caltrans has been consulting with, and will continue to do so throughout project development, with the USFWS, the U.S. Army Corps of Engineers, CDFW, and the San Francisco Bay Regional Water Quality Control Board - Region 2. A copy of the Draft Initial Study was sent to each of these agencies with an opportunity to comment.

Caltrans submitted a Biological Assessment to the USFWS on May 1, 2015 in order to consult on potential project effects determinations for federally listed species and habitats of concern. A Biological Opinion was returned by the USFWS on February 12, 2016. The Biological Opinion found that the proposed action will likely adversely affect the California red-legged frog, Central California tiger salamander, and Alameda whipsnake by harming or harassing juveniles and adults inhabiting suitable upland, dispersal, and non-breeding aquatic habitat within the project construction area. A copy of the Biological Opinion has been attached as Appendix G: Biological Opinion (page 80).

The general public was involved in the project process through solicitation of feedback on the draft environmental document during the 30 day comment period. Post card mailers were sent out to all adjacent land owners on November 20, 2015 and a Notice of Intent was published in the Mercury Newspaper on November 23, 2015. The Notice of Intent was also posted in the Alameda County Clerk-Recorder's Office. A copy of the Notice of Intent and an example post card mailer have been attached as Appendix B (page 48-49).

A copy of the draft document was made available to the public electronically on the Caltrans website. Hard copies of the document were made available at the Fremont Main Library, the Irvington Library, the Alameda County Public Works Department, and the Caltrans District 4 Office.

Copies of the Notice of Intent and the draft environmental document were mailed to directly to local, state, and federal agencies for feedback on November 20, 2015. The following additional agencies were contacted during the comment period for the draft environmental document: the Alameda County Environmental and Clean Water Program, the City of Fremont Planning Division, the City of Milpitas Planning and Neighborhood Services Department, the Alameda

County Sheriff's Department, the Alameda County Board of Supervisors – District 1, and the Mayor's Office of the City of Fremont.

A Notice of Completion (NOC) was submitted to the State Clearinghouse (SCH) on November 20, 2015 and subsequently distributed, along with copies of the Draft Initial Study, to all of the reviewing agencies for comment on the document. A copy of the NOC has been attached as Appendix H (page 115). The SCH received the project on November 24, 2015 and the project was assigned SCH # 2015112051.

The next section is a list of the comments that Caltrans received during the 30 day public review period that began on November 21, 2015 and ended on December 21, 2015. Caltrans received four comments on the Draft Initial Study. Three of these comments were from members of the community and one was from a reviewing agency. These comments are listed in the following pages and have been addressed by members of the project development team whose specialty covers the subject matter of each comment.

During the next phase of project development, Caltrans plans to submit requests to CDFW for a 1600 Lake and Streambed Alteration agreement with regards to work on/around culverts in the project area, and a 2081 Incidental Take Permit for potential impacts to listed species with potential to appear in the project area. In addition to this, Caltrans will also submit requests for a Clean Water Act 404 Nationwide Permit from the U.S. Army Corps. of Engineers and a Clean Water Act 401 Permit from the San Francisco Regional Water Quality Control Board – Region 2. The 404 and 401 permits will be requested due to the work around the culverts in the project area and because of the amount of soil that will be re-worked along the project shoulder throughout the limits of the of project area.

Comment 1:

From: Orozco, Tim [<mailto:Tim.Orozco@sen.ca.gov>]
Sent: Thursday, December 03, 2015 3:05 PM
To: Chance, Christopher@DOT
Subject: I-680 NB Pavement Rehabilitation Project (Fremont, CA)

Chris,

Attached is the letter we received from the District Director's Office informing us of the upcoming pavement rehabilitation project on NB I-680 in south Fremont.

1a My question to you: Do we have a timeline of when the project will begin and the periods for the type of construction (i.e. guardrails, concrete barriers, overhead signs, pavement resurfacing, etc.) throughout the duration of the project? And is there an ending date for the project?

Thanks for looking into this for us.

Tim Orozco
Senior Assistant
Senator Bob Wieckowski
10th Senate District
(510) 794-3900

Response 1a:

The project is expected to begin construction in the summer of 2017 and end in the fall of 2018. The I-680 Northbound Express Lanes project, from Auto Mall Parkway to Koopman Road, is also expected to be in construction during this same time period.

Comment 2:

From: benbier@comcast.net
Sent: Sunday, December 06, 2015 8:57 PM
To: Ala680nbRehab@DOT
Cc: benbier@comcast.net
Subject: I-680 NB Pavement Rehab Project

December 7, 2015

Ben Bierman
47438 Cholla St
Fremont, CA 94539
Home: 510-683-8890
Cell: 408-416-8447
Email: benbier@comcast.net

Department of Transportation

To Whom it may Concern,

I'm writing with regard to the I-680 Northbound Pavement Rehab Project Project. I live on Cholla Street in Fremont, on the West side of I-680. My property backs directly on I-680. When the Southbound HOV/Express Lane was put in place, I believe that the evaluation process did a grave disservice to the residents West of I-680 between Mission Blvd and Scott Creek Rd. While noise levels were found to increase to the point where remediation was required, a cost/benefit study determined that no sound wall would be built, while sound walls were built virtually everywhere else along the length of the project.

This impacted residents of the following streets:

Crawford Street
Yucatan Drive
Cholla Street
Gable Common
Wabana Street
Alta Vista Terrace
Arcadian Street
Cottonwood Street
Plomosa Rd
Cabernet Way

These correspond to Noise Receptor ST 52-54 in the new Northbound HOV/Express Lane Noise Study.

2a

I strongly request that some action be taken to mitigate noise in this area. Perhaps some minor addition to the existing traffic barrier, even adding only 2-3 feet of wall, would meet the cost threshold and provide meaningful relief. My own home was severely impacted by the Southbound project. My

backyard was rendered unusable by the noise. Property values on my street are \$50-100K lower than nearby homes further from the highway.

While I understand that the current project requests comments only on the pavement rehab work on the Northbound lane, the aggregate impact of increased traffic volume on the North and Southbound lanes warrants providing some relief to the residents in my area.

I know that you may not have received many comments on this issue. I myself hoped to do more community organizing to build awareness, but we are all busy and the comment window is short. This does not mean that the residents of my area are satisfied with the status quo, or with the planned lack of noise protection in the new project.

Thanks for your attention to this matter.

Regards,

Ben Bierman

Response 2a:

The proposed project will not provide additional capacity or move traffic closer to receptors on either side of the freeway; therefore, it will not cause an adverse impact from traffic noise. If anything, traffic noise could be reduced somewhat as the project will eliminate cracks and smooth out uneven joints and other irregularities on the pavement. Caltrans can only consider building new soundwalls if a federally-funded highway improvement project would add traffic lane(s) or alter the freeway/ramp alignment substantially. The proposed project is not the type of project that would require assessment of traffic noise impacts or consideration of possible noise abatements under federal regulations.

Traffic noise in the area indicated was the subject of several noise studies associated with past and current highway improvement projects in this corridor. The most recent study conducted for the proposed northbound I-680 Express Lane Project has predicted that the future noise levels for the majority of the residences closest to the southbound I-680 between Scott Creek Road and East Warren Avenue would be between 53 and 63 dBA, well below the noise abatement criteria established in the Federal and State guidelines. Therefore, no noise abatement was considered for these residences. The study also showed the future noise levels for several residences located along the southbound Scott Creek Road off-ramp would reach 67 dBA, which exceed the noise abatement criteria. A soundwall was evaluated for that area but was deemed not reasonable on the grounds of not meeting the noise reduction goal of 7 dBA established in the State guideline. No soundwall was recommended as a result.

The existing concrete barrier along the southbound I-680 is a safety feature that plays little, if any, role in noise reduction. Considering the current noise levels of the area, raising the barrier a couple of feet would not noticeably change the noise environment, since it would still be below the height certain traffic noise emits from.

Comment 3:

From: Oh Austin <austin_oh@hotmail.com>
Sent: Monday, December 21, 2015 9:52 AM
To: Ala680nbRehab@DOT
Cc: Oh Austin
Subject: Concern on 1-680 Northbound Pavement Rehabilitation Project

To Whom It May Concern:

Re: I-680 Northbound Pavement Rehabilitation Project

Quoted from http://www.dot.ca.gov/dist4/documents/680nb_pavementrehab/2015_11_13_ded_3g600.pdf

Traffic Lighting

New traffic lighting would be installed between Mission Boulevard and Auto Mall Parkway. Approximately 50 new lights would be installed along the outside portion of northbound I-680 and would be spaced approximately 180 feet apart. The lights would be installed on piles five feet deep and would have a 2.5 feet by 2.5 feet foundation. Approximately 12,800 linear feet of trenching for new electrical conduits would be needed for the new traffic lighting. The new electrical conduit would be installed within the existing paved shoulder in a trench that would be 3 feet deep and 1 foot wide. Approximately 72 pull boxes would be needed for the new electrical conduits. The new pull boxes would be used to pull cable through the conduit. The proposed pull boxes would have a maximum depth of 3 feet and would have a footprint of two feet by three feet. The new pull boxes and trench would be installed within the existing shoulder of the freeway using a backhoe. New electrical lines that are intended to cross the freeway would be installed using jacking pits for a directional bore. New electrical lines would cross the freeway in approximately four locations. Installing these new lines would require digging jacking pits to drop the directional bore into. These four jacking pits would be approximately six feet deep and six feet wide each for the directional bore.

End of Quote

Concern:

My house is located right behind I-680 northbound between Mission Boulevard and Auto Mall Parkway. There is existing traffic lighting on I-680 southbound. When the existing traffic lighting is on, the light irritates my eye when I stand up in family room inside my house even if there is existing sound wall because the height of existing traffic lighting is too high.

3a

So, I would like to request that the light from NEW traffic lighting should be blocked by existing sound wall by lowering the height of New traffic lighting structure so that the residents can not see the lighting from inside house when it's on.

House Location:
45465 Parkmeadow Dr
Fremont, CA 94539

Resident:
MYONG S. OH

Thanks

Response 3a:

There are standards set by the Federal Highway Administration (FHWA) for the height of safety lighting that can be used on State and Federal highways. These standards are based on the intensity of light an area needs in order to reduce safety hazards caused by dark road conditions. The height of the light, the type of bulb used, and the amount of area that needs to be illuminated all factor into meeting this requirement.

Adjustments to the standard height of the safety lights would have to go through a lengthy process of testing and approval to determine if the new dimensions still meet the safety requirements for which they were suggested and to ensure that they do not create new and/or unexpected hazards. The approval process would be reviewed by both the Caltrans Electrical Design Office and the Caltrans Structure Construction Office. Replacement parts for the non-standard lights would also have to be tailor-made and could be cost prohibitive and difficult to obtain.

During the next phase of project design, Caltrans will investigate options for modifying the height of safety lights as well as other options that may alleviate the glare caused by the spillover of lights onto adjacent properties. Other options may include the use of glare shields around the light fixtures, the use of LED lights that can be shielded on one side, and placement of glare screens on adjacent sound walls.

Comment 4:

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



December 23, 2015

Jamie Le Dent, Chief
Environmental Branch
Division of Environmental Planning
California Department of Transportation
111 Grand Avenue, MS 8-B
Oakland, California 94612

Initial Study of Interstate 680 Northbound Pavement Rehabilitation Project, City of Fremont, Alameda County, Delta Field Division, SCH2015112051

Dear Ms. Le Dent:

Thank you for the opportunity to review and comment on the Initial Study (IS) of the Interstate 680 Northbound Pavement Rehabilitation Project (Project) in Alameda County. The IS describes the proposal by the California Department of Transportation to resurface the existing flexible and rigid pavement, and install rumble strips and concrete barriers along the northbound-lane segment of Interstate 680 between Auto Mall Parkway and Scott Creek Road. The Project includes installation of drainage facilities, overhead signs, roadside signs, and lighting. The Project will not result in additional lanes or a change in the pattern or types of traffic that use the roadway.

South Bay Aqueduct of the State Water Project (SWP) crosses under the Interstate 680 at two locations north of Scott Creek Road, and is within the Project area. Construction activities within the SWP right of way may require an encroachment review by DWR. Information regarding regulations and forms for submitting an application for an encroachment review to DWR can be found at:

http://www.water.ca.gov/engineering/Services/Real_Estate/Encroach_Rel/

4a

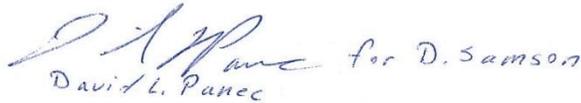
Please provide DWR with a copy of any subsequent environmental documentation when it becomes available for public review. Any future correspondence relating to the Project shall be sent to:

Leroy Ellinghouse, Chief
SWP Encroachments Section
Division of Operations and Maintenance
Department of Water Resources
1416 Ninth Street, Room 641-2
Sacramento, California 95814

Jamie Le Dent
December 23, 2015
Page 2

If you have any questions, please contact Leroy Ellinghouse, Chief of the SWP Encroachments Section, at (916) 659-7168 or Jonathan Canuela at (916) 653-5095.

Sincerely,



David L. Panec for D. Samson
David L. Panec

David M. Samson, Chief
State Water Project Operations Support Office
Division of Operations and Maintenance

cc: State Clearinghouse
Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Response 4a:

Caltrans will provide the DWR with a copy of any subsequent environmental documentation as it becomes available for public review.

Appendix A: References

Boyer, Ray. "Comments from the Air/Noise/Energy Branch". Memorandum, Caltrans Office of Environmental Engineering. Oakland, CA. January 2015

California Department of Fish and Game. California Fish & Game Code. §1900-Native Plant Protection.

Caltrans, District 4 Office of Biological Studies and Permits. Natural Environment Study for the Interstate 680 Northbound Pavement Rehabilitation Project. Oakland, CA. October 2015

Caltrans, District 4 Office of Biological Studies and Permits. Biological assessment for the Interstate 680 Northbound Pavement Rehabilitation Project. Oakland, CA. April 2015

Caltrans, District 4 Office of Biological Studies and Permits. Biological opinion for the Interstate 680 Northbound Pavement Rehabilitation Project. Oakland, CA. February 2016

Caltrans, District 4 Office of Cultural Resources. Section 106 and PCR 5024 Compliance for the I-680 Roadway Rehabilitation Project in Alameda County. Oakland, CA. August 2015

Caltrans, District 4 Office of Environmental Analysis. Section 4(f) Evaluation. July 2015

Caltrans, District 4 Office of Environmental Engineering. Water Quality Report for the ALA-680 Northbound Pavement Rehabilitation Project. Oakland, CA. August 2015

Caltrans, District 4 Office of Geotechnical Design. Paleontological Identification Report and Paleontological Evaluation Report. Oakland, CA. July 2015

Caltrans, District 4 Office of Hydraulics. Location Hydraulics Study. Oakland, CA April 2015

Caltrans, District 4 Office of Landscape Architecture. Visual Impact Assessment: ALA-680 Pavement Rehabilitation Project. Oakland, CA. March 2015

Rowley, Brian. "RE: EA: 3G600 WQ Language for DED". Email, Caltrans Office of Water Quality. Oakland, CA. November 2015

Storer, T. I. A Synopsis of the Amphibia of California, University of California Publications in Zoology. 1925

U.S. Army Corp of Engineers. Corps of Engineers Wetlands Delineation Manual. Waterways Experimental Station Technical Report Y-87-1. 1987

U.S. Army Corp of Engineers. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. Vicksburg, MS. 2008

U.S. Fish and Wildlife Service. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. August 2005b

Wilson, Chris. "Comments from the Hazardous Waste Branch". Memorandum, Caltrans, Office of Environmental Engineering. Oakland, CA. January 2015

Appendix B: Notice of Intent to Adopt a Mitigated Negative Declaration

PUBLIC MEETING
NOTICE OF INTENT TO ADOPT AN INITIAL STUDY WITH PROPOSED
MITIGATED NEGATIVE DECLARATION FOR THE INTERSTATE 680
REHABILITATION PROJECT

| | | | | | |
|---|--|---|---|---|--|
| WHAT'S BEING PLANNED | The California Department of Transportation (Caltrans) proposes to rehabilitate the freeway mainline and on/off-ramps between Scott Creek Road and Auto Mall Parkway by resurfacing the existing pavement and upgrading and/or repairing road features to preserve and extend the roadway service life. The proposed work will encroach upon 0.009 acre of wetlands. The project is being evaluated to determine if there are any practical alternatives to avoid this encroachment or, if not, to ensure that all practical measures are taken to minimize harm to the wetlands. | | | | |
| WHY THIS NOTICE | Caltrans studied the effects this project may have on the environment and finds there will not be a significant effect with additional mitigation measures due to the project was scoping to reduce the level of impacts. This notice is to inform you of the preparation of the Initial Study with Proposed Mitigated Negative Declaration and of its availability for you to read. | | | | |
| WHAT'S AVAILABLE | <p>You can look at or obtain a copy of the Initial Study with Proposed Mitigated Negative Declaration at the following locations:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Caltrans District 4 Office 111 Grand Avenue Oakland, CA 94612</td> <td style="width: 50%;">Fremont Library 2400 Stevenson Blvd Fremont, CA 94538</td> </tr> <tr> <td colspan="2">Irvington Library 41825 Greenpark Drive Fremont, CA 94538</td> </tr> </table> <p>You can also download or view the report online at http://www.dot.ca.gov/dist4/envdocs.htm.</p> | Caltrans District 4 Office 111 Grand Avenue Oakland, CA 94612 | Fremont Library 2400 Stevenson Blvd Fremont, CA 94538 | Irvington Library 41825 Greenpark Drive Fremont, CA 94538 | |
| Caltrans District 4 Office 111 Grand Avenue Oakland, CA 94612 | Fremont Library 2400 Stevenson Blvd Fremont, CA 94538 | | | | |
| Irvington Library 41825 Greenpark Drive Fremont, CA 94538 | | | | | |
| WHERE YOU COME IN | Caltrans welcomes your comments on the Initial Study with Proposed Mitigated Negative Declaration. The most beneficial comments include specific alternatives or mitigation measures that would provide better ways to avoid or mitigate any potential environmental effects of the project, concerns that are not addressed in the Initial Study with Proposed Mitigated Negative Declaration, inaccuracies or missing information, and/or statistical data or facts to support your concern. If you wish to make a comment on the draft Initial Study or request an open-house presentation of the project by Caltrans staff, please contact Jamie Le Dent, 111 Grand Ave., MS-8B, Oakland, CA 94612 or email us at Ala680nbRehab@dot.ca.gov . All comments must be received by 5 pm on Monday, December 21, 2015. | | | | |
| CONTACT | Persons requesting special accommodations should contact Caltrans District 4 Office of Public Affairs at (510)-286-4444, or use the California Relay Service TTY number, (800)-735-2929. | | | | |

Advertisement in the San Jose Mercury News, November 23, 2015.



DEPARTMENT OF TRANSPORTATION

P. O. BOX 23660
OAKLAND, CA 94623-0660
ATTN: R. KIAAINA

Follow us on

twitter  @CaltransD4

NOTICE OF COMMENT PERIOD until December 21, 2015 for the I-680 Northbound Pavement Rehabilitation Project

Caltrans plans to rehabilitate the freeway mainline and on/off ramps on Interstate 680 between Scott Creek Road and Auto Mall Parkway.

The project will resurface the existing pavement and upgrade and/or repair road features to meet current standards. These features will include the installation of rumble strips, replacement or installation of guardrails, concrete barriers, crash cushions, curbs, sidewalks, pedestrian curb ramps, replacement or installation of drainage facilities, overhead signs, roadside signs, Traffic Monitoring Stations, safety lighting and signals.

The proposed work will encroach upon 0.009 acre of wetlands. The project is being evaluated to determine if there are any practical alternatives to avoid this encroachment or, if not, to ensure that all practical measures are taken to minimize harm to the wetlands.

The California Environmental Quality Act requires that Caltrans disclose the projected environmental impacts of this project, and allow the public a set period of time in which to comment on the Initial Study (IS) that Caltrans has prepared to document its assessment. The IS is available for download at <http://www.dot.ca.gov/dist4/envdocs.htm>. To request a print copy, or an open-house presentation of the project by Caltrans staff, write to Caltrans District 4, Attn: J. Le Dent, 111 Grand Ave, MS-8B, Oakland, CA 94623-0660.

The official comment period is your opportunity to have your comments addressed as part of the legally mandated environmental review process. Caltrans will respond to comments in the final version of the IS. Email your comments to Ala680nbRehab@dot.ca.gov, or send postal mail to the address given above. Comments must be received by 5:00 p.m. on December 21, 2015.

Post Cards mailed to residences adjacent to project limits, November 20, 2015.

Appendix C: List of Preparers

| | |
|------------------------|---|
| Amacher, Andrew | Caltrans District 04 Office of Biological Studies and Permits |
| Bright, Douglas | Caltrans District 4 Office of Cultural Studies |
| Boyer, Ray | Caltrans District 4 Office of Environmental Engineering |
| Darko, Emily | Caltrans District 4 Office of Cultural Studies |
| Gaffney, Matthew | Caltrans District 4 Office of Geotechnical Design |
| Krase-Green, Elizabeth | Caltrans District 4 Office of Cultural Studies |
| Le Dent, Jamie | Caltrans District 4 Office of Environmental Analysis |
| Mac, Lydia | Caltrans District 4 Office of Landscape Architecture |
| Packard, Thomas | Caltrans District 4 Office of Landscape Architecture |
| Rose, Kathryn | Caltrans District 4 Office of Cultural Studies |
| Rowley, Brian | Caltrans District 4 Office of Environmental Engineering |
| Spradling, Noray-Ann | Caltrans District 4 Office of Environmental Analysis |
| States, Chris | Caltrans District 04 Office of Biological Studies and Permits |
| Tomimatsu, Craig | Caltrans District 4 Office of Hydraulics |
| Wellen, Jonathan | Caltrans District 4 Office of Environmental Engineering |
| Wilson, Christopher | Caltrans District 4 Office of Environmental Engineering |

Appendix D: Project Plans

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

REVISOR: A. Phan
 DATE: 9-24-15

DESIGNER: DAVID CHAN
 CHECKER: ANDREW PHAN

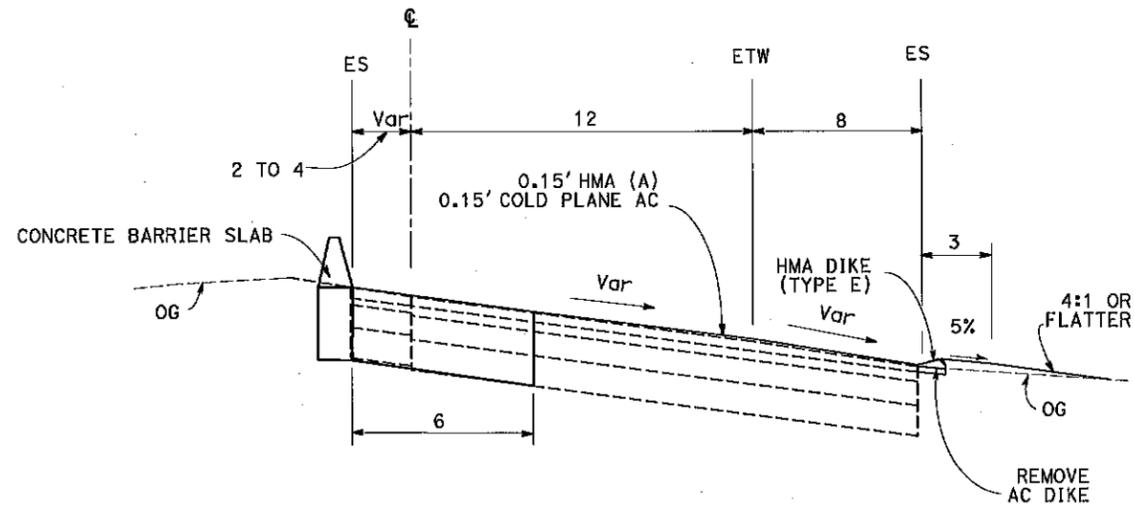
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FUNCTIONAL SUPERVISOR: [Blank]

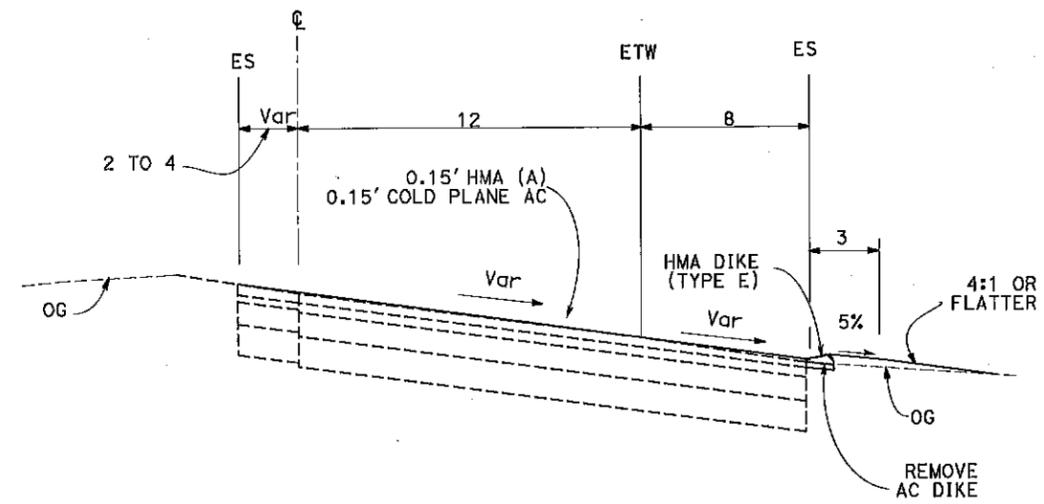
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| 04 | Ala | 680 | MO.0/M4.0 | | |

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____

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SCOTT CREEK RD. RAMP WITH CONCRETE BARRIER SLAB



SCOTT CREEK RD. RAMP

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

RAMPS X-R

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

REVISOR: A. Phan
 DATE: 9-24-15

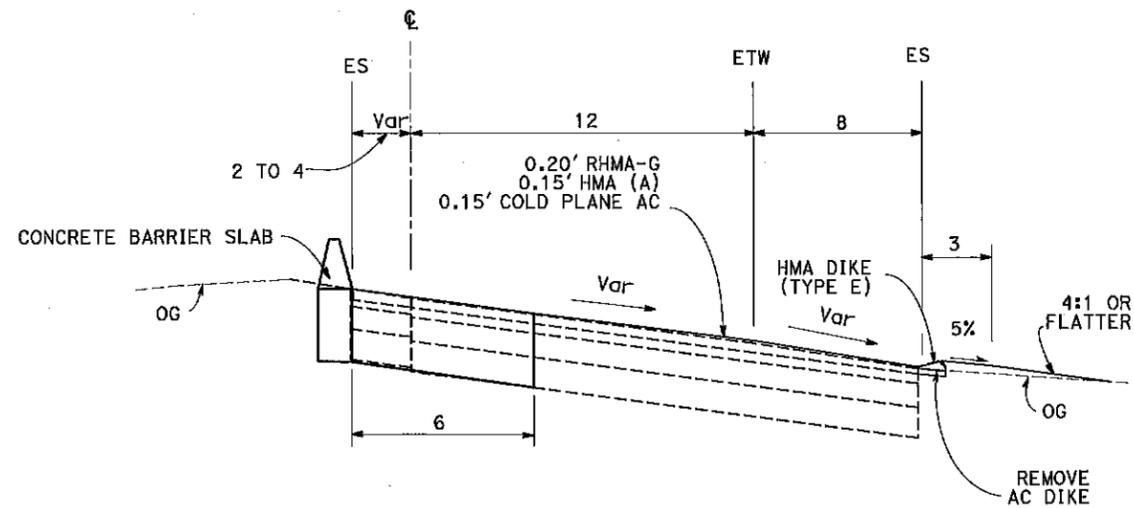
DESIGNER: DAVID CHAN
 CHECKER: ANDREW PHAN

CALCULATED-DESIGNED BY: [Blank]
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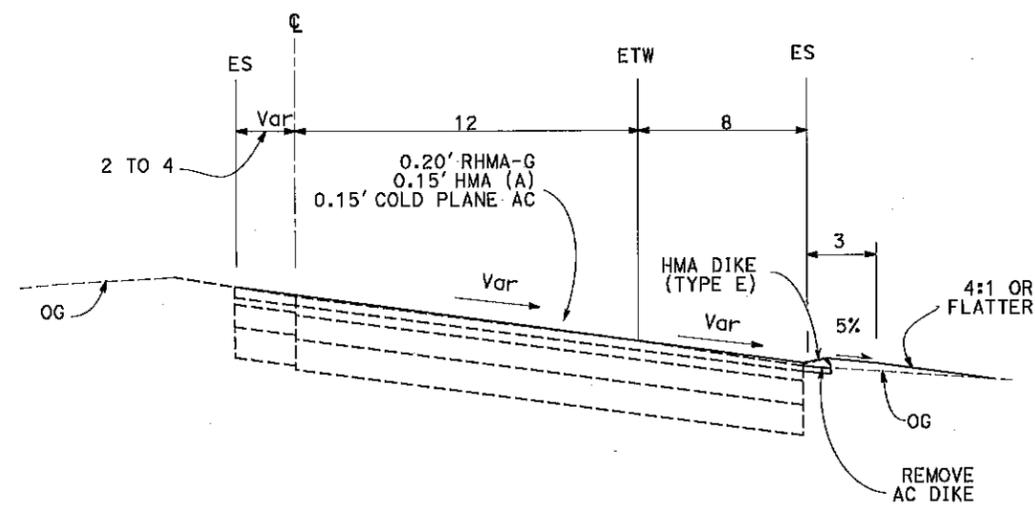
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REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
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MISSION BLVD / SR262
 RAMP WITH CONCRETE BARRIER SLAB



MISSION BLVD / SR262
 AUTOMALL PARKWAY RAMP

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

RAMPS X-R

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Gobans
 FUNCTIONAL SUPERVISOR
 CHECKED BY
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 DATE REVISOR

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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 NO SCALE

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Gobans

FUNCTIONAL SUPERVISOR
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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 No. _____
 Exp. _____
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 STATE OF CALIFORNIA

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L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Stantec
 FUNCTIONAL SUPERVISOR
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REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____

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LAYOUT
 NO SCALE

L-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Stantec
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY
 CHECKED BY
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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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LAYOUT
NO SCALE

L-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Stantec
 FUNCTIONAL SUPERVISOR
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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LAYOUT
NO SCALE

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL No. SHEETS |
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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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LAYOUT
NO SCALE

L-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Stantec
 FUNCTIONAL SUPERVISOR
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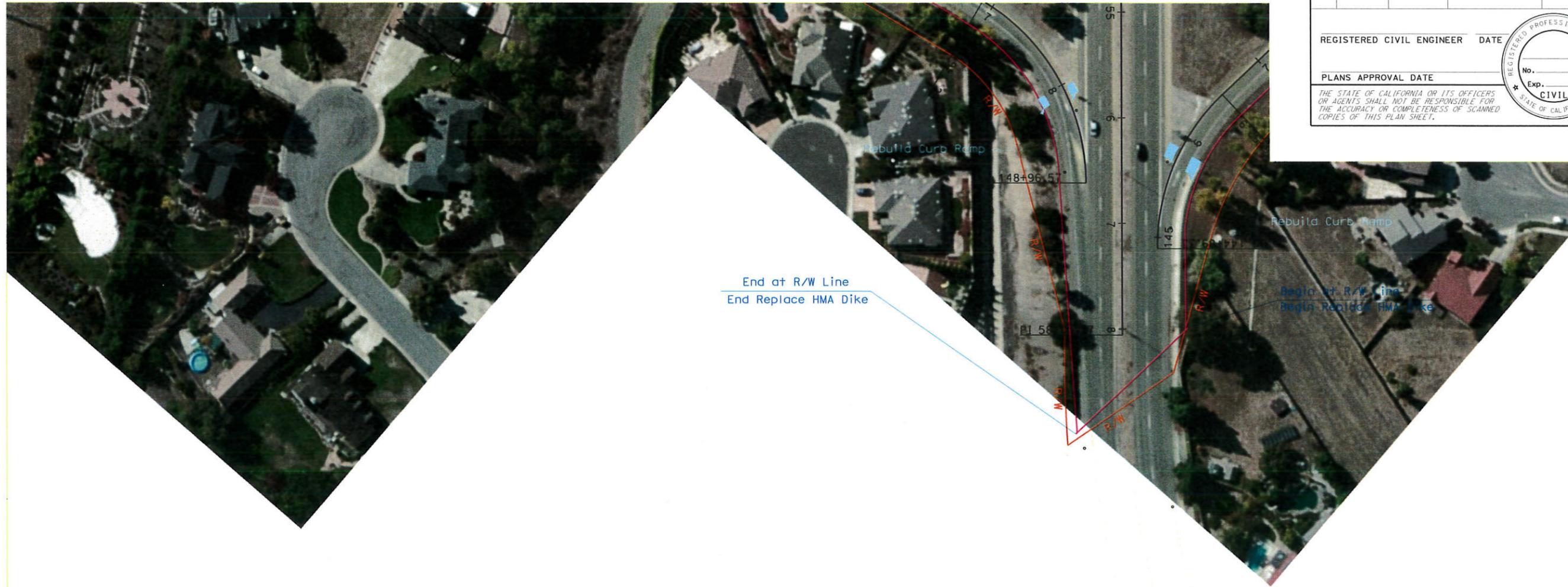
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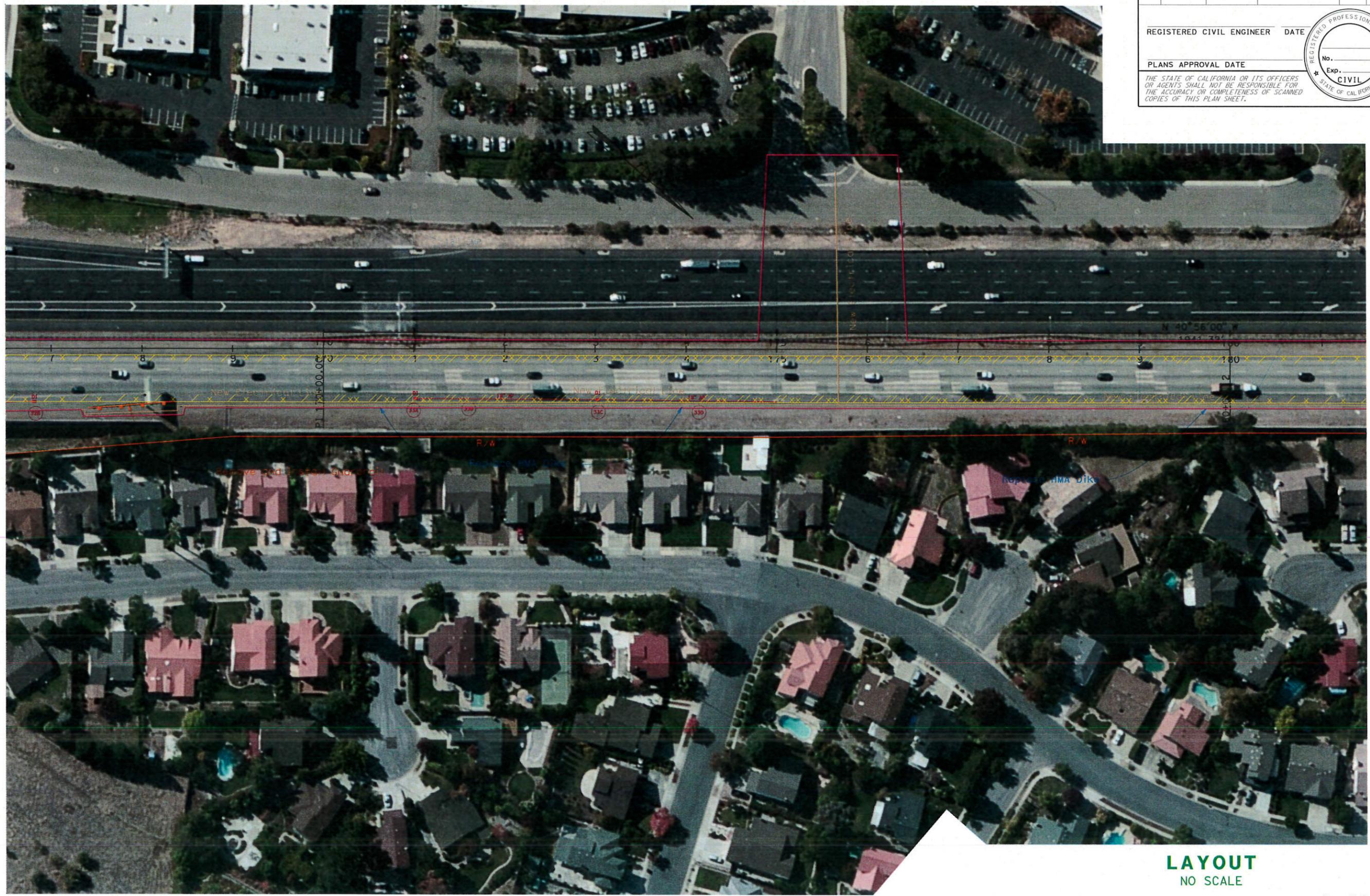


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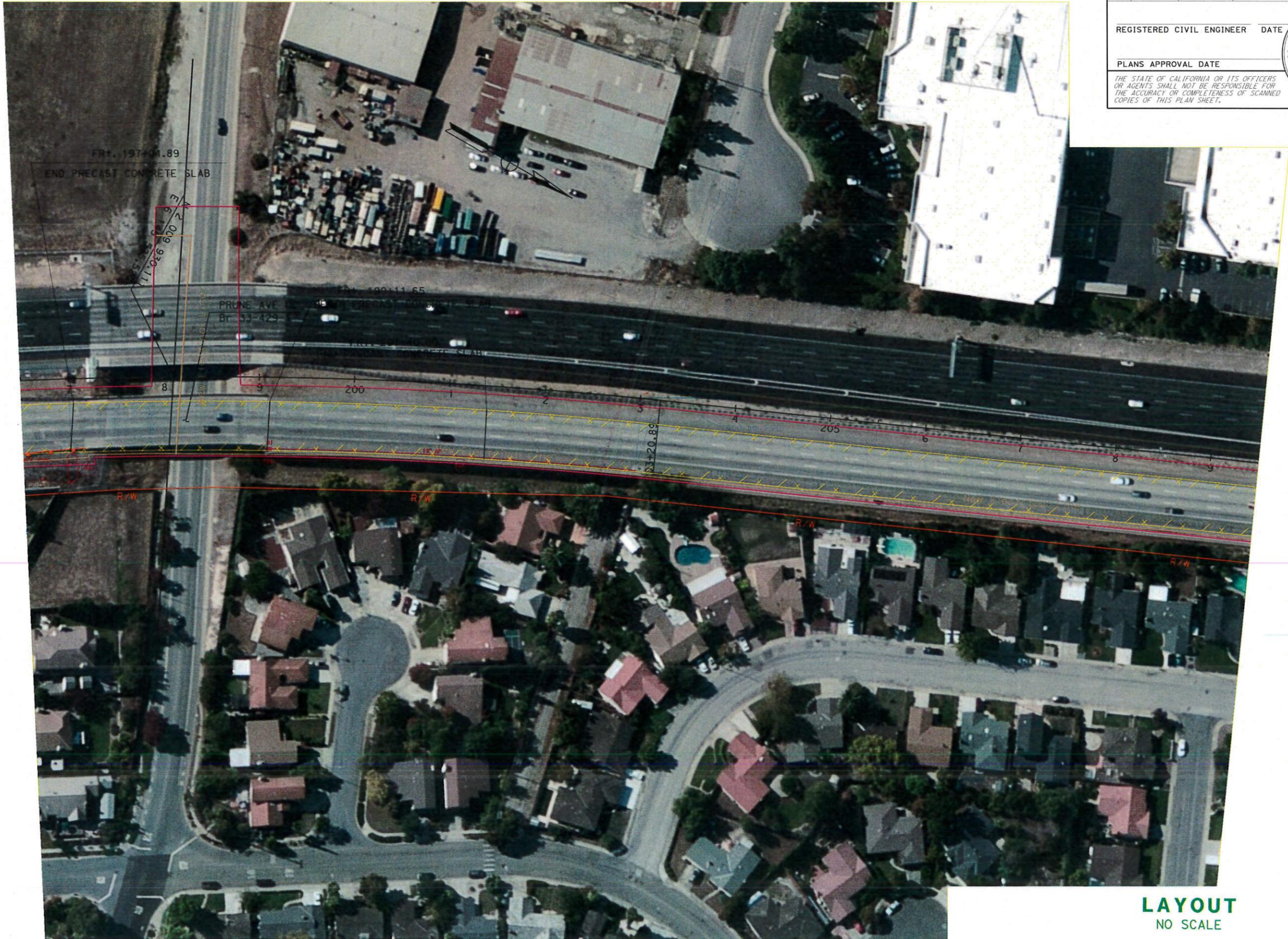
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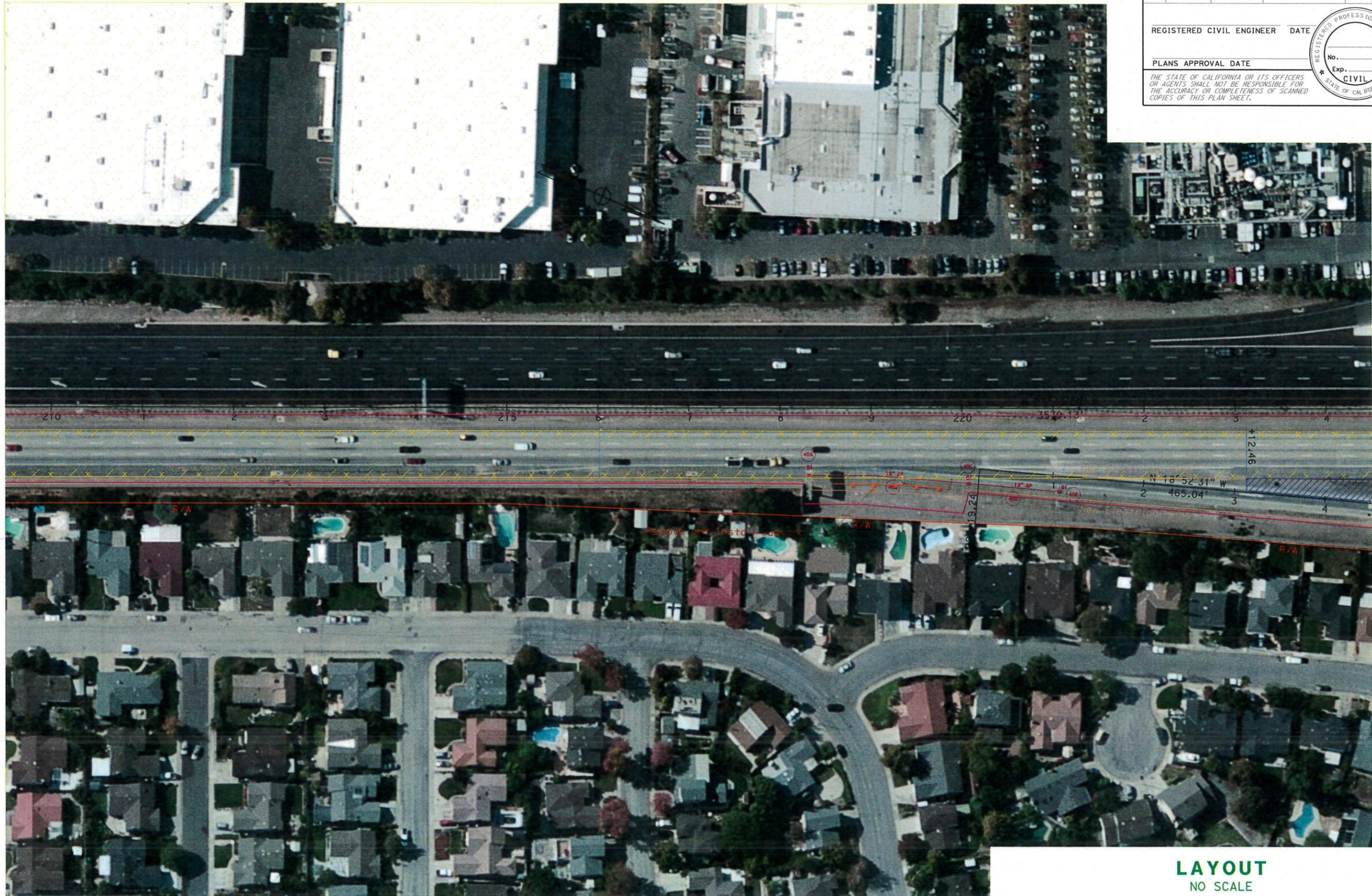
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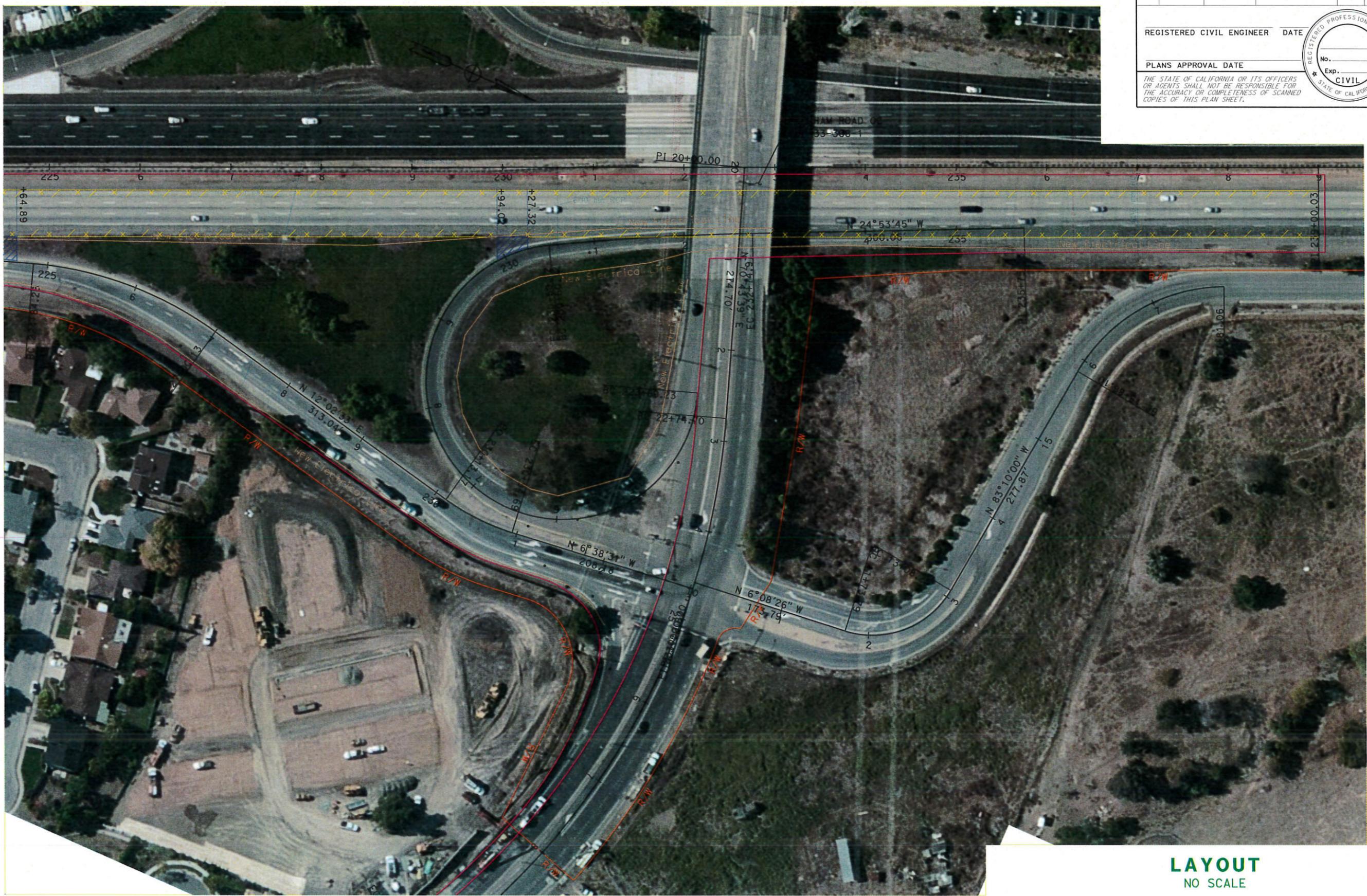
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Appendix E: Avoidance and Minimization Measures

Caltrans has incorporated several avoidance and minimization measures into the proposed project to avoid and minimize the impacts of this project on special-status species, migratory birds, and protected resources that occur in the project area. Special-status species known to occur or with a potential to occur in the project area include the California tiger salamander, California red-legged frog, Alameda whipsnake, burrowing owl, and migratory birds. Measures taken to minimize the likelihood of take of federally listed species have been identified through consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the federal Endangered Species Act. Proposed avoidance measures include conducting construction activities during specific work windows to avoid the time of year when protected species is most active, worker education awareness training, prohibiting the use of monofilament netting, prevention methods for wildlife entrapment, use of wildlife exclusion fencing, proper materials storage, and species surveys of the project area ahead of construction.

Caltrans has also developed other measures to avoid and mitigate impacts to species of special concern as part of the proposed project. The principal measures listed below are not all inclusive and not an iterative list. For example, these conditions may be modified, or new ones added during the next phase of project design when permits are obtained for the project and very specific measures will ultimately be incorporated into the contractor's bid package but are not listed here. The list below is categorized by species and includes a general overview of the most important and applicable measures. The proposed avoidance and minimization measures are as follows:

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
|--|---|
| <p>General Biological and Water Quality Avoidance and Minimization Measures</p> | <ol style="list-style-type: none"> 1. Caltrans will include a copy of the Biological Opinion within the construction bid package of the proposed project. The Resident Engineer or their designee will be responsible for implementing the <i>Conservation Measures and Terms and Conditions</i> of the USFWS, Biological Opinion and the requirements of the California Department of Fish and Wildlife (CDFW), Incidental Take Permit. 2. Caltrans will submit the names and qualifications of the biological monitor(s) for USFWS and CDFW approval prior to initiating construction activities for the proposed project. 3. The agency-approved biologist(s) will be onsite during initial ground-disturbing activities and for all vegetation removal activities, and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) will keep copies of applicable permits in their possession when onsite. Through the Resident Engineer or their designee, the agency-approved biologist(s) shall be given the authority to communicate either verbally, by telephone, email or hardcopy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the Resident Engineer or their designee, the agency-approved biologist(s) shall have the authority to stop project activities to minimize take of listed species or if he/she determines that any permit requirements are not fully implemented. If the agency-approved biologist(s) |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
|---------------------------------|---|
| | <p>exercises this authority, the agencies shall be notified by telephone and email within 48 hours.</p> <p>4. All construction personnel will attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project.</p> <p>5. Prior to any ground disturbance, pre-construction surveys will be conducted by an agency-approved biologist for listed species. These surveys will consist of walking surveys of potential species habitat within the project limits. The biologist(s) will investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, and debris. Native vertebrates found in the cover sites within the project limits will be documented and relocated to an adequate cover site in the vicinity.</p> <p>6. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees will be covered at the close of each working day by plywood or similar materials. Alternatively, an additional four-foot high vertical barrier, independent of exclusionary fences, will be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional four-foot high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape or USFWS and CDFW will be contacted by telephone for guidance. USFWS and CDFW will be notified of the incident by telephone and electronic mail within 48 hours.</p> <p>7. The limits of construction zones within or near suitable habitat for listed species will be delineated with high visibility wildlife exclusion fencing at least four feet in height to prevent wildlife from accessing the construction footprint. The fencing will be removed only when all construction equipment is removed from the site. No project activities will occur outside the delineated project construction area. The exact location of the fencing will be determined by the biologist and resident engineer and submitted to the USFWS for approval. Wildlife exclusion fencing is not required for construction activities occurring outside of suitable habitat for listed species.</p> <p>The wildlife exclusion fencing will have a means for animals to exit the project site on their own. Vegetation on either side of the fencing will remain cleared during the entire time that the fencing is in place. The fencing will be constructed and maintained according to Caltrans standards. The fencing will be regularly inspected by the biologist. Repairs to the fencing will be made within 24 hours of the discovered damage.</p> |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
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| | <p>8. The Resident Engineer will immediately contact the agency-approved project biologist(s) in the event that an Alameda whipsnake, California red-legged frog, or California tiger salamander is observed within a construction zone. The Resident Engineer will suspend construction activities within a 50 foot radius of the animal until the animal leaves the site voluntarily or an agency-approved protocol for removal has been established.</p> <p>9. Wildlife may become trapped or injured when construction materials are moved. All construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.</p> <p>10. Water quality inspections will occur per the approved Storm Water Pollution Prevention Plan (SWPPP), which will coincide with the State Water Resources Control Board (SWRCB) Statewide Construction General Permit. This permit is for any project, not specifically by Caltrans, that disturb 1.0 acre, or greater, of land.</p> <p>11. Project employees will be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.</p> <p>12. All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed at least once a day from the work area.</p> <p>13. No firearms will be allowed in the project area except for those carried by authorized security personnel, or local, State, or Federal law enforcement officials.</p> <p>14. To prevent harassment, injury or mortality of sensitive species, no pets will be permitted on the project site.</p> <p>15. The potential for impacts to water quality will be avoided by implementing temporary and permanent Best Management Practices (BMPs). To address potential temporary impacts, a SWPPP will be developed by the Contractor, and approved by Caltrans, prior to commencement of construction activities. The SWPPP demonstrates the deployment of appropriate BMPs to prevent discharge of unmanaged storm and non-storm water beyond the perimeter of the construction site. Additionally, this will include soil and sediment control BMPs, to minimize, or prevent, such discharge beyond the construction perimeter.</p> <p>To address potential permanent impacts, erosion control and stormwater treatment BMPs will be incorporated into the project design. These will be implemented to provide soil and sediment control, as well as treatment of vehicular pollutants characteristic of stormwater run-off. No Discharge of pollutants from vehicle and equipment cleaning are allowed into the storm drain or water courses.</p> <p>16. Disturbed slopes and graded areas will be protected from erosion, during construction, using a combination of temporary</p> |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
|---------------------------------|---|
| | <p data-bbox="743 264 1404 405">fiber roll, hydro-mulch, and silt fence placed at intervals and/or along perimeters or disturbed areas and toes-of-slopes. Permanent erosion and control measures, such as fiber roll, hydroseed, and erosion-control netting (i.e. jute or coir), will be incorporated as part of the project design.</p> <p data-bbox="719 436 1414 604">17. Plastic mono-filament netting (erosion control matting) or similar material will not be used for the project because Alameda whipsnakes, California red-legged frogs, and California tiger salamanders may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds</p> <p data-bbox="719 636 1369 741">18. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.</p> <p data-bbox="719 772 1414 940">19. All areas that are temporarily affected during construction will be revegetated with an assemblage of native grass, shrub, and trees and will be returned to their original grade and contours to the maximum extent feasible. Caltrans will develop a re-vegetation plan with success criteria. This plan will be submitted to the USFWS for approval.</p> <p data-bbox="719 972 1409 1056">20. To the extent practicable, clearing and grubbing activities will be conducted during the non-nesting season, from September 1 to January 31.</p> <p data-bbox="719 1087 1401 1192">21. Pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to August 31).</p> <p data-bbox="719 1224 1414 1392">22. If work is to occur within 300 feet of active raptor nests, 100 feet of passerine nests, or 50 feet of other active species nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance.</p> <p data-bbox="719 1423 1409 1476">23. The project has been designed to avoid impacts to Waters of the U.S. to the maximum extent practicable.</p> <p data-bbox="719 1507 1385 1560">24. Lighting for nighttime work will be directed downwards and towards the construction work taking place.</p> <p data-bbox="719 1591 1419 1780">25. Environmentally Sensitive Area (ESA) fencing will be placed around all biologically sensitive areas adjacent to or within construction work areas prior to the start of construction. The ESA fencing will remain in place for the duration of the project construction. The location and specifications for construction of the ESA fencing will be included in the contract package for the project.</p> |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
|---------------------------------|---|
| | <p>26. All material stockpiling, vehicle parking, and equipment staging areas for the proposed action will be permitted only in areas cleared by a qualified biologist. The perimeter, ingress, and egress points will be clearly marked before construction use begins. Areas designated for this use will be within the Caltrans right-of-way.</p> <p>27. Vegetation removal will be limited to the minimum amount required for construction. Only the vegetation above the soil surface will be removed, except in areas where subsurface work is required.</p> <p>28. Woody vegetation will be removed by hand or with light construction equipment, such as backhoes.</p> <p>29. All cleared vegetation will be removed from the project site and disposed of in an appropriate location with all required permissions and permits.</p> <p>30. All ground disturbing activities in AWS, CRLF, and CTS habitat will be conducted between May 1 and October 15. Caltrans will seek agency approval for work outside of this window. The exception for this will be limited vegetation clearing necessary to minimize effects to nesting birds.</p> <p>31. No work will occur during, or within 24 hours after, a rain event exceeding 0.2 inch, as measured by the NOAA Weather Report for San Jose, California. Caltrans will seek approval with agencies to continue or begin work during or within 24 hours of a rain event.</p> <p>32. Caltrans will follow all species handling guidelines referenced in the Biological Opinion and other permits.</p> <p>33. Caltrans will follow the requirements of the Biological Opinion, Incidental Take Permit, and other subsequent permits required for the project.</p> |
| <p>Grassland Habitat</p> | <p>1. Caltrans will mitigate for grassland impacts to CTS, CRLF, and AWS habitat. Compensations on site will be at a 1.1:1 ratio and is expected to total 2.04 acres of mitigation. Compensations off-site will be at a 3:1 ratio and is expected to total 0.45 acre. Total compensation for grassland habitat is expected to be 2.49 acres.</p> <p>2. The project has been designed to avoid impacts to grassland habitat to the maximum extent practicable.</p> |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
|---|---|
| <p>Freshwater Marsh Habitat</p> | <ol style="list-style-type: none"> 1. Caltrans will mitigate for freshwater marsh impacts to CTS and CRLF habitat. Compensations on site will be at a 1.1:1 ratio and is expected to total 0.009 acre of mitigation. Compensations off-site will be at a 3:1 ratio and is expected to total 0.0018 acre. Total compensation for freshwater habitat is expected to be 0.01 acre. 2. The project has been designed to avoid impacts to freshwater marsh habitat to the maximum extent practicable. |
| <p>California Red-legged Frog</p> | <ol style="list-style-type: none"> 1. Proposed on-site habitat restoration due to 1.86 acres of temporary impacts to California red-legged frog habitat. See Grassland and Freshwater Marsh Sections. 2. Proposed off-site habitat restoration due to 0.15 acre permanent impacts to California red-legged frog habitat. |
| <p>California Tiger Salamander</p> | <ol style="list-style-type: none"> 1. Proposed on-site habitat restoration due to 1.86 acres of temporary impacts of California tiger salamander habitat. See Grassland and Freshwater Marsh Habitat Sections. 2. Proposed off-site habitat restoration due to 0.15 acres of permanent impacts to California tiger salamander habitat. |
| <p>Alameda Whipsnake</p> | <ol style="list-style-type: none"> 1. Proposed on-site habitat restoration due to 1.86 acres of temporary impacts of Alameda whipsnake habitat. See Grassland Habitat Section. 2. Proposed off-site habitat restoration due to 0.15 acre of permanent impacts of Alameda whipsnake habitat. |
| <p>Western Burrowing Owl</p> | <ol style="list-style-type: none"> 1. Active burrowing owl burrows detected during preconstruction surveys within or adjacent to the active construction area will be avoided per the requirements of CDFW. |
| <p>Migratory Birds</p> | <ol style="list-style-type: none"> 1. To the extent practicable, clearing and grubbing activities will be conducted during the non-nesting season, from September 1 to February 1. 2. Pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to August 31). 3. If work is to occur within 300 feet of active raptor nests or 50 feet of other species nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
|---------------------------------|---|
| | sensitivity to disturbance, and the intensity/type of potential disturbance. |
| Invasive Species | <ol style="list-style-type: none"> 1. Standard AMMs will be proposed to control the spread of invasive species. 2. Invasive, exotic plants will be controlled within the area of disturbance to the maximum extent practicable, pursuant to Executive Order 13112. 3. Areas subject to noxious weed removal or disturbance will be replanted with fast growing native greases or a native erosion control seed mixture. If seeding is not possible, the area should be covered to the extent practicable with heavy black plastic solarization material until the end of the project. |
| Cultural | <ol style="list-style-type: none"> 1. Areas that have been identified as containing cultural resources will be protected with Sensitive Area Fencing. 2. No construction activities or personnel will be allowed within the area protected with Sensitive Area Fencing. 3. If any cultural artifacts are found during construction, the Resident Engineer will immediately be notified and will halt work until a qualified archaeologist has been notified and assessed the significance of the find. |
| Paleontological | <ol style="list-style-type: none"> 1. The Caltrans Project design team will work with the paleontologist to ensure that paleontological resources will be avoided to the maximum extent possible. 2. A project-specific Paleontological Mitigation Plan will be prepared by a qualified paleontologist once project design information regarding subsurface disturbance location, depth, and lateral extent if available. 3. The qualified paleontologist will be present at pre-construction meetings to train contractors in paleontological identification during ground-disturbing activities. 4. Paleontological monitors, under the direction of the paleontologist, will be on site to inspect excavations for fossils at all times during original ground disturbance involving sensitive geologic formations. 5. When fossils are discovered, the paleontologist (or monitor) will recover them. Construction work in these areas will be halted or diverted by the Resident Engineer until the site can be assessed by the paleontologist and to allow the prompt recovery of fossils. |

| Protected or Regulated Resource | Proposed Avoidance and Minimization Measures |
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| | <ol style="list-style-type: none"> 6. Fossils collected during the monitoring and salvage portion of the program will be prepared to the point of identification, sorted, and cataloged. 7. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited in a scientific institution with paleontological collections. 8. A Paleontological Mitigation Report will be completed that outlines the results of the mitigation program. |
| Visual | <ol style="list-style-type: none"> 1. Landscaping and irrigation systems that are damaged or removed will be replaced or repaired. 2. All disturbed ground surfaces will be restored. |
| Hazardous Waste | <ol style="list-style-type: none"> 1. Standard safe handling practices will be implemented with the removal of yellow traffic striping that contains hazardous waste levels of lead. 2. A spill response plan will be developed for any hazardous materials (such as fuels, oils, and solvents) stored and/or used on-site. Standard best management practices will be followed for the use and storage of these materials. 3. Any borrow material will be certified non-toxic and weed free to the maximum extent practicable. |

Appendix F: Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
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SACRAMENTO, CA 94273-0001
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March 2013

NON-DISCRIMINATION 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, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

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

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

A handwritten signature in blue ink, appearing to read "Malcolm Dougherty".

MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"

Appendix G: Biological Opinion



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2015-F-0468-1

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

FEB 12 2016

Ms. Melanie Brent, Office Chief
Caltrans District 4 Environmental Analysis
California Department of Transportation
P.O. Box 23660
Oakland, California 94623-0660

Subject: Formal Consultation on the Interstate 680 Northbound Pavement Rehabilitation Project,
Alameda County, California (Caltrans EA 3G600)

Dear Ms. Brent:

This letter is in response to the California Department of Transportation's (Caltrans), May 1, 2015, request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Interstate 680 (I-680) Northbound Pavement Rehabilitation Project (Caltrans EA 3G600), Alameda County, California. Your request was received by the Service on May 5, 2015. At issue are the proposed project's effects on the federally threatened California red-legged frog (*Rana draytonii*), threatened Central California Distinct Population Segment of the California tiger salamander (Central California tiger salamander) (*Ambystoma californiense*), and threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation (23 U.S.C. 327) allows the Secretary of the U.S. Department of Transportation acting through the Federal Highway Administration (FHWA) to establish a Surface Transportation Project Delivery Pilot Program, whereby a State may assume the FHWA responsibilities under the National Environmental Policy Act (NEPA) for environmental review, agency consultation and other action pertaining to the review or approval of a specific project. Caltrans assumed these responsibilities for the FHWA on July 1, 2007 through a Memorandum of Understanding (MOU) within the State of California (http://www.dot.ca.gov/ser/downloads/MOUs/nepa_delegation/sec6005mou.pdf).

The federal action we are consulting on is the pavement rehabilitation and roadway improvements along I-680 from PM 0.0 at the Santa Clara/Alameda County Line to PM 4.0 at the Auto Mall Parkway. Pursuant to 50 CFR 402.12(j), you submitted a biological assessment dated May 2015 for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect the California red-legged frog, Central California tiger salamander, and Alameda whipsnake. Critical habitat has been designated for the California red-legged frog, Central California tiger salamander, and Alameda whipsnake; however, the proposed action does not occur within designated critical habitat for these species.

In considering your request, we based our evaluation on the following: (1) the I-680 Pavement Rehabilitation Project, Biological Assessment dated May 2015; (2) the June 25, 2013, site visit; (3) July 24, 2015, response to comments from the Service; (4) miscellaneous correspondence and electronic mail concerning the proposed action between Caltrans and the Service; and (5) other information available to

the Service. The remainder of this document provides our biological opinion on the effects of the proposed project on California red-legged frog, Central California tiger salamander, and Alameda whipsnake.

Consultation History

| | |
|-------------------------------------|---|
| June 25, 2013 | The Service attended a site visit with Caltrans to review the proposed project and discuss potential effects to listed species and their habitat. |
| April 3, 2015 | The Service received a request from Caltrans requesting technical assistance with the I-680 Northbound Pavement Rehabilitation Project. |
| May 1, 2015 | The Service received a letter requesting the initiation of formal consultation dated May 1, 2015, and a Biological Assessment for the I-680 Northbound Pavement Rehabilitation Project. |
| Jun 18, 2015 | The Service requested clarification on the action area and project description. |
| July 24, 2015 | Caltrans provided the requested information to clarify questions about the action area and project description. |
| April 3, 2015 - January 28, 2016 | Electronic and phone correspondence between Caltrans and the Service. |

Description of the Action

The following project description, inclusive of the proposed compensation and proposed conservation measures, was provided by Caltrans and is an excerpt from the May 2015 Biological Assessment, as revised, with minor modifications for reasons of clarity and accuracy provided by the Service.

Project Description

The purpose of this project is to preserve and extend the service life of the existing pavement and improve ride quality. The Caltrans pavement condition survey (PCS) for this section of the freeway has an overall PCS/Pavement Management System (PMS) priority number five, which characterizes the road as having minor to moderate distress and poor ride quality. Caltrans proposes to rehabilitate the mainline roadway, and on- and off-ramps on northbound I-680 from the Santa Clara/Alameda County Line (post mile [PM] 0.0) to Auto Mall Parkway (PM 4.0). Additional safety features are proposed for this project including the installation of rumble strips, replacement or installation of guardrail, concrete barriers and crash cushions, Hot Mix Asphalt (HMA) dikes, concrete curbs, sidewalks, and pedestrian curb ramps. Other rehabilitation activities include the replacement or installation of drainage systems, overhead signs, roadside signs, Traffic Monitoring Systems (TMS), streetlights, lighting and signals, and replacement of approach slabs.

Roadway Rehabilitation Construction

Between Scott Creek Road and Mission Boulevard (SR 262), Caltrans proposes to resurface the pavement using the cold plane method. The roadway section between the edges of pavement would be removed up to a depth of 0.25-feet and replaced with a 0.6-foot to one-foot layer of HMA composite layer. The pavement removal and replacement of HMA would extend across the entire traveled way, including the shoulders. Dig outs and HMA replacement will replace any severely deteriorated asphalt areas.

Between Mission Boulevard (SR 262) and Auto Mall Parkway, Caltrans proposes to resurface the pavement using the crack, seat, and overlay method. The pavement will be cracked and seated using a hammer. Then the pavement will be overlaid with a 0.6 to one-foot layer of composite HMA. Deteriorated Portland cement concrete (PCC) slabs will be removed by saw cutting the limits to approximate depth of 1.5 feet, then broken and off hauled. The removed section will be replaced with rapid set concrete pavement. The estimated amount of replacement is 20% of the total existing concrete pavement. This area also has a 10-foot inside shoulder, but only the first five feet is paved. Caltrans proposes to pave the inside shoulder to 10 feet. Approach slabs south of Scott Creek Road will be replaced. The bridge is on piles and does not settle, but the roadway around the bridge has settled since initial construction in the 1960s. Up to 1.5 feet of the slab will be removed and replaced.

Existing asphalt concrete (AC) dikes will be replaced and upgraded to meet current standards. The AC dike work will involve removing AC pavement sections to a depth of no more than 0.35-feet. The total length of AC dike replacement is approximately 20,850 feet. Gore paving will occur between the on- and off-ramps and the mainline. The maximum depth of excavation for the gore paving is one-foot. Gore paving will be completed using an AC mixture.

Existing vehicle detector stations (loop detectors) will be replaced in order to preserve the existing TMS systems. The loop detectors will be placed within the paved surfaces and concrete slab to a depth of no more than two inches. There are nine loop detectors proposed for the mainline. Existing loop detectors within on and off-ramps will be replaced. New traffic lighting is proposed between Mission Boulevard (SR 262) and Auto Mall Parkway. Approximately 50 lights will be in the outside shoulder with approximately 180-foot spacing on 5 foot deep piles. The lights have a footprint of 2.5 by 2.5 feet.

The total length of electrical trenches is 12,800 feet. The maximum depth of trenches is three feet deep and one foot wide. There are 72 (two by 3.1-foot) pull boxes at approximately 180 feet spacing expected. If jacking pits are needed for electrical lines crossing the freeway, the excavated pits will be approximately six by six feet in size. There are assumed to be four jacking pits. Existing Metal Beam Guardrail (MBGR) will be replaced with a new standard Midwest Guard Rail (MGS) system. An auger six inches in diameter will be used to drill new pilot holes to a depth of up to seven feet. Metal posts will be inserted into the excavated holes and backfilled. Once the posts are stabilized the guardrail will be affixed. A thin layer of three inch thick by 4.67 feet wide concrete will be placed under the newly installed MGS for vegetation control treatment throughout the length of the MGS system. Approximately 2,900 feet of MBGR will be replaced. Concrete crash barriers will be constructed between looped ramps and diagonal ramps. Barriers at the edge of looped ramps have one side higher than the other, as a result barrier ramp slabs are needed for added stability. The depth of this concrete barrier and slab can be up to three feet deep. Approximately 850 feet of concrete barrier will be created.

Old overhead signs will be replaced within the project limits. The signs will be removed from the pile foundation and the pile will be left in place. For new overhead signs, a six-foot diameter hole up to 20 to 25 feet deep will be excavated. Rebar cages will be placed in the excavated area and concrete poured. Once the foundations have cured the sign structure will be attached and the sign panels erected. ADA curb ramps and sidewalk replacement/installation will occur at selected locations. At these locations sidewalks and curb ramps will be ripped out and replaced with new sidewalk and curb ramps six inches to one-foot in height. ADA ramps will be installed at 13 locations within existing pavement or concrete.

Drainage

The increased pavement thickness will require all existing inlets within the roadway to be adjusted to match the new finished grade. In addition, replacement or installation of guardrail, as well as the associated HMA dike replacement, will require modification of existing inlet structures and additional inlets and pipes. The proposed median shoulder widening, overhead sign relocation, curb ramp installations, and crash cushion installations will also impact existing drainage facilities and require their

modification, relocation, and the installation of additional drainage facilities. Existing drainage facilities that are damaged, deteriorated, or do not meet current design and safety standards will be replaced.

The depth of buried pipes will be the diameter of the pipe and a maximum cover of three feet. The trench width will be two feet from the edge of the culvert. The temporary impacts of culvert installation are 12 feet wide from the centerline of the pipe and 12 feet extended from the end of the pipe. Downdrains will be replaced at 14 locations.

Construction Equipment

The anticipated equipment for the cold planning will likely include an AC cold planning machine with conveyor belt, end dump trucks for off hauling the existing AC grindings, and paving machines and bottom or end dump trucks for placing new HMA. Rollers will be used to spread out the AC. For crack, seat and overlay, a backhoe with attached hammer will likely be used for demolishing the deteriorated concrete pavement. Rapid set concrete will replace the removed concrete. A crack and seat machine will pass through making drops of the hammer to prepare the pavement for overlay, then bottom or end dump trucks will be used for placing new HMA. Rollers will be used to spread out the AC.

All pavement grindings and broken concrete material will be off-hauled to a Caltrans approved disposal facility. The equipment required for roadway and drainage work will include general construction equipment, such as blade, backhoe, paver, roller, and spreader. A special trenching machine like a small bobcat may be used for excavation of the culvert depending on site conditions. Vehicles required include trucks for delivering materials, labor pick-up trucks, and a water truck for dust control. Other vehicles anticipated to be used include pickup trucks for traffic control and miscellaneous items. No parking or staging of pavement equipment or personal vehicles will be permitted outside of the work areas.

Staging Areas

Designated staging areas will be the diagonal and looped areas on the east side Scott Creek interchange and the southeast quadrant of Durham Road /Auto Mall Parkway. This area is also suitable for placement of water quality facilities.

Traffic Handling

Most work will be done at night. Lane closures as well as ramp closures will be used for traffic handling. Ramps will be closed only at night for paving and reopened for traffic during the day. During on-ramp closures, detours will be necessary to temporarily direct traffic to the next available interchanges. Local and county roads will not be used for detours. Temporary signs will be placed along the roadway during paving operations. The project will take approximately 200 working days to complete.

Proposed Conservation Measures

Proposed Compensation

To offset permanent effects to California red-legged frog, Central California tiger salamander, and Alameda whipsnake, suitable habitat for each species, or suitable multi-species habitat in coordination with the Service, will be created, restored, or set aside in perpetuity at a ratio of 3:1 for permanent effects and 1.1:1 for temporary effects (Table 1). Caltrans proposes to purchase multi-species conservation bank credits at Ohlone or Ohlone West Conservation Bank. Compensation plans will be subject to review and approval by the Service. On-site restoration of temporarily affected areas may qualify as compensation at a 1:1 ratio once conditions are verified by the Service. The criteria for off-site compensation are provided in Appendix A.

Table 1: Proposed Compensation for Temporary and Permanent Effects

| Species | Effects | | | | | | Total Compensation |
|-------------------------------------|-------------------|--------------------|------|-------------------|--------------------|------|--------------------|
| | Temporary (acres) | | | Permanent (acres) | | | |
| | Impact | Compensation Ratio | Need | Impact | Compensation Ratio | Need | |
| California red-legged frog | 1.86 | 1.1:1 | 2.04 | 0.15 | 3:1 | 0.45 | 2.49 |
| Central California tiger salamander | 1.86 | 1.1:1 | 2.04 | 0.15 | 3:1 | 0.45 | 2.49 |
| Alameda whipsnake | 1.85 | 1.1:1 | 2.04 | 0.15 | 3:1 | 0.45 | 2.49 |

General Conservation Measures

To reduce potential effects to sensitive biological resources, Caltrans proposes to incorporate construction best management practice (BMP) and avoidance and minimization measures into the proposed roadway construction project. These measures will be communicated to the contractor through the use of special provisions included in the contract bid solicitation package. These measures include the following:

1. **Environmental Awareness Training:** Prior to the start of construction, a qualified biologist will conduct an educational training program for all construction personnel including contractors and subcontractors. The training will include, at a minimum, a description of the California red-legged frog, Central California tiger salamander, Alameda whipsnake, and their habitat within the action area; an explanation of the status of these species and protection under state and federal laws; the avoidance and minimization measures to be implemented to reduce take of these species; communication and work stoppage procedures in case a listed species is observed within the action area; and an explanation of the Environmentally Sensitive Areas (ESAs) and Wildlife Exclusion Fencing (WEF) and the importance of maintaining these structures. An informational brochure conveying this information with images of these species to aid in identification will be prepared and distributed to all construction personnel. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures and implications of the Act.
2. **Environmentally Sensitive Areas:** Prior to the start of construction all ESAs – defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed – will be clearly delineated using high visibility orange fencing. Construction work areas include the active construction site and all areas providing support for the proposed action including areas used for vehicle parking, equipment and material storage and staging, access roads, etc. The ESA fencing will remain in place throughout the duration of the proposed action, while construction activities are ongoing, and will be regularly inspected and fully maintained at all times. The final project plans will depict all locations where ESA fencing will be installed and will provide installation specifications. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within ESAs.
3. **Wildlife Exclusion Fencing:** Prior to the start of construction, WEF will be installed along the construction site perimeter in all areas where California red-legged frogs, Central California tiger salamanders, or Alameda whipsnakes could enter the construction area. The location of the fencing shall be determined by the Resident Engineer and Service-approved biologist in cooperation with the Service prior to the start of staging or surface disturbing activities. A

conceptual fencing plan shall be submitted to the Service for review and approval prior to WEF installation. The location, timing, fencing materials, installation specifications, and monitoring and repair criteria shall be approved by the Service prior to start of construction. The WEF shall be a minimum of 36 inches tall (measured above ground following installation) and shall be buried a minimum of 4 inches deep and backfilled with soil, sand bags or other means to prevent California red-legged frogs or Central California tiger salamanders from passing under the fence and entering the project footprint. WEF shall include a means for animals to exit the project site on their own, e.g. exit funnels, at 100-foot intervals and shall be accessible by listed species from ground level. Cover boards shall be placed on the non-project side of the WEF to provide temporary refugia for species traveling along the base of the fence line. Cover boards, e.g. sections of plywood, shall, a minimum, measure 2 feet by 1 foot and shall be placed lengthwise along the base of the WEF and elevated 2-4 inches at the point of contact with the fence. Vegetation shall be cleared to within two inches of ground level to prevent species from using vegetation to gain access to the project site by climbing over the WEF. Vegetation within 18 inches of the WEF shall remain clear during the entire time the WEF is in operation. The WEF shall consist of a material that does not allow California red-legged frogs, Central California tiger salamanders, or Alameda whipsnakes from climbing into the project site. Caltrans shall include the WEF specifications on the final project plans. Caltrans shall include the WEF specifications including installation and maintenance criteria in the bid solicitation package special provisions. The WEF shall remain in place throughout the duration of the project and shall be regularly inspected and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon project completion the WEF shall be completely removed and properly disposed of off-site, the area cleaned of debris and trash, and returned to natural conditions.

4. **Avoidance of Entrapment:** To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than one-foot deep with walls steeper than 30 degrees will be covered at the end of each workday by plywood or similar materials. Alternatively, WEF meeting the specifications provided in the Project Description of this Biological Opinion will be used. If it is not feasible to cover the excavation site or install WEF, one or more escape ramps constructed of earth fill or wooden planks will be installed. The Service-approved biologist shall inspect all holes and trenches at the beginning of each workday and before such holes or trenches are filled. All replacement pipes, culverts, or similar structures stored in the action area overnight will be inspected before they are subsequently moved, capped, and/or buried. If at any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape or the Service will be contacted in accordance with the reporting requirements of this Biological Opinion.
5. **Predesignated Staging Areas:** All material stockpiling, vehicle parking, and equipment staging areas for the proposed action will be permitted only in areas cleared by a Service-approved biologist. The limits of the designated staging area will be clearly marked before beginning construction. Staging areas will be located within the Caltrans ROW in non-sensitive locations at designated disturbed/developed areas outside construction zones. No staging will be allowed outside the predesignated staging areas. No equipment storage or staging may occur in or adjacent to designated critical habitat areas before the establishment of an environmentally sensitive area.
6. **Water Quality Inspections:** Water quality inspector(s) will inspect the site after a rain event to ensure that the stormwater Best Management Practices (BMPs) are adequate and are not resulting in additional take to listed species or their habitat.

7. **Concrete Waste:** All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage features.
8. **Caltrans Standard Best Management Practices (BMPs):** The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans' Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water-related erosion. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit (SWPPP) to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A SWPPP will be developed for the project, as one is required for all projects that have at least 1.0-acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for Design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges. The SWPPP will reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found at the following website: <http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>. Protective measures will be included in the contract, including, at a minimum:
 - a. No discharge of pollutants from vehicle and equipment cleaning is allowed into any storm drains or watercourses.
 - b. Vehicle and equipment fueling and maintenance operations must be at least 50 feet away from watercourses, except at established commercial gas stations or established vehicle maintenance facility.
 - c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed. Neither will be allowed into watercourses.
 - d. Spill containment kits will be maintained onsite at all times during construction operations and/or staging or fueling of equipment.
 - e. Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas, covering temporary access road entrances and exits with rock (rocking), and covering of temporary stockpiles when weather conditions require.
 - f. Coir rolls or straw wattles that do not contain plastic or synthetic monofilament netting will be installed along or at the base of slopes during construction to capture sediment.
 - g. Protection of graded areas from erosion using a combination of silt fences, fiber rolls, etc. along toes of slopes or along edges of designated staging areas, and erosion control netting (such as jute or coir) as appropriate on sloped areas. Erosion control materials that use plastic or synthetic monofilament netting will not be used within the action area. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine or other similar fibers.
 - h. Permanent erosion control measures such as bio-filtration strips and swales to receive storm water discharges from the highway, or other impervious surfaces will be incorporated to the maximum extent practicable.
 - i. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 50 feet from any aquatic habitat, culvert, or drainage feature.

9. **Construction Site Management Practices:** The following site restrictions will be implemented to avoid or minimize effects on listed species and their habitats:
- a. A speed limit of 15 miles per hour (mph) in the project footprint in unpaved areas will be enforced to reduce dust and excessive soil disturbance.
 - b. Construction access, staging, storage, and parking areas, will be located within the project Caltrans ROW outside of any designated ESA or outside of the Caltrans ROW in areas environmentally cleared by the contractor. Access routes and the number and size of staging and work areas will be limited to the minimum necessary to construct the proposed project. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading.
 - c. To the maximum extent practicable, any borrow material will be certified to be non-toxic and weed free.
 - d. All food and food-related trash items will be enclosed in sealed trash containers and properly disposed of off-site.
 - e. No pets from project personnel will be allowed anywhere in the action area during construction.
 - f. No firearms will be allowed on the project site except for those carried by authorized security personnel, or local, State or Federal law enforcement officials.
 - g. A Spill Response Plan will be prepared. Hazardous materials such as fuels, oils, solvents, etc. will be stored in sealable containers in a designated location that is at least 50 feet from hydrologic features.
 - h. All equipment will be properly maintained and free of leaks. Servicing of vehicles and construction equipment including fueling, cleaning, and maintenance will occur at least 50 feet from any hydrologic features.
10. **Vegetation Removal:** Any vegetation that is within the cut and fill line or growing in locations where temporary or permanent structures will be placed (e.g., shoulder widening, staging or access areas) will be cleared. Vegetation will be cleared only where necessary and will be cut above soil level except in areas that will be excavated for roadway construction. This will allow plants that reproduce vegetatively to resprout after construction. All clearing and grubbing of woody vegetation will occur by hand or using light construction equipment such as backhoes. If clearing and grubbing occurs between February 1 and August 31, a qualified biologist(s) will survey for nesting birds within the area(s) to be disturbed including a perimeter buffer of 100 feet for passerines and 300 feet for raptors before clearing activities begin. All nest avoidance requirements of the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3503.5 will be observed. All cleared vegetation will be removed from the project footprint to prevent attracting animals to the project site. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of such materials. A Service-approved biologist will be present during all vegetation clearing and grubbing activities. Prior to vegetation removal, the Service-approved biologist shall thoroughly survey the area for California red-legged frogs or Central California tiger salamanders. Once the Service-approved biologist has thoroughly surveyed the area, clearing and grubbing may continue without further restrictions on equipment; however, the Service-approved biologist shall remain onsite to monitor for California red-legged frogs or Central California tiger salamanders until all clearing and grubbing activities are complete. After project completion, all

temporarily affected areas shall be returned to original grade and contours to the maximum extent practicable, protected with proper erosion control materials, and revegetated with native species appropriate for the region and habitat communities on site.

11. **Reduce Spread of Invasive Species:** To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control in order to minimize the economic, ecological, and human health impacts. In the event that high- or medium-priority noxious weeds, as defined by the California Department of Food and Agriculture or the California Invasive Plant Council, are disturbed or removed during construction-related activities, the contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. If seeding is not possible, the area should be covered to the extent practicable with heavy black plastic solarization material until the end of the project.
12. **Replant, Reseed, and Restore Disturbed Areas:** All slopes or unpaved areas affected by the proposed action will be restored to natural conditions. Slopes and bare ground will be reseeded with native grasses and shrubs characteristic of the floristic region and native local habitats to stabilize soils and prevent erosion. Where disturbance includes the removal of trees or plants, native species will be replanted and maintained until they become established. A revegetation plan with success criteria will be submitted to the Service for review and approval. Temporary effects comprise areas denuded, manipulated, or otherwise modified from their existing, pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. Temporary effects must be restored to baseline habitat values or better within one year following initial disturbance. Areas subject to ongoing operations and maintenance are not considered temporary even if they are restored within one year following initial disturbance. Affected areas not fulfilling these criteria are considered permanent.

Action Area

The action area is defined in 50 CFR § 402.02, as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." For the proposed project, the action area encompasses 219.0 acres and includes the project footprint and surrounding lands in unincorporated Santa Clara County. Approximately, 115 acres of which are the paved surfaces of the freeway, on and off-ramps, and adjacent surface streets. The action area includes the project footprint, equipment staging area, access routes, Caltrans ROW, temporary construction easements, and adjacent lands that will be subjected to physical, noise, light, and vibration disturbance. Habitat within the action area comprises paved roadway (114.62 acres), freshwater marsh (0.09-acre), creek or ephemeral channel (0.10-acre), Mediterranean California naturalized annual and perennial grassland (47.42 acres), and urbanized/landscaped (56.88 acre).

Analytical Framework for the Jeopardy Determinations

The following analysis relies on four components to support the jeopardy determination for the California red-legged frog, Central California tiger salamander, and Alameda whipsnake: (1) the *Status of the Species*, which evaluates the species' range wide condition, the factors responsible for that condition, and their survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of

these species in the action area, the factors responsible for that condition, and the role of the action area in the species' survival and recovery; (3) the *Effects of the Action*, which determines the direct and indirect effects of the proposed Federal action and the effects of any interrelated or interdependent activities on these species; and (4) *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on these species.

In accordance with the implementing regulations for Section 7 and Service policy, the jeopardy determination is made in the following manner: the effects of the proposed Federal action are evaluated in the context of the aggregate effects of all factors that have contributed to the current status of the California red-legged frog, Central California tiger salamander, and Alameda whipsnake. Additionally, for non-Federal activities in the action area, we will evaluate those actions likely to affect the species in the future, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both its survival and recovery in the wild.

The following analysis places an emphasis on using the range-wide survival and recovery needs of the California red-legged frog, Central California tiger salamander, and Alameda whipsnake, and the role of the action area in providing for those needs as the context for evaluating the significance of the effects of the proposed programmatic Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Status of the Species

California Red-legged Frog

Listing Status: The California red-legged frog was listed as a threatened species on May 23, 1996 (61 FR 25813) (Service 1996). Critical habitat was designated for this species on April 13, 2006 (71 FR 19244) (Service 2006) and revisions to the critical habitat designation were published on March 17, 2010 (75 FR 12816) (Service 2010). At this time, the Service recognized the taxonomic change from *Rana aurora draytonii* to *Rana draytonii* (Shaffer *et al.* 2010). A recovery plan was published for the California red-legged frog on September 12, 2002 (Service 2002).

Description: The California red-legged frog is the largest native frog in the western United States (Wright and Wright 1949), ranging from 1.5 to 5.1 inches in length (Stebbins 2003). The abdomen and hind legs of adults are largely red, while the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers (Stebbins 2003), and dorsolateral folds are prominent on the back. Larvae (tadpoles) range from 0.6 to 3.1 inches in length, and the background color of the body is dark brown and yellow with darker spots (Storer 1925).

Distribution: The historic range of the California red-legged frog extended from the vicinity of Elk Creek in Mendocino County, California, along the coast inland to the vicinity of Redding in Shasta County, California, and southward to northwestern Baja California, Mexico (Fellers 2005; Jennings and Hayes 1985; Hayes and Krempels 1986). The species was historically documented in 46 counties but the taxa now remains in 238 streams or drainages within 23 counties, representing a loss of 70 percent of its former range (Service 2002). California red-legged frogs are still locally abundant within portions of the San Francisco Bay area and the central California coast. Isolated populations have been documented in the Sierra Nevada, northern coast, and northern Transverse Ranges. The species is believed to be extirpated from the southern Transverse and Peninsular Ranges, but is still present in Baja California, Mexico (CDFW 2015).

Status and Natural History: California red-legged frogs predominately inhabit permanent water sources such as streams, lakes, marshes, natural and manmade ponds, and ephemeral drainages in valley bottoms and foothills up to 4,921 feet in elevation (Jennings and Hayes 1994, Bulger *et al.* 2003, Stebbins

2003). However, they also inhabit ephemeral creeks, drainages, and ponds with minimal riparian and emergent vegetation. California red-legged frogs breed from November to April, although earlier breeding records have been reported in southern localities. Breeding generally occurs in still or slow-moving water often associated with emergent vegetation, such as cattails, tules, or overhanging willows (Storer 1925, Hayes and Jennings 1988). Female frogs deposit egg masses on emergent vegetation so that the egg mass floats on or near the surface of the water (Hayes and Miyamoto 1984).

Habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer including vegetated areas with coyote brush, California blackberry thickets, and root masses associated with willow and California bay trees (Fellers 2005). Sheltering habitat for California red-legged frogs potentially includes all aquatic, riparian, and upland areas within the range of the species and includes any landscape feature that provides cover, such as animal burrows, boulders or rocks, organic debris such as downed trees or logs, and industrial debris. Agricultural features such as drains, watering troughs, spring boxes, abandoned sheds, or haystacks may also be used. Incised stream channels with portions narrower and depths greater than 18 inches also may provide important summer sheltering habitat. Accessibility to sheltering habitat is essential for the survival of California red-legged frogs within a watershed, and can be a factor limiting frog population numbers and survival.

California red-legged frogs do not have a distinct breeding migration (Fellers 2005). Adults are often associated with permanent bodies of water. Some individuals remain at breeding sites year-round, while others disperse to neighboring water features. Dispersal distances are typically less than 0.5 mile, with a few individuals moving up to 1-2 miles (Fellers 2005). Movements are typically along riparian corridors, but some individuals, especially on rainy nights, move directly from one site to another through normally inhospitable habitats, such as heavily grazed pastures or oak-grassland savannas (Fellers 2005).

In a study of California red-legged frog terrestrial activity in a mesic area of the Santa Cruz Mountains, Bulger *et al.* (2003) categorized terrestrial use as migratory and non-migratory. The latter occurred from one to several days and was associated with precipitation events. Migratory movements were characterized as the movement between aquatic sites and were most often associated with breeding activities. Bulger *et al.* (2003) reported that non-migrating frogs typically stayed within 200 feet of aquatic habitat 90 percent of the time and were most often associated with dense vegetative cover, *i.e.*, California blackberry, poison oak, and coyote brush. Dispersing frogs in northern Santa Cruz County traveled distances from 0.25 mile to more than 2 miles without apparent regard to topography, vegetation type, or riparian corridors (Bulger *et al.* 2003).

In a study of California red-legged frog terrestrial activity in a xeric environment in eastern Contra Costa County, Tatarian (2008) noted that 57 percent of frogs fitted with radio transmitters in the Round Valley study area stayed at their breeding pools, whereas 43 percent moved into adjacent upland habitat or to other aquatic sites. Her study reported a peak seasonal terrestrial movement occurring in the fall months associated with the first 0.2 inch of precipitation and tapering off into spring. Upland movement activities ranged from 3 to 233 feet, averaging 80 feet, and were associated with a variety of refugia including grass thatch, crevices, cow hoof prints, ground squirrel burrows at the base of trees or rocks, logs, and under man-made structures; others were associated with upland sites lacking refugia (Tatarian 2008). The majority of terrestrial movements lasted from 1 to 4 days; however, one adult female was reported to remain in upland habitat for 50 days (Tatarian 2008). Upland refugia closer to aquatic sites were used more often and were more commonly associated with areas exhibiting higher object cover, *e.g.*, woody debris, rocks, and vegetative cover. Subterranean cover was not significantly different between occupied upland habitat and non-occupied upland habitat.

California red-legged frogs are often prolific breeders, laying their eggs during or shortly after large rainfall events in late winter and early spring (Hayes and Miyamoto 1984). Egg masses containing 2,000 - 5,000 eggs are attached to vegetation below the surface and hatch after 6 - 14 days (Storer 1925, Jennings

and Hayes 1994). In coastal lagoons, the most significant mortality factor in the pre-hatching stage is water salinity (Jennings *et al.* 1992). Eggs exposed to salinity levels greater than 4.5 parts per thousand resulted in 100 percent mortality (Jennings and Hayes 1990). Increased siltation during the breeding season can cause asphyxiation of eggs and small larvae. Larvae undergo metamorphosis 3.5 - 7 months following hatching and reach sexual maturity at 2 - 3 years of age (Storer 1925; Wright and Wright 1949; Jennings and Hayes 1985, 1990, 1994). Of the various life stages, larvae probably experience the highest mortality rates, with less than 1 percent of eggs laid reaching metamorphosis (Jennings *et al.* 1992). California red-legged frogs may live 8 to 10 years (Jennings *et al.* 1992). Populations can fluctuate from year to year; favorable conditions allow the species to have extremely high rates of reproduction and thus produce large numbers of dispersing young and a concomitant increase in the number of occupied sites. In contrast, the animal may temporarily disappear from an area when conditions are stressful (*e.g.*, during periods of drought, disease, etc.).

The diet of California red-legged frogs is highly variable and changes with the life history stage. The diet of the larvae is not well studied, but is likely similar to that of other ranid frogs, feeding on algae, diatoms, and detritus by grazing on the surface of rocks and vegetation (Fellers 2005; Kupferberg 1996a, 1996b, 1997). Hayes and Tennant (1985) analyzed the diets of California red-legged frogs from Cañada de la Gaviota in Santa Barbara County during the winter of 1981 and found invertebrates (comprising 42 taxa) to be the most common prey item consumed; however, they speculated that this was opportunistic and varied based on prey availability. They ascertained that larger frogs consumed larger prey and were recorded to have preyed on Pacific chorus frogs, threespine stickleback, and, to a limited extent, California mice, which were abundant at the study site (Hayes and Tennant 1985, Fellers 2005). Although larger vertebrate prey was consumed less frequently, it represented over half of the prey mass eaten by larger frogs suggesting that such prey may play an energetically important role in their diets (Hayes and Tennant 1985). Juvenile and subadult/adult frogs varied in their feeding activity periods; juveniles fed for longer periods throughout the day and night, while subadult/adults fed nocturnally (Hayes and Tennant 1985). Juveniles were significantly less successful at capturing prey and all life history stages exhibited poor prey discrimination, feeding on several inanimate objects that moved through their field of view (Hayes and Tennant 1985).

Threats: Habitat loss, non-native species introduction, and urban encroachment are the primary factors that have adversely affected the California red-legged frog throughout its range. Several researchers in central California have noted the decline and eventual local disappearance of California and northern red-legged frogs in systems supporting bullfrogs (Jennings and Hayes 1990, Twedt 1993), red swamp crayfish, signal crayfish, and several species of warm water fish including sunfish, goldfish, common carp, and mosquitofish (Moyle 1976; Barry 1992; Hunt 1993; Fisher and Schaffer 1996). This has been attributed to predation, competition, and reproduction interference. Twedt (1993) documented bullfrog predation of juvenile northern red-legged frogs, and suggested that bullfrogs could prey on subadult California red-legged frogs as well. Bullfrogs may also have a competitive advantage over California red-legged frogs. For instance, bullfrogs are larger and possess more generalized food habits (Bury and Whelan 1984). In addition, bullfrogs have an extended breeding season (Storer 1933) during which an individual female can produce as many as 20,000 eggs (Emlen 1977). Furthermore, bullfrog larvae are unpalatable to predatory fish (Kruse and Francis 1977). Bullfrogs also interfere with California red-legged frog reproduction by eating adult male California red-legged frogs. Both California and northern red-legged frogs have been observed in amplexus (mounted on) with both male and female bullfrogs (Jennings and Hayes 1990, Jennings 1993, Twedt 1993). Thus bullfrogs are able to prey upon and out-compete California red-legged frogs, especially in sub-optimal habitat.

The urbanization of land within and adjacent to California red-legged frog habitat has also affected the threatened amphibian. These declines are attributed to channelization of riparian areas, enclosure of the channels by urban development that blocks dispersal, and the introduction of predatory fishes and bullfrogs. Diseases may also pose a significant threat, although the specific effects of disease on the

California red-legged frog are not known. Pathogens are suspected of causing global amphibian declines (Davidson *et al.* 2003). Chytridiomycosis and ranaviruses are a potential threat because these diseases have been found to adversely affect other amphibians, including the listed species (Davidson *et al.* 2003; Lips *et al.* 2006). Mao *et al.* (1999 cited in Fellers 2005) reported northern red-legged frogs infected with an iridovirus, which was also presented in sympatric threespine sticklebacks in northwestern California. Non-native species, such as bullfrogs and non-native tiger salamanders that live within the range of the California red-legged frog have been identified as potential carriers of these diseases (Garner *et al.* 2006). Human activities can facilitate the spread of disease by encouraging the further introduction of non-native carriers and by acting as carriers themselves (*i.e.*, contaminated boots, waders, or fishing equipment). Human activities can also introduce stress by other means, such as habitat fragmentation, that results in the listed species being more susceptible to the effects of disease.

Recovery Plan: The recovery plan for the California red-legged frog identifies eight recovery units (Service 2002). The establishment of these recovery units is based on the determination that various regional areas of the species' range are essential to its survival and recovery. The status of the California red-legged frog was considered within the small-scale recovery units as opposed to their overall range. These recovery units are delineated by major watershed boundaries as defined by U.S. Geological Survey hydrologic units and the limits of its range. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit. Within each recovery unit, core areas have been delineated and represent contiguous areas of moderate to high California red-legged frog densities that are relatively free of exotic species such as bullfrogs. The goal of designating core areas is to protect metapopulations. Thus when combined with suitable dispersal habitat, will allow for the long-term viability within existing populations. The management strategy identified within the Recovery Plan will allow for the recolonization of habitats within and adjacent to core areas that are naturally subjected to periodic localized extinctions, thus assuring the long-term survival and recovery of California red-legged frogs.

Central California Tiger Salamander

Refer to the five-year review for the species status (Service 2014).

Alameda Whipsnake

Refer to the five-year review for the species status (Service 2011).

Environmental Baseline

California Red-legged Frog

The action area is located within the South and East Bay Recovery Unit (Service 2002, 2006), but is not located within designated critical habitat. The recovery action guidelines provide recommendations for minimizing the effects of various land and water uses, non-native species/predators, and air and water contamination in addition to outlining recommendations for habitat preservation. These recommendations assist in the conservation and recovery of the species, protect high quality habitat within core areas and priority watersheds, increase opportunities for dispersal, population expansion, and recolonization, and provide connectivity between core areas and occupied watersheds. The conservation needs for the Santa Clara Valley Core Area are to: 1) protect existing populations; and 2) control non-native predators.

There are eight reported California red-legged frog occurrences within 5 miles of the action area. The nearest occurrence (Occurrence #210) is located less than a mile from the action area from Agua Caliente Creek, which runs through the action area in a covered culvert. One adult frog and one metamorphosed juvenile were observed on July 30, 1996. The other seven of these occurrences are located over four miles east of the action area within the Diablo Range. Analysis of aerial imagery and

the National Wetlands Inventory identified several ponds in the hills adjacent to the action area and within one mile that may provide suitable breeding or non-breeding aquatic habitat. Four creeks traversing the action area could provide breeding habitat during wet years. Upland foraging and dispersal habitat is present within the grassland habitat adjacent to I-680 within the action area. The majority of the action area consists of paved roadways and urban development with areas of undeveloped Mediterranean California naturalized annual grasslands.

According to the biological assessment, undeveloped habitat within the action area consists of Mediterranean California naturalized annual and perennial grassland, freshwater marsh – cattail marshes herbaceous alliance, and creek or ephemeral channel. These habitat features provide suitable breeding/non-breeding aquatic, upland, and dispersal habitat for California red-legged frogs. The biological assessment identifies the area between South Mission Boulevard (SR 262) and Scott Creek Road with the highest potential for occurrence based on the presence of the aforementioned habitat types. California red-legged frogs are not expected to occur within the other areas due to extensive urban development on both sides of I-680, the presence of unsuitable habitat (i.e., landscaping, pavement), and the lack of connections to contiguous suitable grassland habitats.

I-680 presents a significant barrier to California red-legged frog east-west movement and frogs making it onto the highway are threat of mortality or injury due to high traffic flows. However, culverts and underpasses present an opportunity for frogs to safely bypass this barrier. The habitat on the west side of I-680 is dominated by urban development and supports limited viable options for California red-legged frogs.

Based on the habitat suitability within the action area, known occupancy of California red-legged frogs within the project vicinity, connectivity to adjacent occupied habitats and the presence of suitable breeding habitat within and adjacent to the action area, the Service has determined there is a reasonable potential for California red-legged frogs to inhabit and disperse through the action area.

Central California Tiger Salamander

The action area is not located within designated critical habitat (Service 2005a). The nearest critical habitat is East Bay Region Unit 3, located on the east side of Calaveras Reservoir, approximately five miles east of the action area. The project is located within the known range of the Central California tiger salamander and suitable upland and dispersal habitat is present in the action area. There are 26 reported Central California tiger salamander occurrences within 5 miles of the action area. Five of these are within the species' known 1.3-mile dispersal range (CDFW 2015, Service 2004); however, none are documented within the action area. The majority are located among the undeveloped grassy hills flanking the eastern part of the action area or within a vernal pool restoration site southwest of the Auto Mall Parkway interchange. Occurrences are present in the area south of SR 238 with some present near the bay shore at the Don Edwards National Wildlife Refuge in Fremont. Others are located in the undeveloped hills between the action area and the Avalon Heights residential development in Fremont. One occurrence is located within an urbanized part of Fremont. Central California tiger salamanders are distributed throughout the foothills east of the action area and all life stages have been reported in cattle ponds, stock ponds, and adjacent uplands to the east.

Analysis of aerial imagery and the National Wetlands Inventory identified several ponds in the hills adjacent to the action area and within 1.3 miles that may provide suitable breeding habitat. Freshwater marsh habitats within the action area may provide suitable breeding habitat based on their shallow depth and ephemeral characteristics; however, breeding has not been documented at these sites. California ground squirrel burrows are relatively abundant on the grassy hillsides within and adjacent to the Caltrans right of way along I-680, and these could be utilized as upland refugia. The majority of the action area is consists of paved roadways and urban development with areas of undeveloped Mediterranean California naturalized annual grasslands.

Based on the habitat suitability within the action area, known occupancy of Central California tiger salamanders within the project vicinity, connectivity to adjacent occupied habitats and the presence of suitable breeding habitat within dispersal distance to the action area, the Service has determined there is a reasonable potential for Central California tiger salamanders to occur within the action area.

Alameda Whipsnake

The action area is not located within designated critical habitat; however, it is located approximately 2.5 miles west of the Alameda Creek Unit 5B (Service 2006). The project is located within the known range of the Alameda whipsnake and suitable upland foraging and dispersal habitat is present in the action area. There are two recorded occurrences of Alameda whipsnake within the 5 miles of the action area. No primary scrub habitat is present within the action area; however, the Mediterranean California naturalized annual and perennial grasslands and abundant burrowing mammal activity within the action area provide suitable upland foraging and dispersal habitat for the species.

Based on habitat suitability within the action area, connectivity to occupied habitats to the east, and the presence of breeding, foraging, refugia, and dispersal habitat, the Service has determined there is a reasonable probability for Alameda whipsnakes to inhabit or disperse through the action area.

Effects of the Action

California Red-legged Frog, Central California Tiger Salamander and Alameda Whipsnake

The proposed project will likely adversely affect the California red-legged frog, Central California tiger salamander, and Alameda whipsnake by harming or harassing juveniles and adults inhabiting suitable upland, dispersal, and non-breeding aquatic habitat within the action area. The aspects of the proposed action most likely to affect the California red-legged frog, Central California tiger salamander, and Alameda whipsnake are limited to the construction phase of the project associated with rehabilitating the mainline roadway and on- and off-ramps, drainage systems, overhead signs, roadside signs, TMS, streetlights, lighting and signals; replacement or installation of approach slabs, guardrail, concrete barriers and crash cushions, HMA dikes, concrete curbs, sidewalks, and pedestrian curb ramps; and installation of rumble strips. No work is planned within the creeks and ephemeral channel; however, 0.009-acre of freshwater marsh will be effected by project activities, potentially disrupting breeding for the California red-legged frog and Central California tiger salamander at these locations.

Construction noise, vibration, and increased human activity may interfere with normal behaviors – feeding, sheltering, movement between refugia and foraging grounds, and other essential behaviors of the California red-legged frog, Central California tiger salamander, and Alameda whipsnake – resulting in avoidance of areas that have suitable habitat but intolerable levels of disturbance. Short-term temporal effects will occur when vegetative cover and subterranean upland habitat is removed during project construction. Caltrans proposes to minimize these effects, in part, by locating construction staging, storage and parking areas outside of sensitive habitat; clearly marking construction work boundaries to prevent crews from affecting more habitat than is absolutely necessary, installing WEF to allow California red-legged frogs, Central California tiger salamanders, and Alameda whipsnakes to escape the work area and prevent them from (re-)entering the work area, and revegetating all areas disturbed by project activities.

The proposed construction activities could result in the introduction of chemical contaminants to the site. California red-legged frogs, Central California tiger salamanders, and Alameda whipsnakes using these areas could be exposed to any contaminants that are present at the site. Exposure pathways could include inhalation, dermal contact, direct ingestion, or secondary ingestion of contaminated soil, plants, or prey species. Exposure to contaminants could cause short- or long-term morbidity, possibly resulting in reduced productivity or mortality. Caltrans proposes to minimize these risks by implementing a Storm

Water Pollution Prevention Plan, erosion control BMP, and a Spill Response Plan, which will consist of refueling, oiling or cleaning of vehicles and equipment a minimum of 50 feet from aquatic resources; installing coir rolls, straw wattles and/or silt fencing to capture sediment and prevent runoff or other harmful chemicals from entering the aquatic features; and locating staging, storage and parking areas away from aquatic habitats.

Preconstruction surveys and the relocation of individual California red-legged frogs and Central California tiger salamanders by a Service-approved biologist will minimize the likelihood of serious injury or mortality; however, capturing and handling frogs and salamanders may result in stress during handling, containment, and transport. Death and injury of individuals could occur at the time of relocation or later in time subsequent to their release. Although survivorship for translocated amphibians has not been estimated, survivorship of translocated wildlife, in general, is low because of intraspecific competition, lack of familiarity with the relocation site with regard to breeding, feeding, and sheltering habitats, risk of contracting disease in foreign environment, and increased risk of predation. These effects will be minimized by using qualified Service-approved biologists, limiting the duration of handling, and relocating amphibians to suitable nearby habitat.

Biologists and construction workers traveling to the action area from other project sites may transmit diseases by introducing contaminated equipment. The chance of a disease being introduced into a new area is greater today than in the past due to the increasing occurrences of disease throughout amphibian populations in California and the United States. It is possible that chytridiomycosis, caused by chytrid fungus (*Batrachochytrium dendrobatidis*), may exacerbate the effects of other diseases on amphibians or increase the sensitivity of the amphibian to environmental changes (e.g., water pH) that reduce normal immune response capabilities (Bosch et al. 2001, Weldon et al. 2004). Implementing proper decontamination procedures prior to and following aquatic surveys and handling of frogs and salamanders will minimize the risk of transferring diseases through contaminated equipment or clothing.

Temporary effects comprise areas denuded, manipulated, or otherwise modified from their existing, pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. Temporary effects must be restored to baseline habitat values or better within one year following initial disturbance. Areas subject to ongoing operations and maintenance are not considered temporary even if they are restored within one year following initial disturbance. Affected areas not fulfilling these criteria are considered permanent. This habitat would become unavailable to these species during the construction phase and could result in loss of foraging or movement habitat, altered behavioral displays (e.g., flushing from cover during vegetation clearing or ground disturbing activities, decreased foraging success, increased risk of predation, etc.), and displacement from or avoidance of habitat features within the action area. The proposed action would result in the temporary loss and/or degradation of 1.85 acres of California red-legged frog, Central California tiger salamander, and Alameda whipsnake upland and dispersal habitat and 0.008-acre of California red-legged frog and Central California tiger salamander freshwater marsh habitat. Permanent losses comprise 0.15-acre of upland and dispersal habitat and 0.006-acre of freshwater marsh habitat. Caltrans proposes to minimize these effects by providing off-site compensation as described in Table 1.

These effects will be further minimized by installing environmentally sensitive area fencing to keep workers from straying into otherwise undisturbed habitat; erecting WEF to deter species from wandering onto the construction site; implementing storm water and erosion BMP; educating workers about the presence of California red-legged frog, Central California tiger salamander, and Alameda whipsnake, their habitat, identification, regulatory laws, and avoidance and minimization measures; and requiring a Service-approved biologist(s) to be present to monitor project activities within or adjacent to suitable habitat.

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. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of the California red-legged frog, Central California tiger salamander, and Alameda whipsnake, the environmental baseline for the action area, the effects of the proposed I-680 Northbound Pavement Rehabilitation Project, and the cumulative effects, it is the Service's biological opinion that the I-680 Northbound Pavement Rehabilitation Project, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog, Central California tiger salamander, or Alameda whipsnake. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by FWS regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior 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 the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Caltrans so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If the Caltrans (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Amount or Extent of Take

California Red-Legged Frog

The Service anticipates that incidental take of the California red-legged frog may be difficult to detect due to their cryptic nature and wariness of humans. Losses of this species may also be difficult to

quantify due to a lack of baseline survey data and seasonal/annual fluctuations in their numbers due to environmental or human-caused disturbances. Due to the difficulty in quantifying the number of California red-legged frogs that will be taken as a result of the proposed action, the Service is quantifying take incidental to the proposed action as the harm and harassment of all California red-legged frogs inhabiting or utilizing the 219-acre action area. The Service anticipates that take of juvenile and adult life history stages may be harmed or harassed as a result of habitat loss/degradation, construction-related disturbance, or capture and relocation efforts. Mortality or injury of California red-legged frogs is not anticipated based on the full implementation of the proposed conservation measures; however, we are authorizing the take in the form of mortality or injury to no more than one individual. No take of eggs or larval California red-legged frogs are authorized as preconstruction surveys will determine their presence within potential freshwater marsh breeding sites and coordination with the Service will prevent work from occurring if breeding is occurring. Upon implementation of the following Reasonable and Prudent Measures, all juvenile and adult California red-legged frogs within the action area in accordance with the amount and type of take outlined above will become exempt from the prohibitions described under section 9 of the Act. No other forms of take are authorized under this opinion.

Central California Tiger Salamander

The Service anticipates that incidental take of the Central California tiger salamander may be difficult to detect due to their cryptic nature and wariness of humans. Losses of this species may also be difficult to quantify due to a lack of baseline survey data and seasonal/annual fluctuations in their numbers due to environmental or human-caused disturbances. Due to the difficulty in quantifying the number of Central California tiger salamanders that will be taken as a result of the proposed action, the Service is quantifying take incidental to the proposed action as the harm and harassment of all Central California tiger salamanders inhabiting or utilizing the 219-acre action area. The Service anticipates that take of juvenile and adult life history stages may be harmed or harassed as a result of habitat loss/degradation, construction-related disturbance, or capture and relocation efforts. Mortality or injury of Central California tiger salamanders is not anticipated based on the full implementation of the proposed conservation measures; however, we are authorizing the take in the form of mortality or injury to no more than one individual. No take of eggs or larval Central California tiger salamanders are authorized as preconstruction surveys will determine their presence within potential freshwater marsh breeding sites and coordination with the Service will prevent work from occurring if breeding is occurring. Upon implementation of the following Reasonable and Prudent Measures, all juvenile and adult Central California tiger salamanders within the action area in accordance with the amount and type of take outlined above will become exempt from the prohibitions described under section 9 of the Act. No other forms of take are authorized under this opinion.

Alameda Whipsnake

The Service expects that incidental take of the Alameda whipsnake may be difficult to detect or quantify because this animal may range over a large territory and the finding of an injured or dead individual is unlikely because they may seek refuge in burrows or other underground refugia. Due to the difficulty in quantifying the number of Alameda whipsnakes that will be taken as a result of the proposed action, the Service is quantifying take incidental to the proposed action as the harm and harassment of all Alameda whipsnakes inhabiting or utilizing the 219-acre action area. The Service anticipates that take of juvenile and adult life history stages may be harmed or harassed as a result of habitat loss/degradation, or construction-related disturbance. Mortality or injury of Alameda whipsnakes is not anticipated based on the full implementation of the proposed conservation measures; however, we are authorizing the take in the form of mortality or injury to no more than one individual. Upon implementation of the following Reasonable and Prudent Measures, all juvenile and adult Alameda whipsnakes within the action area in accordance with the amount and type of take outlined above will become exempt from the prohibitions described under section 9 of the Act. No other forms of take are authorized under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the California red-legged frog, Central California tiger salamander, or Alameda whipsnake.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the California red-legged frog, Central California tiger salamander, and Alameda whipsnake resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the Service believes the following Reasonable and Prudent Measure is necessary and appropriate to minimize incidental take of the California red-legged frog, Central California tiger salamander, and Alameda whipsnake:

1. All conservation measures, as described in the biological assessment and restated here in the Project Description section of this biological opinion, shall be fully implemented and adhered to. Further, this Reasonable and Prudent Measure shall be supplemented by the Terms and Conditions below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Caltrans must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. **Compliance with Biological Opinion:** Caltrans shall include Special Provisions that include the Conservation Measures and the Terms and Conditions of this biological opinion in the solicitation for bid information for all contracts for the project that are issued by them to all contractors. Caltrans shall require all contractors and subcontractors to comply with the Act in the performance of the proposed action and shall perform the action as outlined in the Project Description of this biological opinion as provided by Caltrans in the Biological Assessment dated May 2015, and supporting documentation submitted to the Service in support of the action. Changes to the Project Description or performance of work outside the scope of this biological opinion are subject to the requirements of reinitiation of formal consultation.
2. **Implementation of Biological Opinion:** Caltrans shall ensure the Resident Engineer or their designee shall have full authority to implement and enforce all Conservation Measures and Terms and Conditions of this biological opinion. The Resident Engineer or his/her designee shall maintain a copy of this biological opinion onsite whenever construction is in progress. Their name(s) and telephone number(s) shall be provided to the Service at least 30 calendar days prior to groundbreaking at the project.
3. **Seasonal Avoidance:** Construction actions will be scheduled to minimize effects on listed species and habitats. Except for limited vegetation clearing necessary to minimize effects to nesting birds, all ground-disturbing activities in species habitat will be conducted between May 1 and October 15. An extension beyond these dates will be considered on a case-by-case basis.
4. **Weather Restrictions:** The Service-approved biologist will observe 48-hour weather forecasts and will notify the resident engineer of the potential of any storm events. No work will occur during or within 24 hours after a rain event exceeding 0.2-inch, as measured by the NOAA Weather Report for San Jose, California. Service approval to continue work during or within 24 hours of a rain event will be considered on a case-by-case basis.

5. **Agency Access:** If verbally requested through the Resident Engineer or Construction Inspector, before, during, or upon completion of ground breaking and construction activities, Caltrans shall ensure the Service or their designated agents can immediately and without delay, access and inspect the project site for compliance with the proposed project description, conservation measures, and terms and conditions of this Biological Opinion, and to evaluate project effects to the California red-legged frog, Central California tiger salamander, Alameda whipsnake and their habitat.
6. **Biological Monitor Approval and Stop Work Authority:** The qualifications of all proposed Service-approved biological monitors shall be presented to the Service for review and written approval at least 30 calendar days prior to project initiation. The Service-approved biological monitors shall keep a copy of this biological opinion in his/her possession when onsite. Through the Resident Engineer or his/her designee, the Service-approved biological monitors shall be given the authority to communicate verbally, by telephone, email, or hardcopy with Caltrans personnel, construction personnel or any other person(s) at the project site or otherwise associated with the project to ensure that the terms and conditions of this biological opinion are met. The Service-approved biologist(s) through communication with the Resident Engineer or his/her designee shall have oversight over implementation of the Terms and Conditions in this Biological Opinion, and shall have the authority to stop project activities if they determine any of the requirements associated with these Terms and Conditions are not being fulfilled. If the Service-approved biologist(s) exercises this authority, Caltrans shall immediately contact the Service's SFWO at (916) 414-6600 to report the action.
7. **Biological Monitoring:** In order to monitor whether the amount or extent of incidental take anticipated from implementation of the project is approached or exceeded, Caltrans shall adhere to the following reporting requirements. Should this anticipated amount or extent of incidental take be exceeded, Caltrans must immediately reinstate formal consultation as per 50 CFR 402.16.
 - a. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, Caltrans will provide biweekly updates to the Service with a precise accounting of the total acreage of habitat impacted. Updates shall also include any information about changes in project implementation that result in habitat disturbance not described in the Project Description and not analyzed in this Biological Opinion.
 - b. For those components of the action that may result in direct encounters between listed species and project workers and their equipment whereby incidental take in the form of harassment, harm, injury, or death is anticipated, Caltrans shall immediately contact the Service's Sacramento Fish and Wildlife Office (SFWO) at (916) 414-6600 to report the encounter. If encounter occurs after normal working hours, Caltrans shall contact the SFWO at the earliest possible opportunity the next working day. When injured or killed individuals of the listed species are found, Caltrans shall follow the steps outlined in the Salvage and Disposition of Individuals section below.
 - c. For those components of the action that will require the capture and relocation of any listed species, Caltrans shall immediately contact the Service's SFWO at (916) 414-6600 to report the action. If capture and relocation need to occur after normal working hours, Caltrans shall contact the SFWO at the earliest possible opportunity the next working day.
8. **Biological Monitoring Records:** The Service-approved biologist(s) shall maintain monitoring records that include: (1) the beginning and ending time of each day's monitoring effort; (2) a

statement identifying the listed species encountered, including the time and location of the observation; (3) the time the specimen was identified and by whom and its condition; and (4) a description of any actions taken. The Service-approved biologist(s) shall maintain complete records in their possession while conducting monitoring activities and shall immediately surrender records to the Service, CDFW, and/or their designated agents upon request. If requested, all monitoring records shall be provided to the Service within 30 calendar days of the completion of monitoring work.

9. **Proper Use of Erosion Control Devices:** To prevent California red-legged frogs, Central California tiger salamanders, and Alameda whipsnakes from becoming entangled, trapped, or injured, erosion control materials that use plastic or synthetic monofilament netting will not be used within the action area. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine or other similar fibers.
10. **Biological Monitoring:** A Service-approved biologist(s) shall be onsite during all activities that may result in take of California red-legged frogs, Central California tiger salamanders, and Alameda whipsnakes as determined by the Service. A minimum of one Service-approved biologist shall be on-site or available by phone to respond in a timely manner throughout the project duration. Caltrans shall coordinate with the Service to determine which locations will require the presence with Service-approved biological monitors. The Service will consider the implementation of specific project activities without the oversight of an on-site Service-approved biologist on a case-by-case basis.
11. **Preconstruction and Daily Surveys:** Preconstruction surveys shall be conducted by a Service-approved biologist immediately prior to the initiation of any ground disturbing activities and vegetation clearing that may result in take of California red-legged frogs, Central California tiger salamanders, and Alameda whipsnakes. All suitable aquatic and upland habitat including refugia habitat such as dense vegetation, small woody debris, refuse, burrows, etc., shall be thoroughly inspected. The Service-approved biologist(s) shall conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction activities are occurring that may result in take of California red-legged frogs, Central California tiger salamanders, and Alameda whipsnakes.
12. **Protocol for Species Observation and Handling:** If a California red-legged frog, Central California tiger salamander, and Alameda whipsnake is encountered in the action area, work activities within 50 feet of the individual shall cease immediately and the Resident Engineer and Service-approved biologist shall be notified. Based on the professional judgment of the Service-approved biologist, if project activities can be conducted without killing or injuring the animal, it may be left at the location of discovery and monitored by the Service-approved biologist. All project personnel shall be immediately notified and at no time shall work occur within 50 feet of the animal without a Service-approved biologist present. Central California tiger salamanders and Alameda whipsnakes shall not be captured or handled without joint authorization from the Service and CDFW, and shall be monitored until it leaves the action area on its own accord, unless the situation poses an imminent risk of injury or mortality to the individual(s). If it is determined by the Service-approved biologist that relocating the California red-legged frog, Central California tiger salamander, and Alameda whipsnake is necessary, the following steps shall be followed:
 - a. Prior to handling and relocation, the Service-approved biologist will take precautions to prevent introduction of amphibian diseases in accordance with the Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (Service 2005b)

and Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (Service 2003). Disinfecting equipment and clothing is especially important when biologists are coming to the action area to handle amphibians after working in other aquatic habitats.

- b. California red-legged frog, Central California tiger salamander, and Alameda whipsnake shall be captured by hand, dipnet, or other Service-approved methodology, transported and relocated to nearby suitable habitat outside of the work area and released as soon as practicable the same day of capture. Holding/transporting containers and dipnets shall be thoroughly cleaned, disinfected, and rinsed with freshwater prior to use within the action area. The Service shall be notified within 24 hours of all capture, handling, and relocation efforts.
- c. California red-legged frog, Central California tiger salamander, and Alameda whipsnake shall be relocated to nearby suitable habitat outside of the work area and released in a safe area on the same side of I-680 where they were discovered. The individual(s) shall be released within the Caltrans right-of-way if suitable habitat exists and would not pose a risk to the animal's survival or well-being. Otherwise, listed species shall be released at a location subject to the approval of the property owner. If suitable habitat cannot be identified, the Service shall be contacted to determine an acceptable alternative. If salamanders are captured from burrows, they shall be relocated to the nearest active burrow network outside of the work zone. The release burrow shall be actively occupied by ground squirrels, since inactive burrows can collapse if not maintained. No more than two individuals shall be released into the same burrow. If listed species are relocated, the Service shall be notified within 24 hours of relocation.

Reporting Requirements

In order to monitor whether the amount or extent of incidental take anticipated from implementation of the project is approached or exceeded, Caltrans shall adhere to the following reporting requirements. Should this anticipated amount or extent of incidental take be exceeded, Caltrans must reinitiate formal consultation as per 50 CFR 402.16.

1. The Service must be notified within one (1) working day of the finding of any injured or dead listed species or any unanticipated damage to its habitat associated with the proposed project. Notification will be made to the Coast Bay Division Chief of the Endangered Species Program at the Sacramento Fish and Wildlife Office at (916) 414-6600, and must include the date, time, and precise location of the individual/incident clearly indicated on a U.S. Geological Survey 7.5 minute quadrangle or other maps at a finer scale, as requested by the Service, and any other pertinent information. When an injured or dead individual of the listed species is found, Caltrans shall follow the steps outlined in the Disposition of Individuals Taken section below.
2. Other pertinent reporting information such as monitoring reports (if not included as a term and condition), notification of project completion/implementation, etc. including when this information is due to the Service.

Disposition of Individuals Taken

Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the Service-approved biologist. Dead individuals must be sealed in a resealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instructions are received from the Service regarding the disposition of the dead specimen. The

Service contact persons are the Coast Bay Division Chief of the Endangered Species Program at the Sacramento Fish and Wildlife Office at (916) 414-6725.

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. The Service recommends the following actions:

1. Caltrans District 4 should work with the Service to develop a conservation strategy that would identify the current safe passage potential along Bay Area highways and the areas where safe passage for wildlife could be enhanced or established.
2. Caltrans should assist the Service in implementing recovery actions identified in the Recovery Plan for the California Red-legged Frog (Service 2002).
3. Caltrans should consider participating in the planning for a regional habitat conservation plan for the California red-legged frog, Central California tiger salamander, Alameda whipsnakes, and other listed and sensitive species.
4. Caltrans should consider establishing functioning preservation and creation conservation banking systems to further the conservation of the California red-legged frog, Central California tiger salamander, Alameda whipsnakes, 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. Efforts should be made to preserve habitat along roadways in association with wildlife crossings.
5. Roadways can constitute a major barrier to critical wildlife movement. Therefore, Caltrans should incorporate culverts, tunnels, or bridges on highways and other roadways that allow safe passage by the California red-legged frog, Central California tiger salamander, Alameda whipsnakes, other listed animals, and wildlife. Photographs, plans, and other information into the BAs if "wildlife friendly" crossings are incorporated into projects. Efforts should be made to establish upland culverts designed specifically for wildlife movement rather than accommodations for hydrology. Transportation agencies should also acknowledge the value of enhancing human safety by providing safe passage for wildlife in their early project design.

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

REINITIATION--CLOSING STATEMENT

This concludes formal consultation on the I-680 Northbound Pavement Rehabilitation Project. As provided in 50 CFR §402.16, reinitiation of formal consultation is required and shall be requested by the Federal agency or by the Service where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and:

- (a) If the amount or extent of taking specified in the incidental take statement is exceeded;

- (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or
- (d) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this biological opinion, please contact Jerry Roe (jerry_roe@fws.gov) or Ryan Olah (ryan_olah@fws.gov), at the letterhead address, (916) 414-6684 or by e-mail.

Sincerely,



Jennifer M. Norris
Field Supervisor

Enclosure:

cc:

Melissa Escaron, California Department of Fish and Wildlife, Napa, California

LITERATURE CITED

- Barry, S. 1992. Letter to Marvin L. Plenert, Regional Director, U.S. Fish and Wildlife Service, Portland, Oregon, regarding proposed listing.
- Bulger, J.B., N.J. Scott Jr., and R.B. Seymour. 2003. Terrestrial Activity and Conservation of Adult California Red-Legged Frogs *Rana aurora draytonii* in Coastal Forests and Grasslands. *Biological Conservation* 110:85-95.
- Bury, R.B and J.A. Whelan. 1984. Ecology and Management of the Bullfrog. Fish and Wildlife Service/Resource Publication 155.
- California Department of Fish and Wildlife (CDFW). 2015. RAREFIND. California Natural Diversity Data Base, Natural Heritage Division, Sacramento, California.
- California Department of Transportation (Caltrans). 2015. Interstate 680 Northbound Pavement Rehabilitation Project, ALA 680 (PM 0.0/4.0), EA 3G6001, Caltrans District 4, San Mateo County, California. May.
- Davidson, E.W., M. Parris, J.P. Collins, J.E. Longcore, A.P. Pessier, J. Brunner. 2003. Pathogenicity and transmission of *Chytridiomycosis* in tiger salamanders (*Ambystoma tigrinum*). *Copeia* 2003(3):601-607.
- Emlen, S.T. 1977. "Double Clutching" and its Possible Significance in the Bullfrog. *Copeia* 1977(4):749-751.
- Fellers, G. 2005. *Rana draytonii* Baird and Girard, 1852b California Red-Legged Frog. Pages 552-554 in M. Lannoo (editor). *Amphibian Declines: The Conservation Status of United States Species*. University of California Press. Berkeley, California.
- Fisher, R.N., and H.B. Schaffer. 1996. The Decline of Amphibians in California's Great Central Valley. *Conservation Biology* 10(5):1387-1397.
- Garner, T.W.J., M.W. Perkins, P. Govindarajulu, D. Seglie, S. Walker, A.A. Cunningham, and M.C. Fisher. 2006. The Emerging Amphibian Pathogen *Batrachochytrium dendrobatidis* Globally Infects Introduced Populations of the North American Bullfrog, *Rana catesbeiana*. *Biology Letters* 2:455-459.
- Hayes, M.P., and M.R. Jennings. 1988. Habitat Correlates of Distribution of the California Red-Legged Frog (*Rana aurora draytonii*) and the Foothill Yellow-Legged Frog (*Rana boylei*): Implications for Management. Pages 144-158 in R. Sarzo, K.E. Severson, and D.R. Patton (technical coordinators). *Proceedings of the Symposium on the Management of Amphibians, Reptiles, and Small Mammals in North America*. United States Department of Agriculture, Forest Service, Rocky Mountain Range and Experiment Station, Fort Collins, Colorado. General Technical Report (RM-166):1-458.
- Hayes, M.P. and D.M. Krempels. 1986. Vocal Sac Variation among Frogs of the Genus *Rana* from Western North America. *Copeia* 1986(4):927-936.
- Hayes, M.P. and M.M. Miyamoto. 1984. Biochemical, Behavioral and Body Size Differences between *Rana aurora aurora* and *R. a. draytonii*. *Copeia* 1984(4):1018-1022.
- Hayes, M.P., and M.R. Tennant. 1985. Diet and Feeding Behavior of the California Red-Legged Frog, *Rana aurora draytonii* (Ranidae). *Southwestern Naturalist* 30(4):601-605.

- Hunt, L. 1993. Letter to Marvin L. Plenert, Regional Director, U.S. Fish and Wildlife Service, Portland, Oregon, regarding proposed listing.
- Jennings, M.R. 1993. Letter to Peter C. Sorensen, U.S. Fish and Wildlife Service, Sacramento, California.
- Jennings, M.R., and M.P. Hayes. 1985. Pre-1900 Overharvest of California Red-Legged Frogs (*Rana aurora draytonii*): The Inducement for Bullfrog (*Rana catesbeiana*) Introduction. *Herpetological Review* 31(1):94-103.
- _____. 1990. Final Report of the Status of the California Red-Legged Frog (*Rana aurora draytonii*) in the Pescadero Marsh Natural Preserve. Final report prepared for the California Department of Parks and Recreation, Sacramento, California, through Agreement (4-823-9018). Department of Herpetology, California Academy of Sciences, Golden Gate Park, San Francisco, California. 30 pages.
- _____. 1994. Amphibian and Reptile Species of Special Concern in California. Report prepared for the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. 255 pages.
- Jennings, M.R., M.P. Hayes, and D.C. Holland. 1992. A Petition to the U.S. Fish and Wildlife Service to Place the California Red-Legged Frog (*Rana aurora draytonii*) and the Western Pond Turtle (*Clemmys marmorata*) on the List of Endangered and Threatened Wildlife and Plants. 21 pages.
- Kruse, K.C. and M.G. Francis. 1977. A Predation Deterrent in Larvae of the Bullfrog, *Rana catesbeiana*. *Transactions of the American Fisheries Society* 106(3):248-252.
- Kupferberg, S.J. 1996a. Hydrologic and Geomorphic Factors Affecting Conservation of a River-Breeding Frog (*Rana boylei*). *Ecological applications* 6:1322-1344.
- _____. 1996b. The Ecology of Native Tadpoles (*Rana boylei* and *Hyla regilla*) and the Impacts of Invading Bullfrogs (*Rana catesbeiana*) in a Northern California River. PhD dissertation. University of California, Berkeley, California.
- _____. 1997. Bullfrog (*Rana catesbeiana*) invasion of a California river: the role of larval competition. *Ecology* 78(6):1736-1751.
- Lips, K.R., F. Brem, R. Brenes, J.D. Reeve, R.A. Alford, J. Voyles, C. Carey, L. Livo, A.P. Pessier, and J.P. Collins. 2006. Emerging infectious disease and the loss of biodiversity in a neotropical amphibian community. *Proceedings of the National Academy of Sciences* 103(9):3165-3170.
- Mao, J., D.E. Green, G.M. Fellers, and V.G. Chincar. 1999. Molecular Characterization of Iridoviruses Isolated from Sympatric Amphibians and Fish. *Virus Research* 6:45-52. California Department of Fish and Game, Sacramento, California.
- Moyle, P.B. 1976. Fish Introductions in California: History and Impact on Native Fishes. *Biological Conservation* 9(1):101-118.
- Shaffer, H.B., G.M. Fellers, S.R. Voss, C. Oliver, and G.B. Pauley. 2010. Species boundaries, phylogeography, and conservation genetics of the red-legged frog (*Rana aurora/draytonii*) complex. *Molecular ecology* 13:2667-2677.
- Stebbins, R.C. 2003. *A Field Guide to Western Reptiles and Amphibians*. Houghton Mifflin Company, Boston, Massachusetts.

- Storer, T.I. 1925. A Synopsis of the Amphibia of California. University of California Publications in Zoology 27:1-1-342.
- _____. 1933. Frogs and their Commercial Use. California Department of Fish and Game 19(3)203-213.
- Tatarian, P.J. 2008. Movement Patterns of California Red-Legged Frogs (*Rana draytonii*) in an Inland California Environment. Herpetological Conservation and Biology 3(2):155-169. November.
- Twedt, B. 1993. A Comparative Ecology of *Rana aurora* Baird and Girard and *Rana catesbeiana* Shaw at Freshwater Lagoon, Humboldt County, California. Unpublished. Master of Science thesis. Humboldt State University, Arcata, California. 53 pages plus appendix.
- U. S. Fish and Wildlife Service (Service). 1996. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Red-Legged Frog. Federal Register 61:25813-25833.
- _____. 1998. Final Recovery Plan for Upland Species of the San Joaquin Valley, California. Portland, Oregon.
- _____. 2002. Recovery Plan for the Red-Legged Frog (*Rana aurora draytonii*). Portland, Oregon. 173 pages.
- _____. 2003. Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander. October.
- _____. 2004. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Tiger Salamander; and Special Rule Exemption for Existing Routine Ranching Activities; Final Rule. **Federal Register** 69:47212-47248.
- _____. 2005a. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander, Central Population; Final Rule. **Federal Register** 70:49379-49458.
- _____. 2005b. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. August
- _____. 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Red-legged Frog (*Rana aurora draytonii*), and Special Rule Exemption Associated with Final Listing for Existing Routine Ranching Activities; Final Rule. **Federal Register** 71(71):19244-19346. April 13.
- _____. 2010. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the California Red-Legged Frog. Federal Register 75:12816-12959.
- _____. 2011. Alameda Whipsnake (*Masticophis lateralis euryxanthus*), 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service Sacramento Field Office, Sacramento, California.
- _____. 2014. California Tiger Salamander Central California Distinct Population Segment (*Ambystoma californiense*), 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service Sacramento Field Office, Sacramento, California.
- Wright, A.H. and A.A. Wright. 1949. Handbook of Frogs and Toads of the United States and Canada. Comstock Publishing Company, Inc., Ithaca, New York. 640 pages.

APPENDIX A
Sacramento Fish and Wildlife Office
Review Criteria for Section 7 Compensation
Revised January 30, 2014

Property Assurances and Conservation Easement

- Title Report [*preliminary at proposal, and Final Title Insurance at recordation*]; no older than six months;
- Property Assessment and Warranty;
- Subordination Agreement [*include if any outstanding debts or liens on the property; may be needed for existing easements*];
- Legal Description and Parcel Map;
- Conservation Easement [*use the current SFWO standardized CE template*]; or
- Non-Template Conservation Easement [*this requires additional review*]

Site Assessment and Development

- Phase I Environmental Site Assessment;
- Habitat Development Plan [*include if habitat will be constructed, restored, or enhanced*];
- Construction Security Analysis [*applicable if habitat is being constructed/enhanced/restored*];
- Performance Security Analysis [*applicable if there are performance standards*];

Site Management

- Interim Management Plan;
- Interim Management Security Analysis and Schedule;
- Long-Term Management Plan;
- Endowment Fund Analysis and Schedule;
- Endowment Funding Agreement or Trust Agreement or Declaration of Trust [*DFW calls this a "mitigation agreement"*]

Guidelines

Real Estate Assurances and Conservation Easement (CE)

Title Report

1. Who holds fee title to property?
2. Exceptions to title. Are there any liens or encumbrances (existing debts, leases, or easements) on the property? Note that any existing exceptions to title will have priority over a conservation easement for the mitigation project.
 - a. Review Preliminary Title Report to evaluate liens and encumbrances (see Property Assessment and Warranty, below).
 - b. Could any of these exceptions to title potentially interfere with either biological habitat values or ownership? If existing easements can potentially interfere with the conservation values/habitat of the property, those portions of the land should be deducted from the total compensation acreage available on the site.
 - c. Split estates. Have the water or mineral rights been severed from title? If so, property owner should be encouraged to re-acquire those rights, or at least to acquire the surface-entry rights to remove or limit access for mineral exploration/development.

Property Assessment and Warranty

1. Property owner should submit a Property Assessment and Warranty, which discusses every exception to title listed on the Preliminary Title Report and Final Title Insurance Policy, evaluating any potential impacts to the conservation values that could result from the exceptions to title (see below).
2. The Property Assessment and Warranty should include a summary and full explanation of all exceptions remaining on the title, with a statement that the owner/Grantor accepts responsibility for all lands being placed under the CE as available for the primary purposes of the easement, as stated in the easement, and assures that these lands have a free and clear title and are available to be placed under the CE.

Subordination Agreement

1. A Subordination Agreement is necessary if there is any outstanding debt on the property; it could also be used to subordinate liens or easements. Review Subordination Agreement language for adequacy—the lending bank or other lien or rights holder must agree to fully subordinate each lien, encumbrance, or easement under the CE.

Legal Description and Parcel Map

1. Ensure accuracy of map, and location and acreage protected under the CE.
2. Both the map and the legal description should explain the boundaries of the individual project compensation site. The site should *not* have 'leftover' areas for later use.
3. Ask for an easement map to be prepared (if applicable), showing all easements on the property.

Conservation Easement from Template

1. Who will hold the easement?

- a. Conservation easements require third-party oversight by a qualified non-profit or government agency (=easement holder or Grantee). Minimum qualifications for an easement holder include:
 - i. Maintaining accreditation by the Land Trust Accreditation Commission
<http://www.landtrustaccreditation.org/home>.
 - ii. Organized under IRS 501(c)(3);
 - iii. Qualified under CA Civil Code § 815;
 - iv. Bylaws, Articles of Incorporation, and biographies of Boards of Directors on file at;
 1. Must meet requirements of SFWO, including 51% disinterested parties on the Board of Directors;
 - v. Approved by SFWO
2. Project Applicant should submit a redline version showing all of their proposed revisions in track changes or other editable electronic format, along with an explanation of all deviations from the template.

Non-Template Conservation Easement

1. If not using the CE template, the Project Applicant should specify objections they have to the template. This may substantially delay processing, as the non-template CE will require review by the Solicitor's Office. Alternate CEs are subject to SFWO approval prior to being granted and recorded.
2. The Project Applicant must either 1) add SFWO as a third-party beneficiary, or 2) add language throughout the document, in all appropriate places, that will assure SFWO the right to enforce, inspect, and approve any and all uses and/or changes under the CE prior to occurrence (including land use, biological management or ownership).
3. Include, at a minimum, language to:
 - a. Reserve all mineral, air, and water rights under the CE as necessary to maintain and operate the site in perpetuity;
 - b. Ensure all future development rights are forfeited;
 - c. Ensure all prohibited uses contained in the CE template are addressed; and
 - d. Link the CE, Management Plan, and the Endowment Fund within the document (e.g., note that each exists to support the others, and where each of the documents can be located if a copy is required).
4. Insert necessary language, particularly, but not exclusively, per: (can compare to CE template):
 - a. Rights of Grantee
 - b. Grantee's Duties
 - c. Reserved Rights
 - d. Enforcement
 - e. Remedies
 - f. Access
 - g. Costs and Liabilities
 - h. Assignment and Transfer
 - i. Merger
 - j. Notices
5. Include a signature block for USFWS to sign, "approved as to form."

Site Assessment and Development

Phase I Environmental Site Assessment

1. The Phase I ESA must show that the compensation site is not subject to any recognized environmental conditions as defined by the American Society for Testing and Materials (ASTM) Standard E1527-05 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, available at <http://www.astm.org/Standards/E1527.htm>, (i.e., the presence or likely presence of any Hazardous Substances or petroleum products).
2. If the Phase I ESA identifies any recognized environmental conditions, the Project Applicant must represent and warrant to the SFWO that all appropriate assessment, clean up, remediation, or removal action has been completed.
3. If the Phase I ESA identifies any recognized environmental conditions, a Phase II ESA may be needed for sampling and laboratory analysis.

Restoration or Habitat Development Plan [not required if the site is preservation only]

1. The overall plan governing construction and habitat establishment activities required to be conducted on the Property, including, without limitation, creation, restoration, and enhancement of habitat.
 - a. This plan should include the baseline conditions of the Property including biological resources, geographic location and features, topography, hydrology, vegetation, past, present, and adjacent land uses, species and habitats occurring on the property, a description of the activities and methodologies for creating, restoring, or enhancing habitat types, a map of the approved modifications, overall habitat establishment goals, objectives and Performance Standards, monitoring methodologies required to evaluate and meet the Performance Standards, an approved schedule for reporting monitoring results, a discussion of possible remedial actions, and any other information deemed necessary by the SFWO.
2. Any permits and other authorizations needed to construct and maintain the site shall be included and in place prior to the start of construction of the habitat.
3. Full construction plans for any habitat construction are subject to SFWO approval and must be *SFWO-approved prior* to the start of construction of the habitat.

Construction Security

1. Construction Security in the amount of 100% of a reasonable third party estimate or contract to create, restore, or enhance habitats on the property in accordance with the Restoration or Habitat Development Plan.
2. Construction Security can be drawn on should the project proponent default.
3. The Construction Security should be in the form of an irrevocable standby letter of credit or a cashier's check.
 - a. LOC: issued for a period of at least one year, and provide that the expiration date will be automatically extended for at least one year on each successive expiration date unless, until extension is no longer necessary.
 - b. Beneficiary: a third party subject to approval by the SFWO.
 - c. Language in a draft letter of credit subject to approval by the SFWO.

Performance Security [only necessary if habitat if performance standards have been identified]

1. Performance Security in the amount of 20% of the Construction Security.
2. Performance Security can be drawn on should the Performance Standards not be met, if remedial action becomes necessary.
3. The Performance Security in the form of an irrevocable standby letter of credit or a cashier's check.
 - a. LOC: issued for a period of at least one year, and provide that the expiration date will be automatically extended for at least one year on each successive expiration date unless, until extension is no longer necessary.
 - b. Beneficiary: a third party who is subject to approval by the SFWO.
 - c. Language in a draft letter of credit is subject to SFWO approval.

Site Management

Interim Management Plan

1. The Interim Management Plan should identify the short-term management, monitoring, and reporting activities to be conducted from the time construction ends until the Endowment Fund has been fully funded for three years and all the Performance Standards in the Development Plan have been met. This may be the same as the Long-term Management Plan.

Interim Management Security Analysis and Schedule

The purpose of the Interim Management Security is to allow the endowment to grow for at least three years without any disbursements, and is a safeguard to ensure that there will be enough funds in the endowment to pay for future management costs. The period can be longer than three years; a 5-year period is recommended by many land trusts.

1. Interim Management Security (in the form of a standby letter of credit) in the amount equal to the estimated cost to implement the Interim Management Plan during the first three years of the Interim Management Period, as set for in the Interim Management Security Analysis and Schedule.
2. The Interim Management Security Analysis and Schedule should be in the form of a table and/or spreadsheet that shows all of the tasks (management, monitoring, reporting), task descriptions, labor (hours), cost per unit, cost frequency, timing or scheduling of the tasks, the total annual funding necessary for each task, and any associated assumptions for each task required by the Interim Management Plan. The total annual expenses should include administration and contingency costs.
3. The Interim Management Security:
 - a. Held by a qualified, non-profit organization or government agency, subject to SFWO approval [see requirements under CE above], and
 - b. Held according to minimum standards for assuring maximum success in earning potential, and will include assurances to safeguard against loss of principle.
 - c. Instructions for disbursements or releases from the fund must be outlined in the Endowment Management Agreement/Trust Agreement/Declaration of Trust.

Long-Term Management Plan (LTMP)

1. The LTMP template identifies the long-term management, monitoring and reporting activities to be conducted.
2. The LTMP should include at minimum:
 - a. Purpose of the Project and purpose of the LTMP;
 - b. A baseline description of the setting, location, history, and types of land use activities, geology, soils, climate, hydrology, habitats present (once project meets Performance Standards), and species descriptions;
 - c. Overall management, maintenance and monitoring goals; specific tasks and timing of implementation; and discussion of any constraints, which may affect goals;
 - d. The Endowment Fund Analysis and Schedule (see below);
 - e. Discussion of Adaptive Management actions for reasonably foreseeable events and possible thresholds for evaluating and implementing Adaptive Management;
 - f. Rights of access to the Property and prohibited uses of the Property as provided in the CE; and
 - g. Procedures for Property transfer, land manager replacement, amendments, and notices.
3. The LTMP must be incorporated by reference in the CE.
4. The LTMP is considered a living document and may be revised as necessary upon agreement of the land manager, easement holder, and SFWO.

Endowment Fund Analysis and Schedule

1. Can use a PAR or PAR-like analysis and must be based upon the final LTMP, subject to SFWO approval.
 - The analysis should be developed with input by the land manager and conservation easement holder.
2. The analysis and schedule should be in the form of a table and/or spreadsheet that shows, at a minimum:
 - all of the tasks (management, monitoring, reporting)
 - task descriptions, with tasks numbers cross-referenced in management plan(s)
 - labor (hours)
 - materials
 - cost per unit (hr., linear feet, each, etc.).
 - cost frequency
 - timing or scheduling of the tasks,
 - the total annual funding necessary for each task, and
 - the assumptions required for each task by the Management Plan.
3. The total annual expenses should include administration and contingency costs (contingency can be included on each line item – identify the percentage). Unless there is a separate endowment for the purpose of monitoring and reporting on the CE conditions, then, the analysis should also include costs of
 - Monitoring and reporting CE conditions;
 - Defending the CE; and
 - Liability insurance.

4. The Endowment Fund:
 - Held by a qualified, SFWO-approved, non-profit organization or government agency [see requirements under CE above],
 - Held according to minimum standards for assuring maximum success in earning potential, and should include assurances for no loss of principle.
 - Disbursements or releases from the fund must be for documented expenditures, as they occur.

Endowment Funding Agreement

1. This is the agreement between the endowment holder and the Project Applicant, as to how the endowment is to be funded, held, and disbursed;
2. USFWS is not signatory to this agreement, but there should be a signature block on the agreement for SFWO to sign “approved as to form”;
3. USFWS has approval authority over the language in the document, and it must state that modifications or transfer of the endowment to another holder are subject to USFWS approval;
4. This agreement can also be called: “Trust Agreement” or “Declaration of Trust.” When the CDFW is involved, this is called “Mitigation Agreement.”

Appendix H: Notice of Completion

Appendix C
2015112051

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Interstate 680 Northbound Pavement Rehabilitation Project
 Lead Agency: Caltrans Contact Person: Jamie Le Dent
 Mailing Address: 111 Grand Ave, MS 8-B Phone: (510) 622-8729
 City: Oakland Zip: 94612 County: Alameda

Project Location: County: Alameda City/Nearest Community: Fremont
 Cross Streets: I-680 and Scott Creek Road (South End) / Auto Mall Pkwy (North End) Zip Code: 94539
 Longitude/Latitude (degrees, minutes and seconds): 37 ° 29 ' 34 " N / 121 ° 55 ' 12 " W Total Acres: _____
 Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: 238 Waterways: Yes
 Airports: No Schools: Yes

Document Type:
 CEQA: NCP Draft EIR NEPA: NOI Other: Joint Document
 Early Cons Supplement/Subsequent EIR Draft EIS Final Document
 Neg Dec (Prior SCH No.) Draft EIS Other: _____
 Mit Neg Dec FONSI

Local Action Type:
 General Plan Update Specific Plan Ammunition
 General Plan Amendment Master Plan Redevelopment
 General Plan Element Planned Unit Development Use Permit Coastal Permit
 Community Plan Site Plan Land Division (Subdivision, etc.) Other: _____

Development Types:
 Residential: Units _____ Acres _____ Employees _____ Transportation: Type Pavement Rehabilitation
 Office: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Power: Type _____ MW
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Waste Treatment: Type _____ MGD
 Educational: _____ Hazardous Waste: Type _____
 Recreational: _____ Other: _____
 Water Facilities: Type _____ MGD

Project Issues Discussed in Document:
 Aesthetic/Visual Fiscal Recreation/Parks Vegetation
 Agricultural Land Flood Plain/Flooding Schools/Universities Water Quality
 Air Quality Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Archeological/Historical Geologic/Seismic Sewer Capacity Wetland/Riparian
 Biological Resources Minerals Solid Waste Growth Inducement
 Coastal Zone Noise Toxic/Hazardous Land Use
 Drainage/Absorption Population/Housing Balance Traffic/Circulation Cumulative Effects
 Economic/Jobs Public Services/Facilities Other: _____

Present Land Use/Zoning/General Plan Designation:
 Transportation
 Project Description: (please use a separate page if necessary)
 This project proposes to rehabilitate the mainline and on/off ramps of the northbound lanes of I-680 from Scott Creek Rd. (post mile 0.0) to Auto Mall Parkway (post mile 4.0). The pavement will be resurfaced and additional roadway features will be upgraded and/or installed to current Caltrans standards. These features will be guardrails, rumble strips, concrete barriers, crash cushions, hot mix asphalt dikes, concrete curbs, sidewalks, pedestrian curb ramps, drainage facilities, overhead signs, roadside signs, traffic monitoring stations, lighting, and replacement of existing concrete approach slabs at several bridge locations. There will be no widening or changes in traffic configuration.

State Clearinghouse Contact: (916) 445-0613 Project Sent to the following State Agencies

State Review Began: 11-24-2015

SCH COMPLIANCE 12-23-2015

Please note State Clearinghouse Number (SCH#) on all Comments

SCH#: 2015112051

Please forward late comments directly to the Lead Agency

AQMD/APCD 2

(Resources: 11 / 28)

| | |
|--|--|
| <input checked="" type="checkbox"/> Resources | <input type="checkbox"/> State/Consumer Svcs |
| <input type="checkbox"/> Boating & Waterways | <input type="checkbox"/> General Services |
| <input type="checkbox"/> Coastal Comm | <input type="checkbox"/> Cal EPA |
| <input type="checkbox"/> Colorado Rvr Bd | <input type="checkbox"/> ARB: ALL Other Projects |
| <input type="checkbox"/> Conservation | <input checked="" type="checkbox"/> ARB: Transportation Projects |
| <input checked="" type="checkbox"/> CDFW # <u>3</u> | <input type="checkbox"/> ARB: Major Industrial/Energy |
| <input type="checkbox"/> Delta Protection Comm | <input type="checkbox"/> SWRCB: Div. of Drinking Water |
| <input type="checkbox"/> Cal Fire | <input type="checkbox"/> SWRCB: Div. Financial Assist. |
| <input checked="" type="checkbox"/> Historic Preservation | <input type="checkbox"/> SWRCB: Wtr Quality |
| <input checked="" type="checkbox"/> Parks & Rec | <input type="checkbox"/> SWRCB: Wtr Rights |
| <input type="checkbox"/> Central Valley Flood Prot. | <input checked="" type="checkbox"/> Reg. WQCB # <u>2</u> |
| <input checked="" type="checkbox"/> Bay Cons & Dev Comm. | <input type="checkbox"/> Toxic Sub Ctrl-CTC |
| <input type="checkbox"/> DWR | <input type="checkbox"/> Yth/Adlt Corrections |
| <input checked="" type="checkbox"/> OES | <input type="checkbox"/> Corrections |
| <input type="checkbox"/> Resources, Recycling and Recovery | <input type="checkbox"/> Independent Comm |
| <input type="checkbox"/> CalSTA | <input type="checkbox"/> Energy Commission |
| <input checked="" type="checkbox"/> Aeronautics | <input checked="" type="checkbox"/> NAHC |
| <input type="checkbox"/> CHP | <input checked="" type="checkbox"/> Public Utilities Comm |
| <input type="checkbox"/> Caltrans # _____ | <input type="checkbox"/> State Lands Comm |
| <input type="checkbox"/> Trans Planning | <input type="checkbox"/> Tahoe Rgl Plan Agency |
| <input type="checkbox"/> Other | <input type="checkbox"/> Conservancy |
| <input type="checkbox"/> HCD | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Food & Agriculture | |